Computing Scholarship

Comment: The student has clearly structured the format and contents of the report.

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Introduction

I was asked by Tom Whitefield, the owner of Southern Pine Forestry Products, to create a website which would be used to sell second-grade wood mouldings.

The link for the website is included in this report, and I will at times refer to the files that make up the website. Screenshots and copied/pasted code will also be included where necessary to make a point. A complete copy of the code is attached.

http://woodmouldingstrader.co.nz

Comment: The student introduces the context for the practice reflected in the report and the structure used.

The issue

Tom Whitefield owns a Wood Mouldings company, and would like a way to arrange sales with clients online. The time constraint is only that of the assessment, but he wants the website to be easy-to-use and appeal to clients with limited computer knowledge. He also wants an easy way to keep it up to date, and extra features such as pop-up images.

What a website is

A website exists on the World Wide Web. Using programming languages such as html and php, commands can be sent to browsers to interpret and display raw information in certain ways.

Stakeholders

Stakeholders
Tom Whitefield (manager of the company)
~~Andrew Dingley (left company)~~
~~Sales Rep 1 (never responded)~~
~~Sales Rep 2 (never responded)~~
Martin Savory (IT Manager, came into the project later)

Users (Wider Community Stakeholders)
Tradesmen
DIY
Builders
Contractors

Key Factors

Key Factors Prioritized
1. Compatibility
2. Ease-of-use
3. Aesthetics
4. Client needs to be able to update website easily in the future as information changes
5. Efficiency

6. Resources
7. Access to client
8. Time
9. Access to expertise and materials to develop skills and understanding
10. Software/equipment
11. Current logo can't be used on website

Prioritization Explained

1. Compatibility: If users can't understand the website, or if it is faulty on their (outdated) browser, they will not want/be able to use/view it
2. Ease of use: If the website is difficult to use customers will give up and leave it. Since customers may not be computer literate, they will give up especially easily
3. Aesthetics: Website needs to *look* simple and easy to use, to calm customers. The look gives the website a feel, and it needs to seem professional and helpful

Combined effect: All related to the way customers perceive the website. For the site to be effective, they must have a positive impression of it. Thus it needs to be usable and professional looking.

> **Comment:** This section exemplifies the determination of key attributes

Needs/Opportunities

Needs

- Create a website for Client Wood Mouldings Trader to sell 2nd grade products

- There needs to be an easy way to update prices and add new profiles

- The site needs to display images

- The website needs to be user-friendly for users who are probably not computer literate

- The website needs a feel much like the Warehouse(c). It needs to seem like a bargain.

- There needs to be a user-friendly order process which sends automated emails when an order is placed.

Opportunities

- The website could incorporate elements e.g. shopping cart which would make it easier for the client's clients to make purchases

- The client believes that the website could expand in future and become a major aspect of their business

Plan of action (when I started planning, how I changed things)

The Plan

I was given a brief which, roughly, asked me to create a website "like TradeMe", where customers could shop for wood mouldings, and mentioned that the site would require the ability to have new profiles uploaded to it. The client also thought that images which popped up when the mouse was hovered over the profile would be interesting.

My planning evolved in several stages. Initially, I focussed on the layout, and left the remainder of the website until term three. My initial GANNT chart for term two appeared like this (with larger areas blocked out, specifics as yet undecided):

Stages	Weeks (Term Two)											Resources
	1	2	3	4	5	6	7	8	9	10	11	Resources
Plan and Research	▓	▓	▓	▓								
Identify Issue												Client
Find key factors												Word
Contact client												Internet
Consult client												
Make questionnaire												
Plan GANNT chart												
Write up key factors												
Write brief												
Research similar designs to show to client												
Research existing sites												
Decide on solution				▓	▓	▓	▓					
Develop at least 3 concepts												Photoshop?
Consult client to decide on best concept												Client
Revise brief												Word
Update plan/GANNT												
Design solution								▓	▓	▓	▓	
Design a solution												
Research new ideas												
Talk with client												
Update plan and brief												
Decide on final look and layout of the website												
Get necessary information from client to implement solution												

Still in Term Two, I had a few meetings with an IT specialist (Brendon), and he helped me plan roughly that I should use a database (he suggested Access) to manage the data in the website. He suggested a user-login system, and I thought that this could be used to create a shopping cart system for customers. I also had plans to create a search function so customers could browse with maximum ease. Because I was familiar with design principles, html, and CSS, I was confident in my ability to arrange these to plan. However I had not had previous contact with php, and the client would be a "variable" in the plan. Because of this, I decided to give the later

stages of my plan fluidity to change as I learnt more about how to use php, and also as I learned more specifics from the client. Near the end of term two, my design GANNT chart was somewhat behind schedule, because my client was not communicating as well as I had initially thought he would:

Comment: The student interacted with a practicing technologist to learn new techniques which impacted on her practice

KEY															
Planned to complete															
Actually completed															
Do the whole time															
Stages	Weeks (Term Two)											Resources	Problems		
	1	2	3	4	5	6	7	8	9	10	11		In Japan – no progress School exams – limited progress		
Plan and Research															
Identify Issue												Client			
Find key factors												Client			
Contact client												Client			
Consult client												Client	Had trouble arranging interview with client. Busy and didn't communicate well.		
Make questionnaire												Word			
Plan GANNT chart												Word			
Write up key factors												Word			
Write brief												Word, Client			
Research similar designs to show to client												Internet			
Research existing sites												Internet			
Decide on solution															
Develop at least 3 concepts												Photoshop			
Consult client to decide on best concept												Client			
Revise brief												Word			
Update plan/GANNT												Word			
Design solution															
Design a solution												Photoshop			
Research new ideas												Internet			
Talk with client												Client			
Update plan and brief												Word			
Decide on final look and layout of the website												Client	Delayed, because client is not responding		
Get necessary information from												Client	Delayed, because client		

client to implement solution											is busy

So by the end of term two, my plan was already behind schedule. However, I decided to move onto coding at the start of term three as I had originally planned, and just picked a design I liked to continue with, intending to change it once the client had confirmed a preference (as only minor coding changes would be required).

According to plan, at the start of term three, I created the html skeleton of the website. As I was quite familiar with html, this occurred largely during the allotted time, although I began to notice setbacks due to poor client communication.

In the third term, I changed mentors. Rather than working with the IT specialist who suggested Access, I began working with one of our other computing teachers, Mr Smith (a php practitioner), who knows php and mySQL. He suggested that rather than Access, I should use a mySQL database and manage it with php. This should be faster and more reliable. I agreed to this, but because I had no previous experience with mySQL and php, I was still unable to estimate how long it would take. My plan was that I would do things in a logical order, prioritising – I would start with creating a sign up sheet, then a user database, then a stock database, a stock display, and finally the shopping cart system and associated database. After that I would worry about things such as the search, the images, and how the customer would get the files into the database. Initially I still went with the shopping cart idea, but after we had created the products database, a Users database, and signup and login capabilities, we realized it would be too difficult to create the shopping cart system with the number of variables present in the products database. At this point I had to scrap the shopping cart idea and begin thinking of alternative ways to allow customers to place orders. My GANNT chart at a later stage of Term 3:

Stages	Weeks (Term Three)											Resources	Problems
		2	3	4	5	6	7	8	9	10	11		In Germany progress
Decide on final look and layout of the website												Photoshop, client	(carry over from term two) Client hasn't confirmed updated variations (week 4)
Get necessary information from client to implement solution												Client	(carry over from term two)
Create Solution													
Set up layout of pages												Dreamweaver Photoshop	
Consult teachers to problem solve												Teachers	
Insert text and format												Fireworks	

Task		Tools	Notes
it			
Add pictures		Flash	
Add flash		Flash Client	Am no longer going to use flash
Add navigation bars		Dreamweaver	
Add automated emails etc		Dreamweaver	
Create fill out form for adding future profiles		Dreamweaver	
Update brief		Word	
Update GANNT		Word	
Input Basic Data into mySQL Database			Need way to manage profiles, so had to add... (Client only supplied partial confusing data initially – postponed) Am no longer using Access – php recommended as easier
Integrate Database and webpage		Mr. Smith, Access, Dreamweaver	
Link form to Database		Mr. Smith, Access, Dreamweaver	
Create shopping cart		Mr. Smith, Access, Dreamweaver	
Create login system		Mr. Smith, Access, Dreamweaver	
Add pop-up images		Mr. Smith, Brendon, Access, Dreamweaver	
Add images to site via php and links		Dreamweaver, Firefox, Mr. Smith	Pop-ups were unnecessary.
Create multiple order version of order page		Dreamweaver, Firefox, Mr. Smith	This needed to be made easier
Create email output for multiple order version of order page		Dreamweaver, Firefox, Mr. Smith	
Test and evaluate			
Check the website works		Client	

												Dreamweaver	
Check spelling etc												Dreamweaver	
Check for client satisfaction													
Modify as needed													

I changed the plan to focus on the things I realized I should have been focussing on in the first place (somewhat reflected in GANNT chart above). With a few weeks left in term three, I decided to use them to create the method for my client to upload csv files easily to the mySQL database, to display images, and to create a simpler order form which would perform the necessary function with less complex coding. I scrapped the search function completely, realizing it would be too difficult. Having created a decryption php, I realized it would be much easier for the clients if they could browse to the csv file and then have it upload to the server without them having to do this manually, and so I added this capability (since the upload script was easier than anticipated). I then began working on the order form to replace the shopping cart, which I still was unhappy with (as it was not functioning at all since the shopping cart had been scrapped). I created and improved various versions of order forms, ending up with a drop box which populated from the profiles in the mySQL which customers could select from outputting to a second page containing the data relevant to the profile (such as price). At this point I realized I needed to get the email notification working, which luckily did not take long. I then realized had sorely neglected the scroll-over image part of the plan.

> **Comment:** The student reflects on the decisions made and difficulties which brought these about.

At this point my client (previously very busy) began communicating again, and suggested that due to "associated costs" the mySQL component should be scrapped. This disrupted plans, as the whole site was at this point dependant on mySQL.

However after further research the client realized that mySQL was okay after all, and I planned to use the remaining week of the term to create a way to upload and display images, and to sort out a multiple order capability for the website. Luckily by this point my understanding of php had improved greatly, and this did not take longer than anticipated. The client at this point also required multiple small scale changes to be made to the database (including changing the fields in the mySQL database, and all associated forms), which was a slight setback.

> **Comment:** Evidence of student planning to inform the development of the technological outcome. The Gantt charts from the journals show planning and revisions

Stages	Weeks (Term Three)											Resources	Problems
		2	3	4	5	6	7	8	9	10	11		In Germany – progress
Decide on final look and layout of the website												Photoshop, client	
Get necessary information from client to implement solution												Client	Client eventually confirmed, then changed the data to be put on the website.
Create Solution													
Set up layout of pages												Dreamweaver Photoshop	

Task	Timeline	Tool/Person	Notes
Consult teachers to problem solve		Teachers	
Insert text and format it		Fireworks	
Add pictures within site layout (not the database ones)		Flash	
Add flash		Client	Am no longer going to use flash
Add navigation bars		Dreamweaver	
Add automated emails etc		Dreamweaver	
Create fill out form for adding future profiles		Dreamweaver	This has been replaced with an upload for a csv from
Update brief		Word	
Update GANNT		Word	
Input Basic Data into mySQL Database			Need way to manage profiles, so had to add... (Client only supplied partial confusing data initially – postponed) Am no longer using Access – php recommended as easier
Integrate Database and webpage		Mr. Smith, Access, Dreamweaver	
Link profile form to Database		Mr. Smith, ~~Brendon~~ Access, Dreamweaver	The profile upload form has been replaced with an alternative solution, so this is no longer necessary
Create shopping cart		~~Mr. Smith, Brendon Access, Dreamweaver~~	(Too complex)
Create login system		Mr. Smith,	(this is now to

Task	Resources	Comments
	Firefox, Dreamweaver	be used for the client logging into the manager site portions, not for customers logging into the shopping cart)
Create form for client to upload csv sheets to the mySQL database	Mr. Smith, Dreamweaver, Firefox	
Create CSV so that CSV upload form places the data in the mySQL database	Mr. Smith, Dreamweaver, Firefox	
Create form and php to do the same as above for images	Mr. Smith, Dreamweaver, Firefox	
Add pop-up images	Mr. Smith, Brendon, Access, Dreamweaver	
Add images to site via php and links	Dreamweaver, Firefox, Mr. Smith	Pop-ups were unnecessary.
Create order page	Dreamweaver, Firefox	
Create multiple order version of order page	Dreamweaver, Firefox, Mr. Smith	This needed to be made easier
Create email output for multiple order version of order page	Dreamweaver, Firefox, Mr. Smith	
Create a "manager" site to contain the pages for uploading etc to facilitate easier navigation	Dreamweaver, Firefox	The clients needed an easier way to manage the site
Modify login script so that it can be used as a secure way for the client to manage the site through the manager		It would be bad if just anyone could upload new files to that database
Test and evaluate		
Check the website	Client	

works													
Check spelling etc												Dreamweaver	
Check for client satisfaction													
Modify as needed													

Stages	Weeks (Term 4)											Resources	Problems
		2	3	4	5	6	7	8	9	10	11		
Check for client satisfaction					Site Handed In							Client	Client is very busy
Make email output for multiple order better												Php help	
Check all links etc work													
Get site up and running and modified for client's own server												Client, Telecom Business Hub	
Modify php on order pages so that it gives error message and doesn't send email if not all fields are filled in.												Dreamweaver, Firefox	Client requested this recently – it was not in the original plan
Modify order page to give error and not send email if customer orders more bundles than are in stock												Dreamweaver, Firefox	Client requested this recently – it was not in the original plan
Add hit counter to website												Dreamweaver, Firefox, Telecom Business Hub	Client requested this recently – it was not in the original plan
Test and evaluate													
Check the website works												Client	Carry over from term 3
Check spelling etc												Dreamweaver	Carry over from term 3
Check for client satisfaction													Carry over from term 3
Modify as needed													Carry over

						from term 3

Also, the client wished for several "small" additional changes to be made to the website in term four. Initially, I had planned to be finished by term four, but since I ended up coding right through to the day before the project was due in, despite intending to allow a week at the end. Actually, this week at the end was effectively the time I used to make the final tidy-ing changes to the website, so it was good that I had worked with it in mind to leave a week to tidy up at the end. Changes made at this stage include adding the hit counter, aligning the hit counter, then making the hit counter invisible. Also I changed the php script so that orders would not send unless email and other various fields were filled in.

Comment: The student reflects on the key stages and time allocations

What I Learnt about Planning

If I were to do a project like this again, I would plan it much more carefully at the beginning. Since I am now more familiar with php, I would be able to better understand which processes could be automated (the upload of csv, for example), and which are beyond my abilities (the shopping cart). This would lead to less wasted time. I believe I still could have done better if I had done more careful research on php at the beginning, and, if I created another php based website, I would map out which forms would link which php to which database etc much more carefully. But the largest difference would be that I would not be working essentially blind, but would have much more idea of what php is capable of, and what is far too difficult. However, planning for fluidity in this case worked well, and time management (always planning to allow twice as much as seems necessary) worked well, and I was able to finish many complex features relevant to the working of the site (such as the later php change to not send orders unless the email and various other fields are filled in).

Comment: Reflection on the practice undertaken in aspects of planning

Material from Initial Brainstorms

Problems and Solutions

1) ~~Make pop-up images~~
   a) ~~Javascripting~~
   b) ~~Use Flash (not as viable)~~
   c) Pop up images scrapped later in the project
2) Create a way to easily update prices AND add new profiles *~~with pop-up images~~*.
   a) Prices: update from excel sheets
   b) Profiles: create template
   c) Profiles: make TradeMe-like uploader (a form with different steps)
   d) Both: Table that includes images and prices and does full update? (probably harder than necessary + inconvenient)
   e) Use Access as a Database to manage this.
   f) What I did: Using php and mySQL, create a php script which inserts values from a csv file (default output by Excel) into the mySQL database. This allows infinite addition/changes of profiles.
3) Create a design which works well for those unfamiliar with the internet, which is aesthetically appealing

    a) I want the navigation bar to be consistently placed tabs, which change colour depending on which one is the page currently selected.

4) ~~Create a search bar~~
    a) ~~This was scrapped later in the project~~

5) Create a way for customers to order wood mouldings from the company
    a) create a shopping cart using various database technologies. This would require log-ins.
    b) Create an order form that clients can use to order wood mouldings from the company, and create associated automated email form. This would use php.

This was the initial idea for a sign up form. I did create it and the associated php, but this was unnecessary once the shopping cart idea was scrapped.

Sign up example:

Name:	
*Username:	
*Password:	
*Repeat password:	
*e-mail address:	
*Repeat e-mail address	
Billing Address:	
Shipping Address:	

* Compulsory

An idea of what the shopping cart might look like/ an early idea for a pop-up order form.

Shopping Cart Example

Prouct No.	Prouct	Size (mm)	Length (m)	No. of Bundles	Price (totals)
####	Square Dressed	30x10	5.2	5	$$$.$$
####	Bevelled Architrave	40x10	5.4	2	$$$.$$
####	Square Dressed	40x18	5.2	7	$$$.$$
####	etc	##x##	#.#	#	$$$.$$
####	etc	##x##	#.#	#	$$$.$$
Total Price					**$$$$.$$**

(Probably will be white on the background colour of the site)

v.s pop up form

Enter e-mail | joebloggs@hotmail.com

Product | ▼ *(please select a product)*

No. Bundles | #

Want to buy more than one type? Click here

(drops down box)

Product 2 | ▼ *(please select a product)*

No. Bundles | #

(However when we looking more closely at the sample product list, I noticed some that had the same name, size, etc. Are these differentiable only by product number and picture? If so the shopping cart idea definitely seems preferable.)

An early idea for the appearance of the automated email. It later evolved based on what was possible to code.

Automated email when buyer has purchased should be something along lines of…?

"Dear Customer

Thank you for your purchase. **Pick ups by arrangement** from the production factory site located on:
Crancross st (off Dukes Road)
Mosgiel

Contact Andy Dingley on 021 999 134 to arrange a suitable pickup time.

If you want delivery, it can be arranged at buyer's cost:

Otago region	$	(to be advised depending on location)
South Island	$	(to be advised depending on location)
North Island	$	(to be advised depending on location)

Payment can be made by:
Bank deposit
Cheque with positive ID
Cash
But there are no EFTPOS facilities on site

Your order's total cost (without delivery) comes to: **$0,000.00**

If you have any questions, feel free to contact us.

_____
(Signature)
New Zealand Moulding Co Limited
Dukes Road
Mosgiel
Dunedin
New Zealand

Ph   03 489 7078
Fax   03 489 9849

Contact person: Andrew Dingley
Email: andy@nzmoulding.co.nz "

Would you want to set up a special e-mail address to prompt this site, or will it always just be you handling orders on your own email? It won't affect the site-building process – I only have to know so that I can add it to one little link in the site. Is tax separate or inclusive? If I'm putting in things that add totals I'll need to know to add 12.5% if it's not there already.

Rough planning for shopping cart/order form
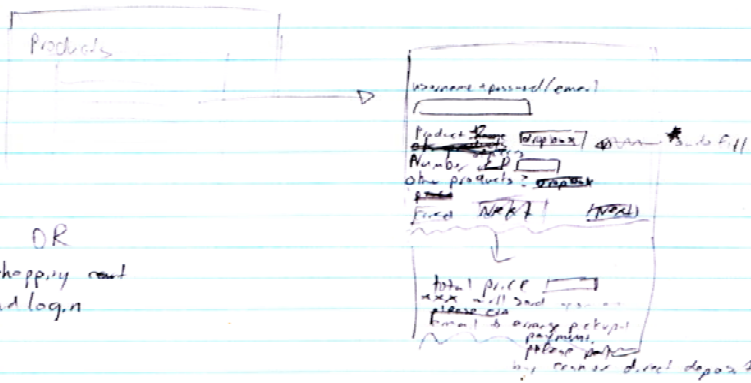
Image Research

Research of various company websites

(N.B. The Client liked the look of this website.)

What's good about it: I like the clean lines, the divided-look navigation bar across the top, and the fact that the main part is smaller and centred (this makes it possible to view on several different browser sizes without un-necessary scrolling or disruption of design).

What I would use from it: Centred layout, for sure. I think that this is the best way to make a site compatible with various browser sizes while retaining a crisp, planned look.

Having the navigation bar across the top is also functional, although it could be along the side just as easily, depending on design requirements.

It's a good idea to have some kind of logo. Do you have one already that I should incorporate?
Is there an existing site I can take a look at?
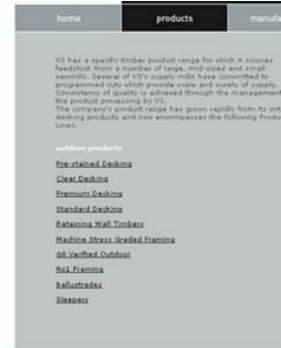
This site has very nice crisp lines. Since it gives a tidy feel, I would probably also use very clean lines on the finished website

What should also be there: Search button. Every website selling anything needs a search button.

It has a structure where you click a broad heading and gradually narrow down. This would be good to include in the finished website as well as the search bar, for those who are simply browsing.
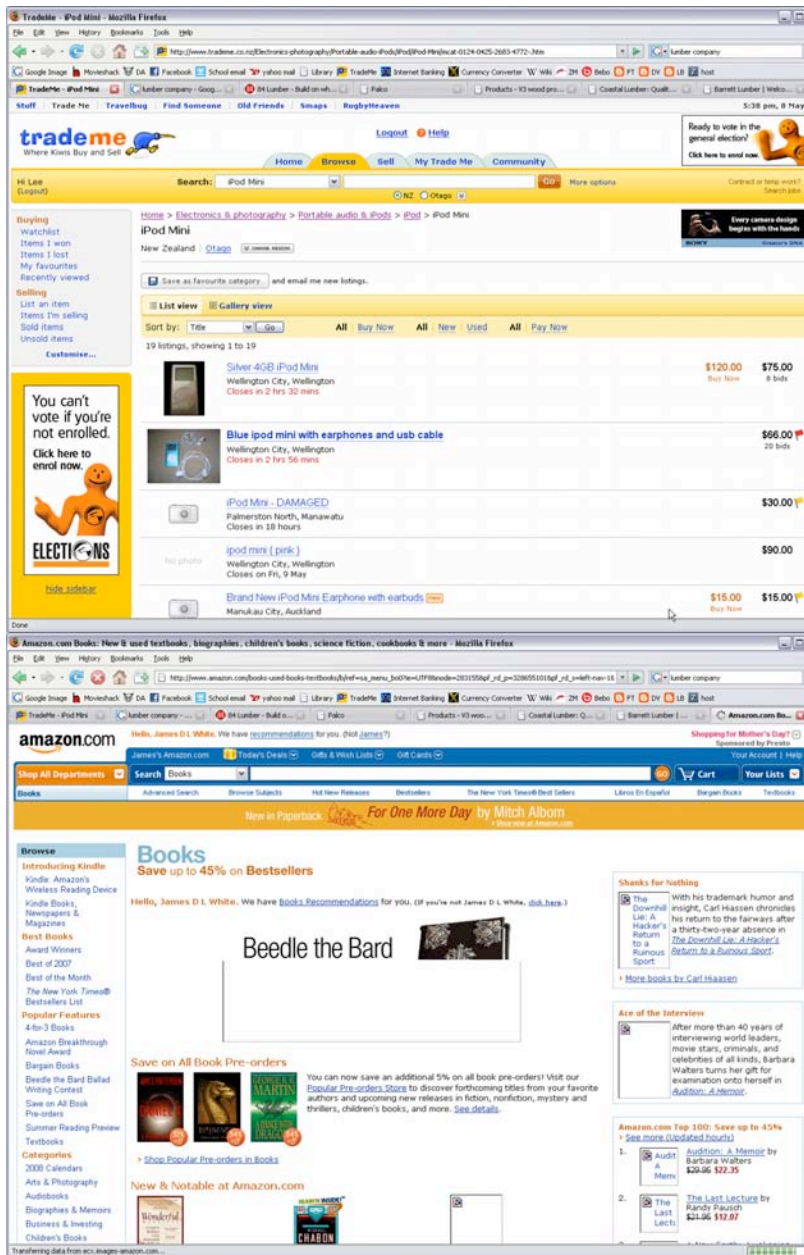
In the cases of TradeMe and Amazon, they are mainly trying to find room to fit huge numbers of menus and products. Their layouts are not especially attractive, and I wouldn't take much from

the layouts. The menus, however, are good because they're very easy to understand and navigate. TradeMe also allows users to upload new profiles. A form similar to this one might be good for adding new wood profiles to the website.

This choice of category matches to the heading that is later displayed

① Category > ❷ Details > ③ Photos > ④ Extras > ⑤ Confirm

Details
Required fields are shown with a star*

Listing Details	
Category	Computers > Apple > Laptops
Listing title *	
Subtitle ?	⦿ No subtitle ◯ Add a subtitle (55c)
Description * e.g. condition, special features	
Brand new item	☐ Brand new, unused item with original manuals and packaging
Start price * ?	$
Reserve price * ?	⦿ Same as the start price ◯ Specify a reserve ? $
Buy Now ?	$
Allow bids from	⦿ Anyone ◯ Authenticated members only ✱
Multiple identical items ?	☐ Create a new listing each time one sells. I have a total of 2 items ⌄
Listing duration *	⦿ Fixed length 7 days ⌄ ◯ Or, choose an end time (25c) Thu 8 May ⌄ 11:45 pm ⌄ Trade Me's busiest time is 7-10pm, every day except Sat

Payment & Shipping	
Pick-ups *	Buyer can pick-up ⌄
Shipping * ?	⦿ I don't know the shipping costs yet ◯ Free shipping within New Zealand ◯ Specify shipping costs: Cost Details e.g. Overnight courier within Auckland $ $ ➕ Add another shipping option

Photos can be added at the next stage.

TradeMe has a heading which shows you where you have browsed to/from. This makes the site more comprehensible if, say, you want to easily go back to the broader search heading. Good thing to include in final design?
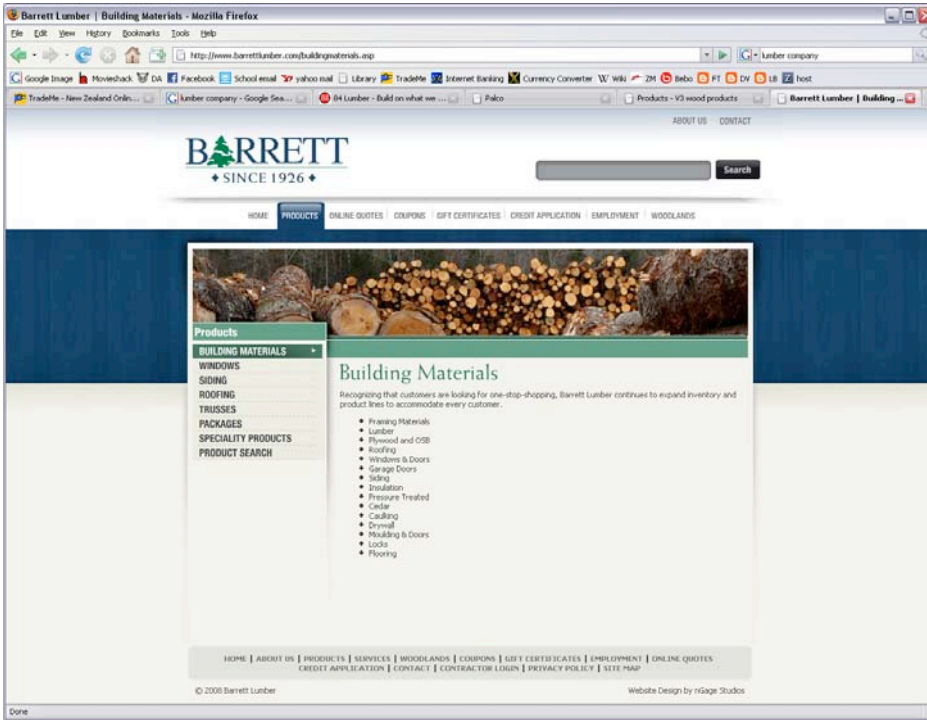
This one is quite nice and clean.
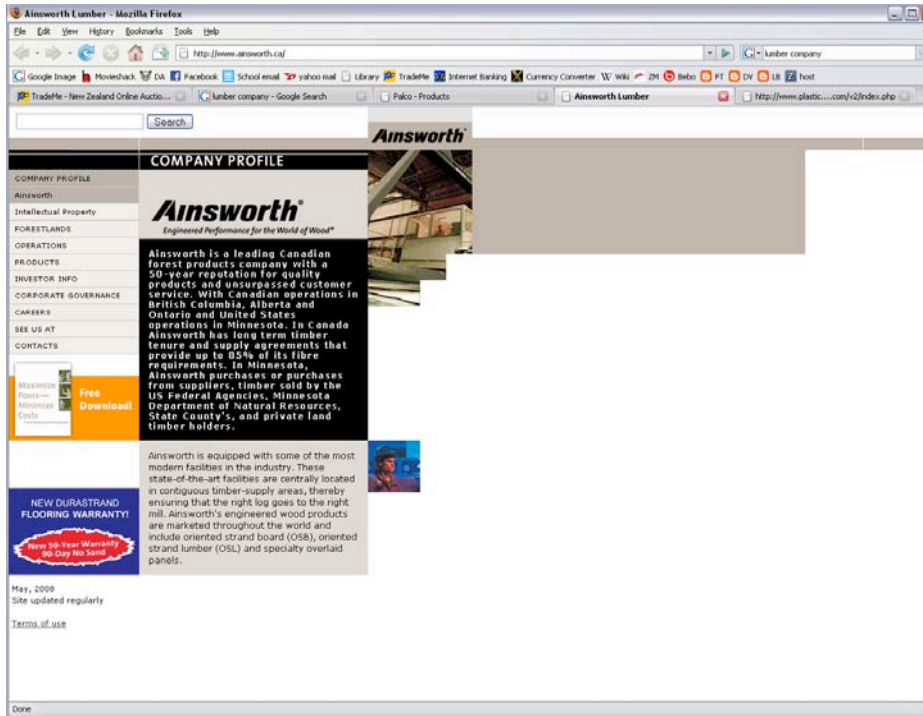
Alternatively, you could choose to align the page so that it was always on the left, and sized to look good on a smaller browser. However, this looks odd on the full screen browser (which is why I prefer the centred layout).

This is another designer's conceptual design for a webpage (in German). I like the way that they've made the page look like an A4 folder sitting on a desk. I'm not sure how hard this is to program, but would this style of design appeal to the client? Would it be appropriate for a website selling wood mouldings?

(Perhaps it is a bit too sleek for this particular project, and not especially relevant.)
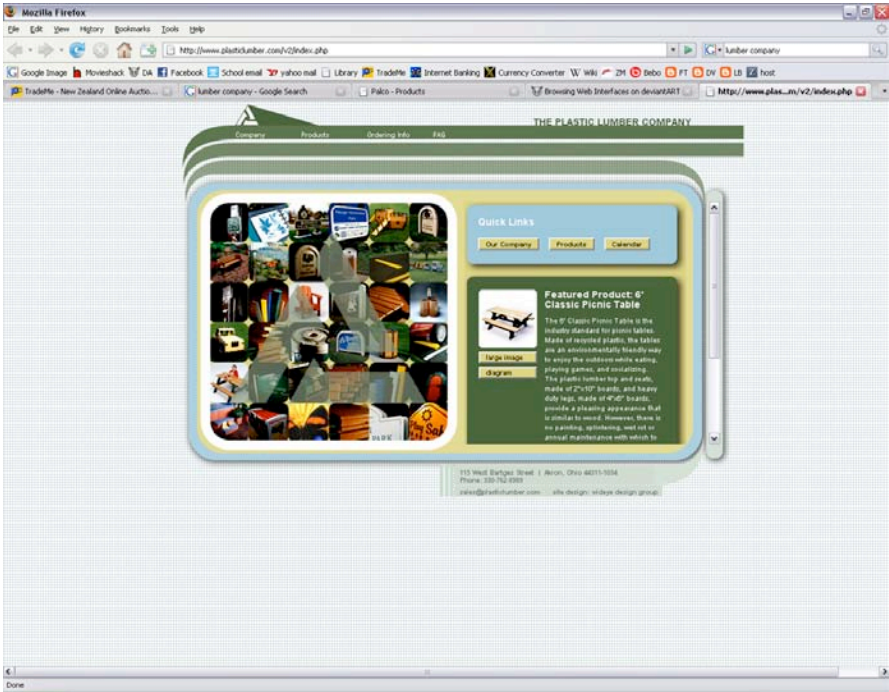
Too busy.
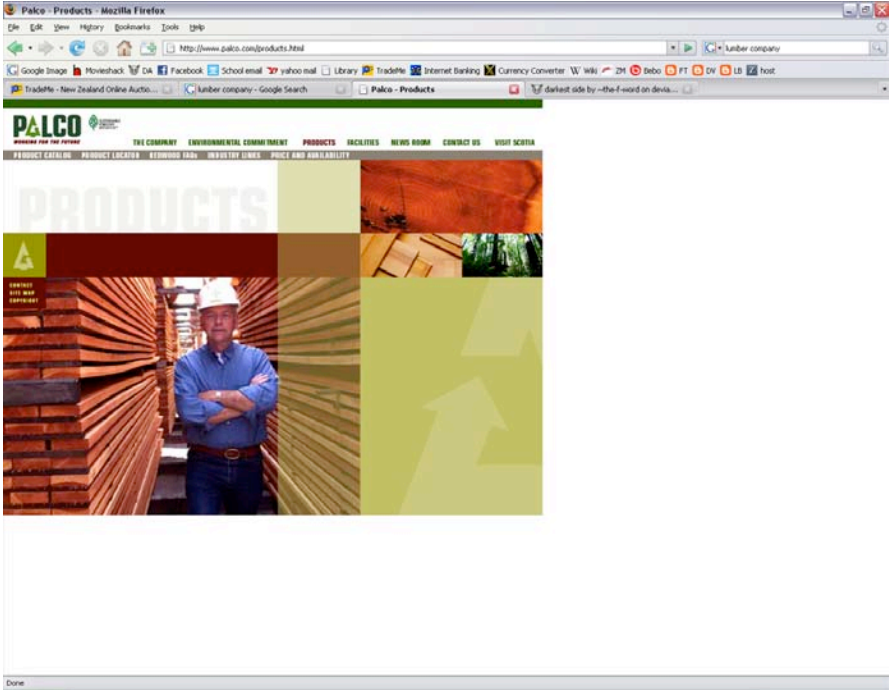
Looks strange when set to the upper left. Better to center. Interesting effect here with the overlapping layers. Consider.

Comment: The student has considered aspects of the design and could increase the clarity of the decision by explaining the link between the elements of the web page and the client requirements

Submittable form requesting more information.
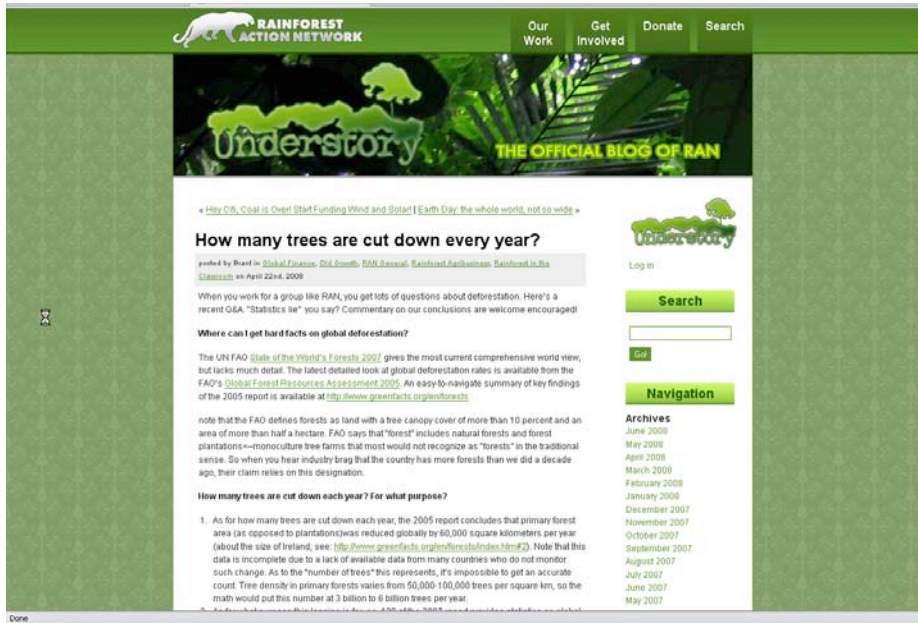
Not so good – busy background is distracting. Don't do. Also, tabs at top are hard to find.
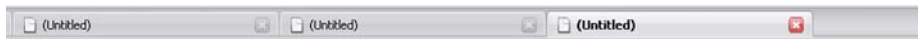
Firefox's nice tabs. Rounded look tabs can be effective.

Development

Examine

- Typeface combinations for heading text (there is no logo, so this is important for the site's identity).
- Tabs – what looks good, what works well, what's easy to understand
- Alignments/grid forms (as in website example client liked).

Tabs/Some Typefaces

1.6.08   For for tittle of webpage.
          - it's aimed at builders, DIY, contractors etc,
            so it should be functional, not decorative.
          - A more professional? Slighter of script?

          Wood Mouldings Trader   w.g?
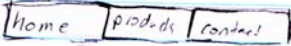
          Wood Mouldings Trader   serif?

          Wood Mouldings Trader
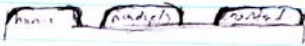
          Wood Mouldings Trader   italics?

          Tabs / Nav bar
                       (current)
          blocks: [home] [products] [contact]   ← too basic

          buttons   (home) (products) (contact)   no. too "young"

          tabs   (home) (products) (contact)   ← could work - fairly easy.

          rounded tabs: (home) (products) (contact) ← could work, slightly harder.

          Still need to: write up search bar notes -
                          get (log notes etc for school)

11.6.08

Typefaces

Wood Mouldings Trader

Wood Mouldings Trader

Wood Mouldings Trader

Wood Mouldings Trader

Wood Mouldings Trader

Wood Mouldings Trader

Wood Mouldings Trader

Wood Mouldings Trader

Wood Mouldings Trader

Typefaces

Wood Mouldings Trader

Wood Mouldings Trader
not a nice enough w

Wood Mouldings Trader
too thin

Wood Mouldings Trader
not a nice enough w

Wood Mouldings Trader
too average

Wood Mouldings Trader

Wood Mouldings Trader
difficult to read at speed

Rough Planning for layout

(logo) Wood Mouldings Trade

Home

stock images available to work with?

Products / Prices)
Search [____]

Products
Type
Type
Type
Type
Type

22rd June

space heading better

change floor?

plan

add st strips
etc to break. I
up

← 800 px → $\frac{800}{6}$:
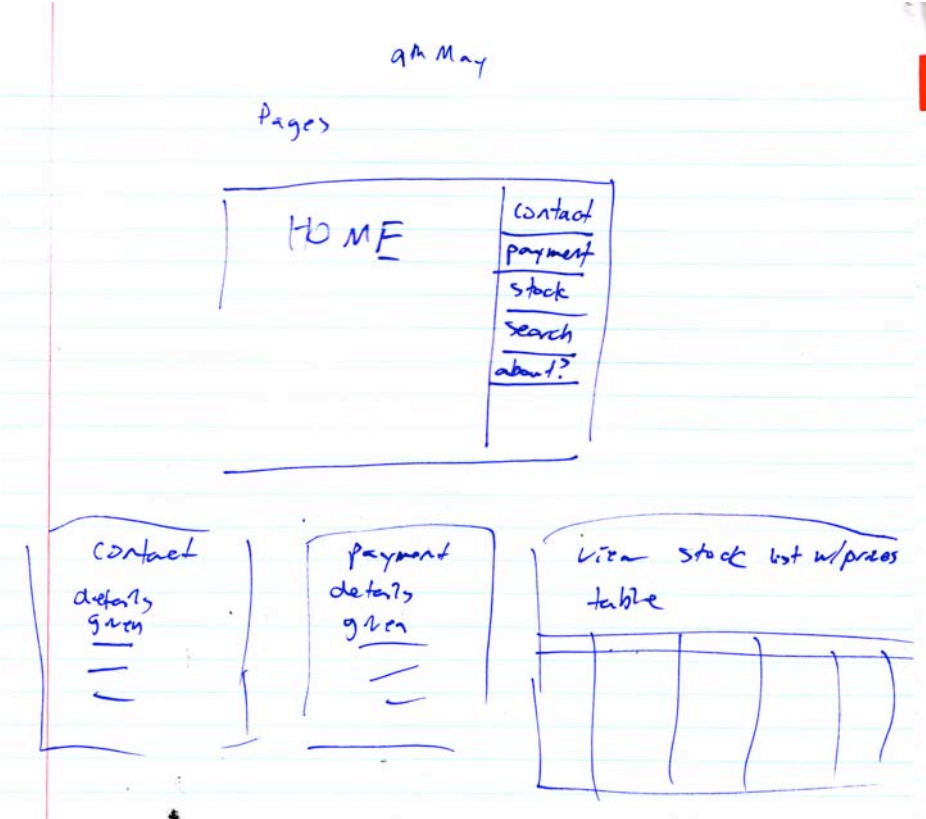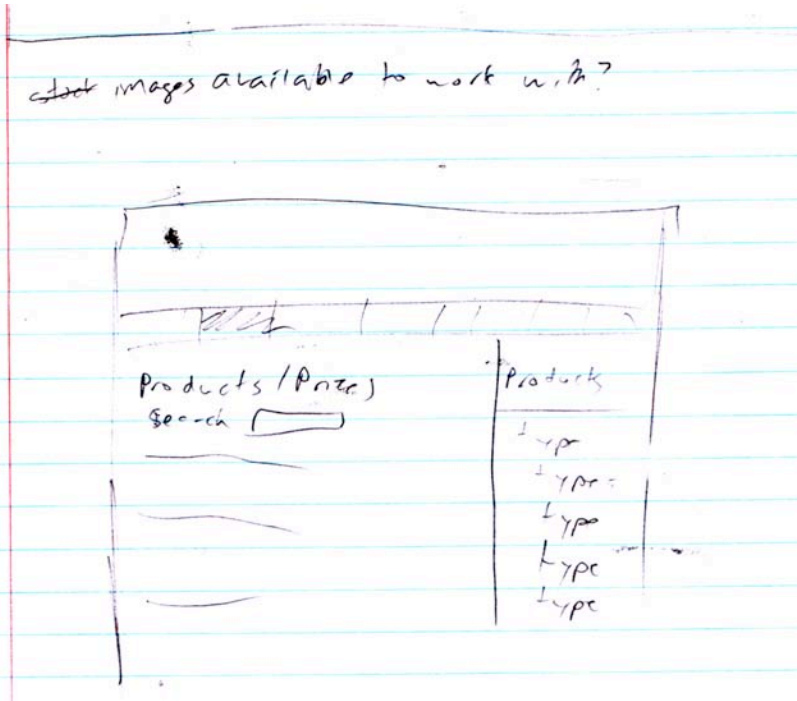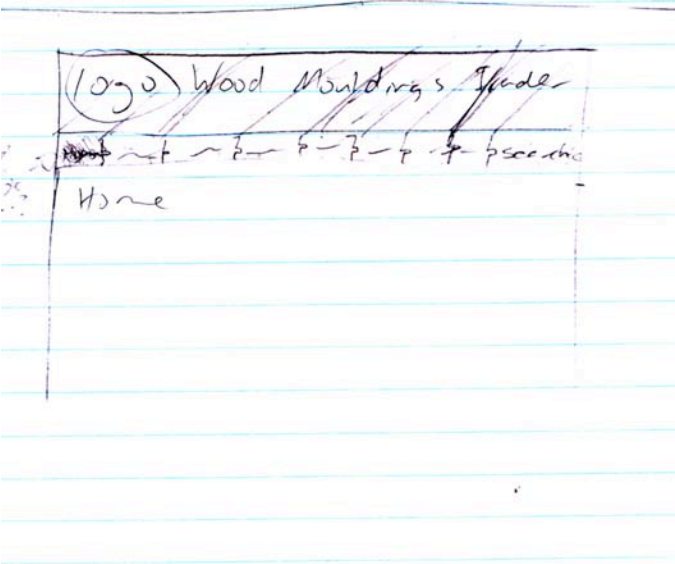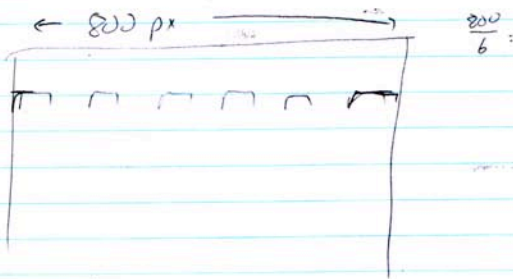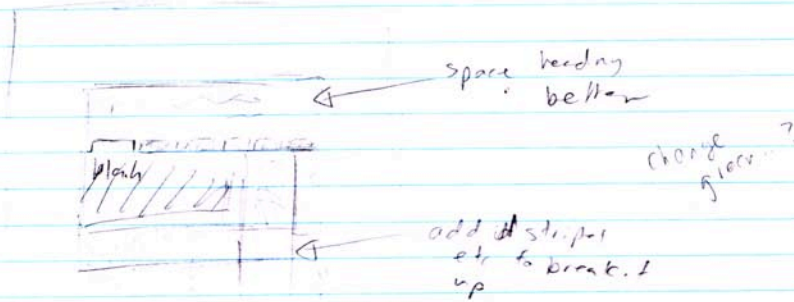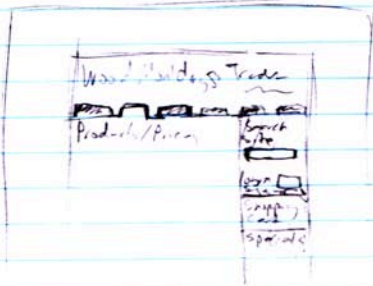
1. Initial idea. Images not in place yet, and fonts haven't fully been decided.

2. Added actual images and a slogan (not a very interesting one). Tried a different font.
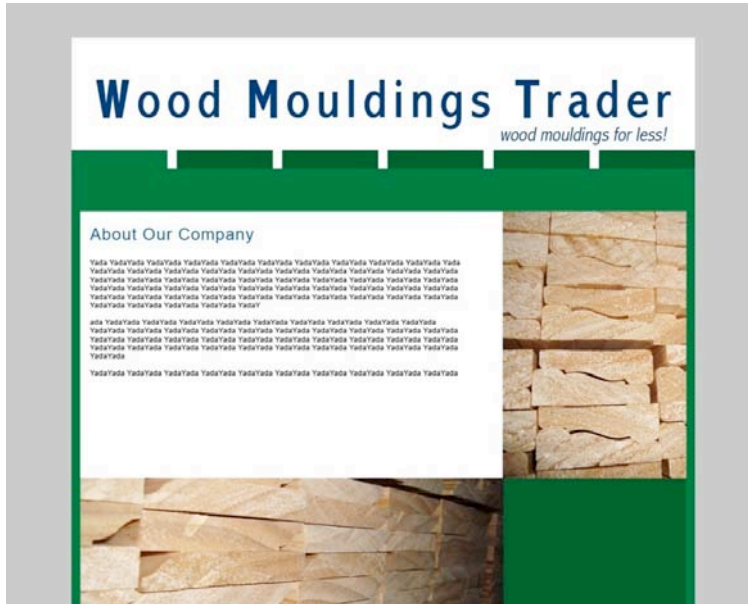
3. Added labels to tabs. Experimented with adding a wooden "strip". Tried a different font, but as it came from a website it may have copyright issues. (Note: the font is no longer on the site I originally got it from, so it is not safe to use due to copyrights.)

4. Tested having a wood background, but it looks cleaner in my opinion with the grey. Tried a different font (from the web, but definitely free for commercial use).

5. The font I like best with the wooden strip look.
 (I like the font because: It's thick so easy to read, it has a nicely shaped "w", it's elegant and "fun" at the same time, it has nice letter forms, and it's free. The "g" gives it some character/keeps the look from being too utilitarian. Is it too feminine for a wood moulding site with the "g"?)

6. Font I like without the wooden strip look and with plain background – looks cleaner to me. (Final resolution? Still probably needs *something* in bottom right corner).

7. Tried rounded tabs. (Perhaps if I work on the exact shape of the rounding they would be more appealing than the box-look tabs?)
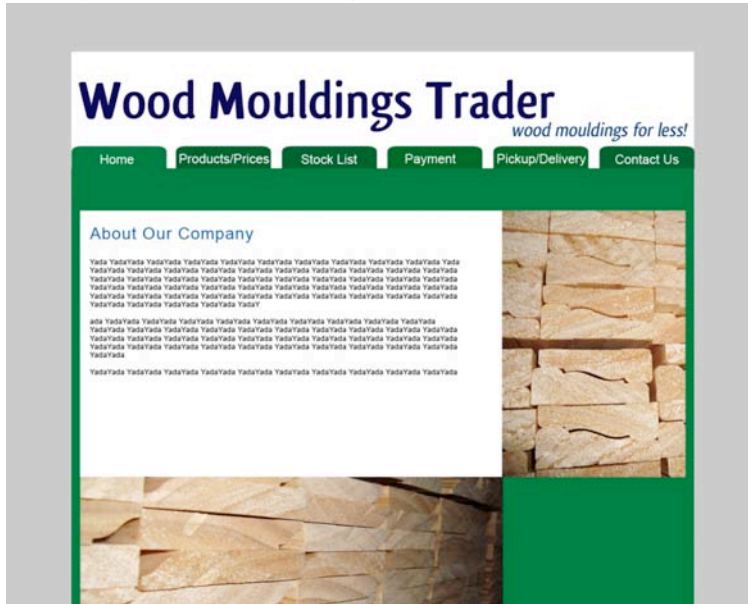
8. Mock up of "products/prices page. Tried adding an extra bar along the right side (should move it to the left?) with various buyer stuff.
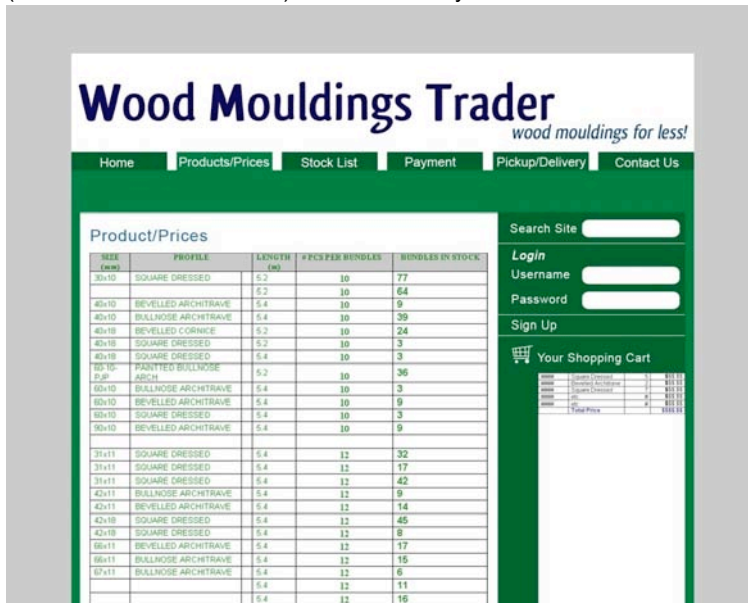
9. Tried placing the shopping cart etc on the left, as is commonly done – to me it just doesn't look as nice somehow.

I wasn't entirely happy with the way that the homepage for option 5 looked (it seemed a bit plain, I liked the simple tabs but I wanted to add something more to the graphic part.) This is my experimentation towards that.
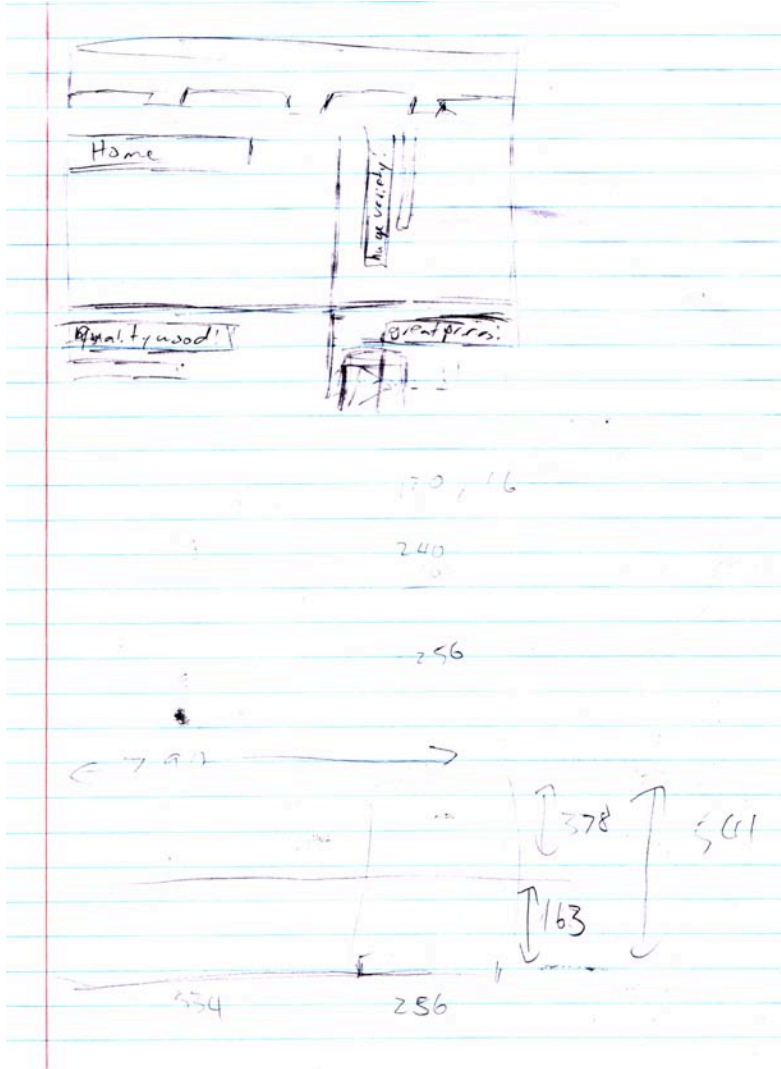
10. Really didn't like this one. It's way too busy.
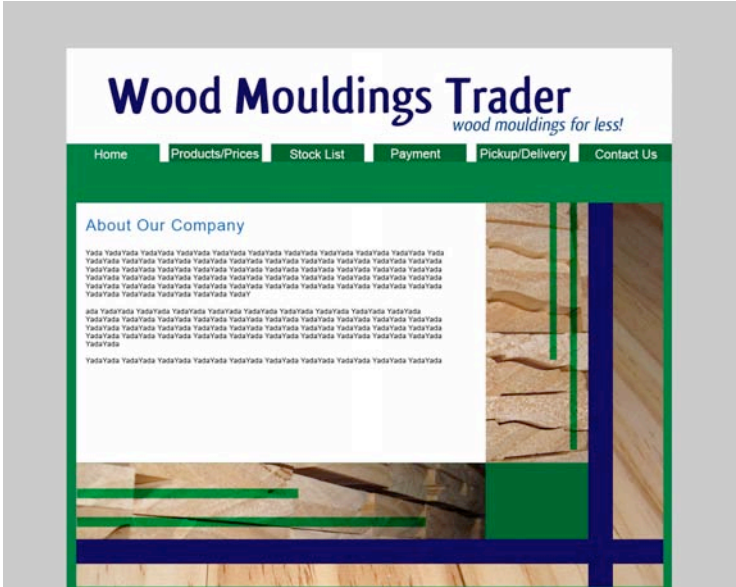
11. This one was simpler, and a bit better. Still not so great (looks a lot like tartan).

12. I quite liked this one – it's basically the same as for option 5, but with a little bit added. What do you think?
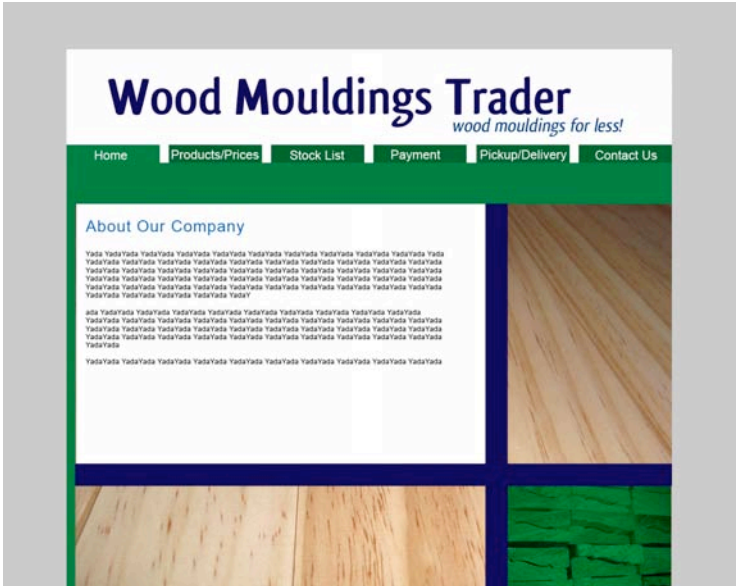
Also, perhaps a header bar:

13a) Off the white?

13b) On the white?

13c) No header bar?

Or header bar but no stripes etc etc.

Final Design and Why

The client replied at one stage that he liked the design labeled #5, which contained a wooden strip underlining the heading. I slightly modified the design to give it a more professional look at a later date, and wrote to the correspondent asking for his feedback on which variation he preferred. As there was no response for a very long time, I decided to continue with the design I liked best. Eventually the original correspondent left the company, and the company manager took over communications. He initially said he preferred the design labeled #6, and when I queried as to whether or not this meant he wished to scrap the header bars and bars on the front page with "quality wood!" and "great prices!" he changed his mind again and said it was fine as it was. Thus, this design is the final one.

The reason I chose this one as my favourite reincarnation of #5 was that the dark blue header bars contained in the body area of the text gave a clean look, slightly classier than using a default browser font for headings. The additional text bars made the homepage more visually interesting, which I believe is a very important feature for a website, as many customers would pass judgement on the website based on the first page they see, generally the homepage. The text is intended to make the page seem like a bargain sales place, as requested by the client. This matches the brief's original requirement that the site be clean and professional looking, and appeal to DIY customers as looking simple. It includes the necessary 6 tabs in a tidy way, ad has the feel of a "bargain" site. It also has no associations with the parent company. The main box is 800px wide, so the site can display on even very old monitors without need to scroll sideways. Also, the font used in the header has been checked to make sure it is free even for commercial use.

The other requirements of the brief are largely coding issues, and will be answered during the creation process.

Comment: The student provides evidence of ongoing client interaction, decisions and actions made as a result of this and the integration of knowledge and skills required to develop a high quality outcome

The Learning Curve

One thing I enjoyed about working on this website was that I was able to view the "brains" of a website. Creating a website with user interaction, constant updating, and variables taught me a huge new range of skills. It was a good challenge to learn php and mySQL, and very satisfying when important parts of the website began to work. The focus of this site was only on a certain part of php and mySQL, but I now have an idea of the huge scope required to make a fully functioning interactive commercial website. If I were to do another project similar to this one, I would be able to plan and manage my time more effectively, as I now have some idea of the time frames and difficulties involved in php, as well as its strengths and weaknesses.

Learning php

It was also an excellent opportunity for me to learn from a php practitioner, Mr Smith. I learnt things such as common causes of php errors, and also commonly used php tags. Without knowing the tags nothing could be done, so having a mentor who was able to suggest which tags would be appropriate in which situation was extremely helpful. There were also several instances when I came extremely close to solving a problem on my own and then my mentor was able to pinpoint the detail that wasn't working, so that it could be fixed. This gave me a better understanding of how php works, and what kinds of things can be done to change code so that it is more functional.

> **Comment:** The student identifies the need for external practitioner expertise to support her learning of new coding. The student explores the technological practice of others

I was also able to learn php from scratch. By the end of the project, I was able to solve many problems entirely on my own – and I was getting a much clearer idea of which specifics I needed to find out from Mr Smith, so that rather than presenting him with a general problem, it was more specific – for example, rather than just "I need a way to compare the values of "bundles in stock" from the database with "bundles ordered" by the customer, and output an error message if they ordered more than are in stock" (more or less what the client told me), I was able to add "I've got both sets of values into arrays from the previous page, and I've checked that they're outputting as arrays with the print_r function. Is there a way to compare them by keys or something like that?". In other words, I was able to solve quite a few steps of the problem on my own before needing help. There are still limited php functions I have had experience with, but I was able to gain confidence in manipulating data from a mySQL database, outputting that data, using variables in relation to that data, comparing variables, comparing arrays, comparing variable arrays, getting the php back into the html flow, and much more. Some of these functions are discussed at greater length in other sections of this report. But by the end, I was able to fully understand all of the code contained in the website, even the parts Mr Smith helped write initially. This made it easy to manipulate the code as the client requested.

Planning

As I mentioned above, if I were to do a project like this again, I would plan it much more carefully at the beginning. The fluidity of the latter stages was good when I had no php knowledge, but because I learnt so much during the project, I would be able to plan times and functions much more clearly for future project. Since I am now more familiar with php, I would be able to better understand which processes could be automated (the upload of csv, for example), and which are beyond my abilities (the shopping cart). This would lead to less

wasted time, and better overall management.. I now know how to utilize the web more effectively to find solutions to problems, rather than just searching blindly. I also have a better idea now of the flow of php, and now I would be better able to map out which forms would link which php to which database, and similar. But the largest difference would be that I would not be working essentially blind, but would have much more idea of what php is capable of, and which direction is "the path of least resistance" – such as the initial idea of the shopping cart vs. the reality of the order form. Same function, very different coding.

Comment: Reflection on practice that will inform further technological developments

CSV

This relates to planning. I knew from the start that the client was working with Excel, but due to confusion between different mentors, I didn't think til very late in the project to ask "how will I provide an easy way for the client to manage the database?" Management would not have been a problem in Access, the original idea, but I had since changed to php and mySQL and had not gone back and rethought the plan. Initially I was only trying to upload the data myself so I could test it, and was unconcerned with convenience. However I did get rather tired of putting in the data one step at a time, and Google yielded suggestions of using "csv", which could supposedly interact directly with mySQL through phpMyAdmin. I was unable to get that to work, though I did find a downloadable program that let me get the data into the database, so I was able to continue testing and shelve the upload issue for a later date. When I did get to the stage of solving the upload issue, I remembered from my earlier research that csv could be output simply by Excel, so if the problem of getting it into the database could be solved with php, that would be a highly convenient solution. I was able to present this idea to Mr Smith, who knew that it was possible and taught me how to write the code, and the solution, once I got to it, was surprisingly simple. I think that the reason it seemed simple was that I had a starting point going in this time. This served as a lesson about the value of research before trying to solve a problem. Knowing the options available makes it much easier to decide on a good plan of attack.

Web Tutorials

One of my two main sources of information was a php practitioner, Mr. Smith. The other was the World Wide Web. Sites such as http://php.net have been created for the express purpose of providing web developers with a comprehensive list of php functions and uses, and this site even contains a tutorial for beginners. There are many other sites on the web where helpful practitioners, and often other learners, will post tricks and tips for coding. It is also very common for programmers facing a difficult problem to post it to a web forum, where someone will often be able to provide a solution. Because there is so much information related to php and coding on the web, one way I was able to solve problems that seemed to have no starting point (when Mr. Smith was busy, absent, or otherwise) was by Googling the error message. I could then either find someone with a similar situation and examine their forum post more carefully, or skim the overall results to see what had generally caused the problem for others so I could check my own code for similar issues. In the case, the dynamic nature of coding, which allows it to be easily shared online, was of great help to me.

Some of the php Functions I Learnt for the Project

A large part of learning php is learning which functions exist, and what they are able to do. Mr Smith and php.net were both a big help with this, as well as other online tutorials. *Some areas of php I found were necessary for my website were as follows:*

mySQL functions

Because my website was interacting with a mySQL database, *I needed to learn to write code to communicate with this database.* The most commonly used part of this was a mysql_fetch statement, which could SELECT different fields from my database. *I also learnt to specify only to return data where a specified field matched a certain criteria.*

mysql_query("SELECT Profile, PerM, PerPieces, PieceLength, PricePerBundle, PricePerBundleGST, BundlesInStock, PiecesPerBundle FROM Stock WHERE BundlesInStock > 0")

This selects the specified fields in the specified order from the specified database (Stock) – only if the "BundlesInStock" field is greater than 0.

if Statements

The difficulty in if/else statements was not in the "if" idea, but in writing the code to go inside them. *I learned at this stage that it is very, very important to get the right number of brackets in the right place.* Php is very particular about code, and it is easier to make mistakes in than html. One missing bracket will kill the whole script.

Variables

These are what allow php to interact with the user, and so are arguably php's most important feature (at least for this site). *I had to work with progressively more difficult variables.*

The first variable/if statement I wrote for the user.php page (which is no longer in use, but this statement has been reused in the orderplaced scripts):

```
$password = $_POST["password"];

$passwordr = $_POST["passwordr"];

if($password==$passwordr)

        echo "Happily, your password was consistent";

        else

        die("Error.  Password was inconsistent. Please click back to the products page
and try again.");

        ?>
```

Before I knew about the POST variable, I had no idea how to interact with the data output from forms. Once I knew how to assign a variable in this way, all kinds of possibilities opened up.

The second half of the single order page, where I used php to output data related to the profile selected on the first page of the order process:

```
<? $Profile = $_POST['profile'];?>

<p>

<strong>You specified the profile <? print $Profile ?></strong>

<br />

The specifications for this profile are:

<br /> <br />

</p>

  Prices:

<?php

$result = mysql_query( "SELECT PerM, PerPieces, PricePerBundle, PricePerBundleGST FROM
Stock WHERE Profile = '$Profile'" )

or die("SELECT Error: ".mysql_error());

$num_rows = mysql_num_rows($result);

?>
```

Here I was even able to use a variable to interact with the mySQL database, successfully combining two of the ideas I had learnt.

Arrays

The mySQL database is an array of sorts, a huge store of data. However this "array" was easy to work with. When I wanted to create my multiple order page, however, *I had to learn how to use arrays other than the database output.* I had to learn out to create them, print them, split them up again, the carry them over to the next page. *Mr Smith helped, but I also learnt a lot on my own with the aid of php.net's function list.*

I had to put this on the first page. The "[]" marks allow the stockids to be output as an array on the next page.

```
<input type="hidden" name="stocknumber[]" value ="<? echo ($stockid) ?>" />
```

I could then assign the stockids to an array:

```
$stock_array=($_POST['stocknumber']);
```

Then print the array to a single variable:

$stock=var_export($stock_array, true);

Then put the array print variable into an email:

$body = "

Order placed by $email, phone contact $phone.\n\n

Order of products with stock number of: \n\n

$stock

Where it output the original array:

e.g.

Order of products with stock number of:


```
array (
  0 => '15',
  1 => '16',
  2 => '17',
)
```

There was of course a lot of other code in between those bits, but that was the general idea and the hardest bit. I had no problem with email output when it didn't involve arrays, but once the arrays were added it suddenly became much more difficult. It was mainly difficult because I didn't know which functions existed or what they could do, so now that I do know that I could much more easily recreate a similar output form. I also gained a lot of understanding about how arrays work by puzzling through this process and seeing what did and didn't work. ***The email output was done entirely by myself.***

Later, the client requested that an order not place if the customer had ordered more bundles than in stock. For this to work on the multiple order page, I had to learn how to compare two arrays. Eventually, Mr Smith taught me that array values can be compared by their "keys" (the values I had inserted in "[]"s). This also required the use of a for statement:

```
for ($i=0;$i<=20;$i++){
            if ($number_array[$i] > $in_stock_array[$i]){
```

?> <p>You ordered too many, please return to the <a
href="products.php">Products Page and try again.</p><?

die;

}

Here, "$i" would reprsent any number between 0 and 20 ($i<=20), and would auto-increment
($i++) from 0 ($i=0). $i would represent the key number (e.g. [0]) which was present in both
arrays, thus the arrays could be compared.

echo (html inside php)
echo("<p>Order successfully placed!</p>");

I found this was a handy way to put php back into the html flow, and use associated css.

A more complex use was the table on the products page, where the table containing php
elements and generated by php needed some html elements included:

```
echo "<table>";
echo "
<td>Profile (Size(mm), Description)</td>
<td>$/lm</td>
<td>$/piece</td>
<td>Pc length (m) </td>
<td>$/Bundle</td>
<td>$/Bundle GST Inc</td>
<td>Pcs/ Bundle</td>
<td>Bundles in Stock</td>
<td>Image</td>
<td>Order</td>
";

while(($get_info = mysql_fetch_row($result)) && ($get_rec=mysql_fetch_row($recno))
){
    $get_image = mysql_fetch_row($image);
    print "<tr>\n";
    foreach ($get_info as $field)
    print "\t<td><font face=arial size=2/>$field</font></td>\n";
```

The tags needed here were html tags, but html tags only work within php when using echo or
print. This was a handy trick to learn, and was useful on all sorts of pages.

Milestones (Website design all done, website html all functioning, users' database functioning, stock database functioning)

The first milestone I set myself was getting the html "skeleton" of the website set up for the php to function within. I accomplished this part largely within the time I had allotted myself (about 3 weeks).

The following milestones proved to be quite changeable. Originally, when I was thinking of the shopping cart system, they were loosely defined as:

1: get sign up and associated php working

2: get products upload and associated php working

3: get products displaying on products page and associated php working

4: get shopping cart system working

5: get pop-up images working

6: if I have time, get a search function up and running.

I accomplished up to step 4 of these, then realized that due to changes the client had meanwhile made to the nature of information to be displayed, the shopping cart system would be too difficult. Also, by this time I had gained more appreciation for the difficulties of php.

I then had to separate which parts of what I had already done were still usable, and which bits had to be scrapped. I redefined my milestones as:

1: get products page displaying

2: make an easy way for the clients to upload mass amounts of information from an Excel sheet

3: create an order form to replace the shopping cart system

4: create a way for the order form to output to email

5: get images displaying on the site

Re-deciding my priorities at that stage was actually helpful, because at that stage I had more understanding of php. I had a much better idea of what would be needed, and the second set of milestones I assigned myself went more smoothly, and had more useful results. The main one for this would be the csv upload form – at the start I didn't even know csv existed. Due to research I had done earlier in the project (when I was trying to find a way to get the data in the database for testing purposes without entering it all by hand), I learnt about csv files, I realized that would be a good way to get the data onto the site. I had also learned that Excel could output this as default, making it easy on the client.

Step 1: happily, this had been completed in the previous stage.

Step 2: By this time, I had much more idea what would be involved. Earlier efforts had turned up "csv" files, i.e. files with Comma Separated Values. It was relatively easy to (with Mr. Smith's help) create a php which would read a csv file and place it into the database. However this yielded step 2i), which was creating a way for the client to browse to the file to be uploaded to their server, and also involved writing php which would save a temp file on the server while it extracted the data then delete it. This made the process fully user friendly. However this then gave rise to step 2ii), which was to write php to delete all pre-existing data in the database to avoid data conflicts.

This then gave rise to step 2iii), which was to create basic security so only the company could use the upload form. I realized that I could recycle my login form originally intended for the shopping cart system for this. This process of continual revision was a good way to expand my knowledge one step at a time, and it matched well with my initial idea of a fluid/changeable plan. These multiple steps only took about the time I had guessed at for the initial one, so it worked out well.

Steps 3&4: Creating a basic order form with html and outputting it to email was quite simple. By this point, as I was pressed for time, I was taking things in small chunks, getting something working to a functional level, and then if that proved easy I would improve the function. Step 3i) was to create a drop box which populated via php from the current list of profiles in the database. Step 3ii) was to create a "units/prices" drop box which would do the same based on what was selected in the profiles drop box, but doing this on the same page would require JavaScript, so I created an "orderpagetwo". However it was difficult to get a reasonable display for the second drop box, as the data in the database didn't include what unit it was, only the prices. I eventually scrapped this method and output a table based on the first page instead, to refresh customers' memories of the prices of what they were ordering. This seemed to make it much more user friendly. At this point, everything still output easily to email. It was a steep learning curve, but very satisfying to complete. ***I figured out the drop box idea without input from Mr. Smith, so it was confirmation that my php skills really had improved by this point.*** The site now had a functional way to output to email, and despite having limited php knowledge I had managed to create something which I felt was relatively user friendly.

Step 5: Getting images to appear on scrollover would have been very difficult, so I consulted with the client to come up with a more realistic solution. He said he was happy to have them merely display beside the product, and this stage proved simple. I added (with help from Mr. Smith) some lines to the php which output the table on the main page, so that it would get an image name which had been input into the mySQL database, and apply various text around it so it could be read and displayed in html. This did require some formatting of images and careful naming of them by the clients, but as any solution would have, this was not an issue.

Now that the basic site was functional, I needed to create a way for clients to place multiple orders easily, and this became step 6.

Step 6: It seemed easiest to use the checkbox system that had been created for use with the shopping cart system. I had to do some speed learning about arrays in php before I could get the checkboxes to output multiple "stock ids". I started this over a weekend, and so I spent several hours on it (researching using php.net and other web tutorials) before consulting Mr

Smith, who was able to help sort out the remaining issues. From there, it was hugely more difficult than with a single profile to create a nice display to refresh the user's memory of prices, and allow them to specify number they were ordering and whether they wished for GST exclusive or inclusive pricing. (The client had in the meantime told me that they only sold per bundle, and the pricings per m, per piece etc were for comparison purposes only, thus should not be in the order form.) The email form proved even more difficult, and eventually I had to leave it in a less-than-perfect format. However I did improve the output from an array of stockID's to an array of profile names, among other minor adjustments (such as specifying a "from" field).

(See flow chart of process on next page.)

After this stage, there were still many improvements to be made to the website, such as making the site reject the order if the customer forgot to fill out their email address. In this case the site displays an error message, and refers the customer back to the order page to try again.

> **Comment:** Linking student acquisition of new knowledge and skills derived from interactions with external expert in php.

Get the products page displaying

Make an easy way for clients to upload mass amounts of information from an Excel Sheet

Create an order form to replace the shopping cart system

Get images displaying on the site

Create php to insert a csv file into the mySQL database

Create a way for the order form to output to email

Create a multiple order form which utilizes checkboxes on the products page

Create a dropbox on the order page which populates a list of profiles from the database (user friendly)

Create a way for the client to upload images to the site (similar to csv upload)

Create a way for the client to browse to the file to be uploaded so easier use

Write php to delete all pre-existing data in the database

Make the email copy to the customer so that they can see what they have ordered

Get the multiple order form to output to email

Make a second page for the order process which prints out prices etc based on profiles selected so that customer can see what they are ordering.

Make the upload form secure

Make the output of the multiple order email more user friendly

Create "manager" site so that it is easier for client to navigate between various upload pages

Make the page secure with a login form so that only the company can update the database

Problem Solving

This was a large component of the php project, as I had never learnt php before. I also had some issues with the initial alignment of the tabs on the page in the html.

Problem solving for CSS

A later problem I had with the CSS was getting the hit counter to align. When working through this problem, I made the background a brilliant colour in order to find the box that was pushing the counter out of alignment:

Thus I was able to see when the problem was fixed:

This is only one example – I used similar techniques in many other cases (for example, the tabs of the navigation bar at the beginning of the project required a lot of trouble shooting).

Problem solving for php

This was an entirely different case than html or css, because php does not function unless you use a remote server. To test the site, it was necessary for me to use my teacher's server, endgathering.com. The Dreamweaver FTP manager has troubles with this, so instead I used the helpful site webftp.dreamhost.com to manage the site:

Process for problem solving of multiple order php

(Originally named "addtocart.php" then "addtocart_.php", but renamed for tidiness to "multipleorder.php")

(Originally on the products page there were two tables – Prices and Product Details)

Prices

Profile (Size(mm), Description)	$/lm	$/piece	$/Bundle	$/Bundle GST Inclusive	Image	Order
30x10 Sq Dressed 5.2	0.46	2.39	23.90	26.89		☐
30x10 Sq Dressed 5.4	0.46	2.48	24.80	27.90		☐
40x18 Sq Dressed 5.4	1.18	6.37	76.44	86.00		☐
40x10 Bev Architrave 5.4	0.59	3.19	31.90	35.89		☐
40x10 Bullnose Architrave 5.4	0.59	3.19	31.90	35.89		☐
60x10 Bullnose Architrave 5.4	0.76	4.10	41.00	46.13		☐
40x10 Sq Dressed 5.4	0.59	3.19	31.90	35.89		☐
60x10 Sq Dressed 5.4	0.76	4.10	41.00	46.13		☐
90x10 Sq Dressed 5.4	1.32	7.13	71.30	80.21		☐
35mm Scotia 5.4	1.05	5.67	56.70	63.79		☐

Place Order

Product Details

Profile (Size(mm), Description)	Bundles in Stock	Piece Length (m)	Pieces per Bundle	Image

Trouble shooting steps

1. Try to get the page to display the array of stock id's that have been put into the products page through the checkboxes
   (part of the script on the products page)

```
<?
foreach ($get_rec as $recn) {
?>
<td>
<form name="purchasing" action="addtocart.php" method="post">
<input type="checkbox" name="recordnumber" value="<? print $recn ?>">

</td>
```

The script for addtocart.php

```php
1  <?php
2  // dBase file
3  include "connect.php";
4
5  $recarray= ($_POST['recordnumber']);
6
7  echo $recarray;
8
9  ?>
```

The output

net2ftp - a web based FTP client   http://testing.e...m/addtocart.php

10

only one number is output. Therefore, $recarray is not registering as an array at the moment.

2. Web research. I found a site which suggested adding "[]"'s to the stage before the variable was defined – in this case, the script on the products page
Changed to:
Products page

```
foreach ($get_rec as $recn) {
?>
<td>
<form name="purchasing" action="addtocart.php" method="post">
<input type="checkbox" name="recordnumber[]" value="<? print $recn ?>">

</td>
<?
```

left addtocart.php the same
Output changed to

net2ftp - a web based FTP client   http://testing.e...m/addtocart.php

Array

It's not reading the variables in the array. I need to research and find a php tag that will output array values.

3. php.net: function print_r looks usable

Example #1 print_r() example

```
<pre>
<?php
$a = array ('a' => 'apple', 'b' => 'banana', 'c' => array ('x', 'y', 'z'));
print_r ($a);
?>
</pre>
```

The above example will output:

```
<pre>
Array
(
    [a] => apple
    [b] => banana
    [c] => Array
        (
            [0] => x
            [1] => y
            [2] => z
        )
)
</pre>
```

Testing with print_r
(values selected on products page)

| 90x10 Sq Dressed 5.4 | 1.32 | 7.13 | 71.30 | 80.21 | | ☑ |
| 35mm Scotia 5.4 | 1.05 | 5.67 | 56.70 | 63.79 | | ☑ |

Place Order

script on addtocart.php

```
1    <?php
2    // dBase file
3    include "connect.php";
4
5    $recarray= ($_POST['recordnumber']);
6
7    print_r($recarray);
8
9    ?>
```

output

net2ftp - a web based FTP client   http://testing.e...m/addtocart.php

Array ([0] => 9 [1] => 10)

So I have confirmed that my data is now outputting in an array. I can move on to the next step – a table which outputs data corresponding to the values in the array.

4. First, I add my CSS to the page so that the display is closer to the final stage:

```
1   <!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN" "http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">
2   <html xmlns="http://www.w3.org/1999/xhtml">
3   <head>
4   <meta http-equiv="Content-Type" content="text/html; charset=utf-8" />
5   <meta name = "keywords" content="Wood, Mouldings, Trader, Timber, housing, purchase, quality, new zealand, moulding" />
6   <title>WMT: Order pg 2</title>
7   <link href="wmtv2.css" rel="stylesheet" type="text/css" />
8   </head>
9
10  <body>
11  <div id="container">
12      <div id="top"><img src="images/header.jpg" alt="Wood Mouldings Trader" /></div>
13          <div id="nav">
14              <ul>
15                  <li id="lefttab" ><a href="index.htm">Home</a></li>
16                  <li id="lefttab"><a href="products.php">Prices/Products</a></li>
17                  <li id="lefttab"><a href="order.php" class="active">Place an Order</a></li>
18                  <li id="lefttab"><a href="payment.htm">Payment</a></li>
19                  <li id="lefttab"><a href="delivery.htm">Delivery</a></li>
20                  <li><a href="contact.htm">Contact Us</a></li>
21              </ul>
22          </div>
23          <div id="main">
24
25              <div id="centerboxp">
26                  <h1><img src="images/titleorder.gif" alt="Place an Order"></h1>
27
28
29  <?php
30  // dBase file
31  include "connect.php";
32
33  $recarray= ($_POST['recordnumber']);
34
35  print_r($recarray);
36
37  ?>
```


5. Next, I try using the same script as with the tables output on previous pages, making the WHERE value the variable $recarray

```php
29  <?php
30  // dBase file
31  include "connect.php";
32
33  $recarray= ($_POST['recordnumber']);
34
35  print_r($recarray);
36
37
38  echo "<table border=1>";
39  echo "
40  <tr>
41  <td>Profile</td>
42  <td>Bundles in Stock</td>
43  <td>Piece Length (m)</td>
44  <td>Pieces/Bundle</td>
45  <td>$/Bundle</td>
46  <td>$/Bundle GST Incl</td><br />
47  <td>Select</td>
48  <td>Number to order</td>
49  </tr>
50  ";
51
52  print "<tr>\n";
53  $result = mysql_query( "SELECT Profile, BundlesInStock, PieceLength, PiecesPerBundle, PricePerBundle, PricePerBundleGST FROM Stock
     WHERE STOCKID = '$recarray'" )
54      or die("SELECT Error: ".mysql_error());
55      while($get_info = mysql_fetch_row($result)){
56      foreach ($get_info as $displayrow){
57  print "\t<td><font face=arial size=3/>$displayrow</font></td>\n";}
58
59          ?>
```

Output of this is

Parse error: syntax error, unexpected $end in **/home/.sorceress/leewhite/testing.endgathering.com/addtocart.php** on line **139**

So I need to find and fix a coding error. Probably "}"s

6. I had forgotten to end the table

```php
     WHERE STOCKID = '$recarray'" )
54      or die("SELECT Error: ".mysql_error());
55      while($get_info = mysql_fetch_row($result)){
56      foreach ($get_info as $displayrow){
57  print "\t<td><font face=arial size=3/>$displayrow</font></td>\n";}
58  print "</tr>\n";
59      }
60  echo "</table>";
61          ?>
```

Output now shows as

Place an Order

Array ([0] => 9 [1] => 10)

Profile	Bundles in Stock	Piece Length (m)	Pieces/Bundle	$/Bundle	$/Bundle GST Incl	Select	Number to order

So the no values at all are being retrieved from the database

7. Check that it's not just the array values being put out too early by print_r

```
32
33    $recarray= ($_POST['recordnumber']);
34
35    //print_r($recarray);
36
37
38    echo "<table border=1>";
```

Output

Place an Order

Profile	Bundles in Stock	Piece Length (m)	Pieces/Bundle	$/Bundle	$/Bundle GST Incl	Select	Number to order

©2008 Wood Mouldings Trader   Contact Us   Place an Order   Coding by Lee White

So that wasn't it

8. At this stage I talked to Mr Smith, who suggested an extra "foreach" statement to separate the values from the array.

```
52    print "<tr>\n";
53    foreach ($recarray as $stockid){
54    $result = mysql_query( "SELECT Profile, BundlesInStock, PieceLength, PiecesPerBundle, PricePerBundle, PricePerBundleGST FROM Stock
      WHERE STOCKID = '$stockid'" )
55        or die("SELECT Error: ".mysql_error());
56        while($get_info = mysql_fetch_row($result)){
57        foreach ($get_info as $displayrow){
58    print "\t<td><font face=arial size=3/>$displayrow</font></td>\n";}
59    print "</tr>\n";
60        }
61        }
62    echo "</table>";
63          ?>
```

Output

Place an Order

Profile	Bundles in Stock	Piece Length (m)	Pieces/Bundle	$/Bundle	$/Bundle GST Incl	Select	Number to order
90x10 Sq Dressed 5.4	10	5.4	10	71.30	80.21		
35mm Scotia 5.4	10	5.4	10	56.70	63.79		

Success! The php now selects the appropriate data from the mySQL database. I now need to add the form in the correct place in the table for customers to select number to order

9. Add the form data to the php

```
53  foreach ($recarray as $stockid){
54  $result = mysql_query( "SELECT Profile, BundlesInStock, PieceLength, PiecesPerBundle, PricePerBundle, PricePerBundleGST FROM Stock
    WHERE STOCKID = '$stockid'" )
55      or die("SELECT Error: ".mysql_error());
56      while($get_info = mysql_fetch_row($result)){
57      foreach ($get_info as $displayrow){
58      ?>
59      <form method="post" action="orderplacedtwo.php">
60  <td>
61
62                  <select name="unit" size="1">
63                  <option value="Bundles">Bundles GST inc</option>
64                  <option value="Bundles_GST_excl">Bundles GST exc</option>
65                  </select>
66
67
68      </td>
69      <td>
70      <input type="text" name="number" n="10" />
71      </td>
72  <?
73  print "\t<td><font face=arial size=3/>$displayrow</font></td>\n";}
74
75      }
76      }
77  echo "</table>";
78          ?>
```

Output

It's producing just a few too many forms.

10. Try placing the form data in a different place in relation to the foreach statements

```
52  print "<tr>\n";
53  foreach ($recarray as $stockid){
54  $result = mysql_query( "SELECT Profile, BundlesInStock, PieceLength, PiecesPerBundle, PricePerBundle, PricePerBundleGST FROM Stock
    WHERE STOCKID = '$stockid'" )
55      or die("SELECT Error: ".mysql_error());
56      while($get_info = mysql_fetch_row($result)){
57      foreach ($get_info as $displayrow){
58  print "\t<td><font face=arial size=3/>$displayrow</font></td>\n";}
59  ?><form method="post" action="orderplacedtwo.php">
60  <td>
61
62                  <select name="unit" size="1">
63                  <option value="Bundles">Bundles GST inc</option>
64                  <option value="Bundles_GST_excl">Bundles GST exc</option>
65                  </select>
66
67
68      </td>
69      <td>
70      <input type="text" name="number" n="10" />
71      </td>
72  <?
73      }
74      }
75  echo "</table>";
76          ?>
```

Output

Still not quite right.

11. Maybe I need to close the row on the table

```
67
68              </td>
69              <td>
70              <input type="text" name="number" n="10" />
71              </td>
72    print "</tr>\n"; <?
73          }
74          }
75    echo "</table>";
76              ?>
```

Output

Success! But there is still a slight bug.

12. Fix the bug
    (it's not a php part of the script, so it doesn't need the "print" or "\n" – which output.)

```
68            </td>
69            <td>
70            <input type="text" name="number" n="10" />
71            </td>
72    </tr><?
73        }
```

Output

The bug is now fixed.

13. Adding the rest of the form to the page. This is just html, so it's not too hard

```
75    echo "</table>";
76        ?>
77
78
79    <p>
80    <br />
81    The minimum amount purchasable is one bundle
82    <br />
83    <br />
84    <strong>Please specify for us</strong> units: 
85
86                and the number you wish to order: 
87                <br />
88                <br />
89                <strong> NOTE:  It is ESSENTIAL that you provide your e-mail or the sale will be unable to go through.</strong>
90                <br />
91                <br />
92                Your e-mail (for us to contact you RE your order): <input type="text" name="email" /><br /> <br />
93                Your Name (optional): <input type="text" name="name" />
94                <br />
95                <br />
96                Your Phone Number: <input type="text" name="phone" />
97                <br />
98                <br />
99                Shipping Address: 
100               <textarea name="shippingad" rows="6" cols="90"></textarea>
101               <br />
102               <br />
103               <input type="hidden" value="<? echo ($Profile) ?>" name="profile"/>
104               <input type="submit" value="Place Order" />
105               </form>
106               <form action="order.php">
107               <br />
108               Chose the wrong profile?  Go <input type="submit" value="Back" />
109               </form>
110               </p>
111               <p><strong>You will be sent a copy of the email so you are able to remember what you have ordered.
112               <br />
```

Output now looks like

So the order page is now displaying correctly.

14. The next step was to get this page outputting correctly to an automated email. This took about twice as many steps, but I will only show the ones related to addtocart.php here

15. I needed to preserve the value "stockid" for the next step, but here it was output in the array. I had to add in a hidden form to preserve it

```
52   print "<tr>\n";
53   foreach ($recarray as $stockid){
54   $result = mysql_query( "SELECT Profile, BundlesInStock, PieceLength, PiecesPerBundle, PricePer
     WHERE STOCKID = '$stockid'" )
55       or die("SELECT Error: ".mysql_error());
56       ?>
57
58       <input type="hidden" name="stocknumber[]" value ="<? echo ($stockid) ?>" />
59       <?
60       while($get_info = mysql_fetch_row($result)){
61       foreach ($get_info as $displayrow){
```

Check the "page source" in Firefox to make sure it works

```
<tr>

        <input type="hidden" name="stocknumber[]" value ="9" />
                <td><font face=arial size=3/>90x10 Sq Dressed 5.4</font></td>
        <td><font face=arial size=3/>10</font></td>
        <td><font face=arial size=3/>5.4</font></td>
        <td><font face=arial size=3/>10</font></td>
        <td><font face=arial size=3/>71.30</font></td>
        <td><font face=arial size=3/>80.21</font></td>
<form method="post" action="orderplacedtwo.php">
<td>

                            <select name="unit" size="1">
                            <option value="Bundles">Bundles GST inc</option>
                <option value="Bundles_GST_excl">Bundles GST exc</option>
                            </select>


                </td>
                <td>
                <input type="text" name="number" n="10" />
                </td>
</tr>
        <input type="hidden" name="stocknumber[]" value ="10" />
                <td><font face=arial size=3/>35mm Scotia 5.4</font></td>
        <td><font face=arial size=3/>10</font></td>
        <td><font face=arial size=3/>5.4</font></td>
        <td><font face=arial size=3/>10</font></td>
        <td><font face=arial size=3/>56.70</font></td>
        <td><font face=arial size=3/>63.79</font></td>
<form method="post" action="orderplacedtwo.php">
<td>
```

It does.

16. Add "[]" marks (as I learnt in a previous step) to "number" and "unit" to allow array output in the next step:

```
63   ?><form method="post" action="orderplacedtwo.php">
64   <td>
65
66                <select name="unit[]" size="1">
67                <option value="Bundles">Bundles GST inc</option>
68                <option value="Bundles_GST_excl">Bundles GST exc</option>
69                </select>
70
71
72        </td>
73        <td>
74        <input type="text" name="number[]" n="10" />
75        </td>
76   </tr><?
```

I can't check the effect of this till the next page, which will not be documented as it is too long.

Changes were later made to the order page so that it was slightly simpler:

Original display for stage 2

Place an Order

Profile	Bundles in Stock	Piece Length (m)	Pieces/Bundle	$/Bundle	$/Bundle GST Incl	Select	Number to order
90x10 Sq Dressed 5.4	10	5.4	10	71.30	80.21	Bundles ▾	
35mm Scotia 5.4	10	5.4	10	56.70	63.79	Bundles ▾	

Altered display for stage 2 (GST inc/exc box has moved)

Place an Order

Profile	Bundles in Stock	Piece Length (m)	Pieces/Bundle	$/Bundle	$/Bundle GST Incl	Number to order
90x10 Sq Dressed 5.4	10	5.40	10	71.30	80.21	
35mm Scotia 5.4	10	5.40	10	56.70	63.79	

The minimum order quantity is one bundle. Select GST inclusive/exclusive: [Bundles GST inclusive ▼]

Please specify for us units: and the number you wish to order:

NOTE: It is ESSENTIAL that you provide your e-mail or the sale will be unable to go through.

Your e-mail (for us to contact you RE your order): [＿＿＿＿＿＿]

(makes more sense too)

So the code was altered to:

```
100  print "<tr>\n";
101  foreach ($recarray as $stockid){
102  $result = mysql_query( "SELECT Profile, BundlesInStock, PieceLength, PiecesPerBundle, PricePerBu
     WHERE STOCKID = '$stockid'" )
103      or die("SELECT Error: ".mysql_error());
104      ?>
105
106      <input type="hidden" name="stocknumber[]" value ="<? echo ($stockid) ?>" />
107      <?
108      while($get_info = mysql_fetch_row($result)){
109      foreach ($get_info as $displayrow){
110  print "\t<td><font face=arial size=2/>$displayrow</font></td>\n";}
111
112          ?>
113
114          <td>
115          <input type="text" name="number[]" n="5" />
116          </td>
117          <?
118          print "</tr>\n";
119      }
120      }
121  echo "</table>"; ?>
122
123  <br />
124  <p>The minimum order quantity is one bundle.  Select GST inclusive/exclusive:
125
126                  <select name="unit" size="1">
127                  <option value="Bundles_GST_inclusive">Bundles GST inclusive</option>
128                  <option value="Bundles_GST_exclusive">Bundles GST exclusive</option>
129                  </select>
130
131
132
133  <br />
```

A number of other changes were also made, for example script added to output the profile name to the next page as a hidden value

```
49   foreach ($recarray as $stockid){
50   $profileresult = mysql_query( "SELECT Profile FROM Stock WHERE STOCKID = '$stockid'" )
51       or die("SELECT Error: ".mysql_error());
52       while($get_profile_info = mysql_fetch_row($profileresult)){
53       foreach ($get_profile_info as $displayprofile){ ?>
54       <input type="hidden" name="profile_for_next[]" value ="<? echo ($displayprofile) ?>" />
55       <?
56   }
57   }
58   }
59
```

Which was similar to the change which allowed the number in stock for each bundle to be output to the next page

```
38   foreach ($recarray as $stockid){
39   $numresult = mysql_query( "SELECT BundlesInStock FROM Stock WHERE STOCKID = '$stockid'" )
40       or die("SELECT Error: ".mysql_error());
41       while($get_num_info = mysql_fetch_row($numresult)){
42       foreach ($get_num_info as $displaynumber){ ?>
43       <input type="hidden" name="number_in_stock[]" value ="<? echo ($displaynumber) ?>" />
44       <?
45   }
46   }
47   }
```

And also I needed to add an if statement to stop cryptic error messages appearing when "place order" was clicked with no profiles/stock ID's selected

```
29   <?php
30   // dBase file
31   include "connect.php";
32
33   $recarray= ($_POST['recordnumber']);
34
35   if ($recarray > 0){
36   ///////////////////////set number in stock for use on next page
37
38   foreach ($recarray as $stockid){
39   $numresult = mysql_query( "SELECT BundlesInStock FROM Stock WHERE STOCKID = '$s
40       or die("SELECT Error: ".mysql_error());
41       while($get_num_info = mysql_fetch_row($numresult)){
42       foreach ($get_num_info as $displaynumber){ ?>
43       <input type="hidden" name="number_in_stock[]" value ="<? echo ($displaynumb
44       <?
45   }
46   }
```

The Brief

Version 1 (Initial Brief)

Tom Whitefield owns a Wood Moulding company, and would like a way to arrange sales with clients online.   The time constraint is only that of the internal, but he wants the website to be easy-to-use and appeal to clients with limited computer knowledge. He also wants and easy way to keep it up to date, and extra features such as pop-up images.

Version 2

Create a website for the business "Wood Mouldings Trader". It needs the ability to display "profiles" of wood products, and also the ability to add more of these profiles at a later date (to be added by non-computer techs at the business). The client has requested that images pop up when the name of the profile (to be in a product list) is hovered over. This website will deal with purchases of wood by cash, cheque, or direct deposit, but will *not* need to be secured, as it will only direct the purchaser to contact the company to arrange payment and pick-up.   The site is to sell *second-grade* wood moulding products. The client would like the website to be visually appealing, easy to use, and appropriate for use by DIY persons, builders, and contractors. These people are not always fond of computers, so the website should be simple.

Specifications

- The website should be easily compatible with older browsers.
- The site will have six pages: Home, Prices and Products, Stock List, Payment, Delivery, Contact Us.
- The website should be simple.
- It needs the ability to have more profiles added at a later date (i.e. it won't be static).
- The client has requested that images pop up when the name of the profile (to be in a product list) is hovered over.

Version 3

I need to create a website for the business "Wood Mouldings Trader". The site is to sell *second-grade* wood moulding products. The client would like the website to be visually appealing, easy to use, and appropriate for use by DIY persons, builders, and contractors. The colours to use are green, white, and blue (others possible). These people are not always fond of computers, so the website should be simple. Tabs should be large, with large and resizable text to make it easier for people whose vision is not as good. The website should be easily compatible with older browsers, and the navigation bar should be consistently placed to avoid confusion. It needs the ability to display "profiles" of wood products, and also the ability to add more of these profiles at a later date (to be added by non-computer techs at the business). The client has requested that images pop up when the name of the profile (to be in a product list) is hovered over. This website will deal with purchases of wood by cash, cheque, or direct deposit, but will *not* need to be secured, as it will only direct the purchaser to contact the company to

arrange payment and pick-up. The client does not want the website to have any associations with the parent company. When showed a series of example websites, the sleek, modern one was the one he liked best. Because Trade Marking is expensive, I will not be designing a logo for their company. The client uses excel sheets to keep product lists up to date, so it should be possible to easily update the site from these (about once a week). My site design will need approval from several people within the business. There are no size constraints on the website because of cost, but the download time still needs to be very short, so that viewers don't lose interest.

The website should have search bar to make it easy for users to find the product they want. This search bar should not be overly literal. The pages should be consistent throughout the site, and also with other websites. It should be easily scannable and avoid large blocks of text. It needs to take into account commonly used browsers, screen resolutions, and download speeds. I need to take steps to make the website visible to Google and other search engines. The website should look credible or users won't trust it. I should also consider other ways to increase sales, such as support for reordering or an information request form for clients.

The client also has a second website in mind for me to redesign; coding is not a large issue, but the site needs to be brought up to web visual and compatibility standards.

Specifications

- The website should be easily compatible with older browsers.
- The site will have six pages: Home, Prices and Products, Stock List, Payment, Delivery, Contact Us.
- The website should be simple.
- It needs the ability to have more profiles added (by non-computer techs at the business) at a later date (i.e. it won't be static).
- The client uses excel sheets to keep product lists up to date, so it should be possible to easily update the site from these (about once a week).
- Tabs should be large, with large and resizable text to make it easier for people whose vision is not as good.
- The client has requested that images pop up when the name of the profile (to be in a product list) is hovered over.
- The website should have search bar to make it easy for users to find the product they want. This search bar should not be overly literal.
- It needs to take into account commonly used browsers, screen resolutions, and download speeds.

Version 4 (Final Brief)

I need to create a website for the business "Wood Mouldings Trader". The site is to sell *second-grade* wood moulding products. The client would like the website to be visually appealing, easy to use, and appropriate for use by DIY persons, builders, and contractors. The colours to use are green, white, and blue (others possible). These people are not always fond of computers,

Comment: The final brief reflects the attributes and specifications required for the development of an outcome that meets the client need. It also explains the practice to be undertaken

so the website should be simple. The website should be easily compatible with older browsers, and the navigation bar should be consistently placed to avoid confusion. There should be a minimum of scrolling involved. The pages should be consistent throughout the site, and also with other websites. It should be easily scannable and avoid large blocks of text, and needs to take into account commonly used browsers, screen resolutions, and download speeds. I need to take steps to make the website visible to Google and other search engines.

The site needs the ability to display "profiles" of wood products, and also the ability to add more of these profiles at a later date (to be added by non-computer techs at the business). The client uses excel sheets to keep product lists up to date, so it should be possible to easily update the site from these (about once a week). An upload form will need to be created so that the client can update profiles with minimum hassle. Php will need to be written to convert a csv file output by Excel into data in the mySQL database. The database itself will need to be set up on the client's server prior to handing-over of the site, and instructions will need to be written both on uploading data and on managing the mySQL database (simplified). The client has requested that images be included in the table of data. An upload form will need to be created for these, and php to retrieve image name from its place in the database then display the image in the table will also need to be written. The site will also feature a hit-counter add-on from Telecom (the service provider) and this will need to be integrated with the rest of the site. An order form will need to be created which will automatically email both the customer and the client when an order is placed. The site will need multiple order capability. The forms used to output the emails to the client/customer need to tell the customer if they have ordered more bundles than in stock, or if they have forgotten to fill in their email and/or address/phone/etc. In this case, the order needs to not go through.

This website will deal with purchases of wood by cash, cheque, or direct deposit, but will *not* need to be secured, as it will only direct the purchaser to contact the company to arrange payment and delivery. The client does not want the website to have any associations with the parent company. When showed a series of example websites, the sleek, modern one was the one he liked best. The website should look credible or users won't trust it. Because Trade Marking is expensive, I will not be designing a logo for their company. My site design will need approval from several people within the business. There are no size constraints on the website because of cost, but the download time still needs to be very short, so that viewers don't lose interest.

Specifications

- The website should be easily compatible with older browsers.
- The site will have six pages: Home, Prices and Products, Place an Order, Payment, Delivery, Contact Us.
- The website should be simple.
- It needs the ability to have more profiles added (by non-computer techs at the business) at a later date (i.e. it won't be static).

- The client uses excel sheets to keep product lists up to date, so it should be possible to easily update the site from these (about once a week).
- It needs to take into account commonly used browsers, screen resolutions, and download speeds.
- An upload form will need to be created so that the client can update profiles with minimum hassle.
- Php will need to be written to convert a csv file output by Excel into data in the mySQL database.
- The database itself will need to be set up on the client's server prior to handing-over of the site, and instructions will need to be written both on uploading data and on managing the mySQL database (simplified).
- The client has requested that images be included in the table of data. An upload form will need to be created for these, and php to retrieve image name from its place in the database then display the image in the table will also need to be written.
- The site will also feature a hit-counter add-on from Telecom (the service provider) and this will need to be integrated with the rest of the site.
- An order form will need to be created which will automatically email both the customer and the client when an order is placed.
- The site will need multiple order capability.
- The forms used to output the emails to the client/customer need to tell the customer if they have ordered more bundles than in stock, or if they have forgotten to fill in their email and/or address/phone/etc. In this case, the order needs to not go through.
- There needs to be a secured "Manager site" for the client to manage the site from without concerns about hackers. I will need a login and also a slightly altered appearance for this site.

The Development of the Specifications

When I started the project, I had virtually no specifications to work with. However as I continued through the project, the more of the site I created, the easier it was to see what the next step would be. The client also appeared to feel this way, and sent an increasing number of specifications and changes to be made towards the end of the project. Learning more about php also helped clarify the specifications, as I learnt how to word the request, and how many steps would be needed to create, say, an order form.

How the Final Design meets the Specifications of the Brief

The final solution has been checked to make sure that the site is compatible with older browsers. The site has six pages, Home, Prices and Products, Place an Order, Payment, Delivery, Contact Us, all of which function correctly. The site is simple to navigate, and has the ability to have more profiles added (by non-computer techs at the business) at a later date (i.e. it is not static). The php scripts written allow the client to easily and regularly update the site from Excel files. Images have all be optimized to reduce download times. An upload form has created so that the client can update profiles with minimum hassle, and php has been written to convert a csv file output by Excel into data in the mySQL database.   The database itself was set up on the client's server prior to handing-over of the site, and instructions were written both on uploading data and on managing the mySQL database (simplified). The client

requested that images be included in the table of data, so an upload form was created for these, and php to retrieve image name from its place in the database then display the image in the table has also been written. The site features a hit-counter add-on from Telecom (the service provider) and this is integrated with the rest of the site. An order form has been created which automatically emails both the customer and the client when an order is placed. The site also has multiple order capability, and the forms used to output the emails to the client/customer tell the customer if they have ordered more bundles than in stock, or if they have forgotten to fill in their email and/or address/phone/etc. In this case, the order doe not go through. There is also a secured "Manager site" for the client to manage the site from without concerns about hackers. I created a login and also a slightly altered the css for this site.

Correspondence with the Client regarding Specifications
First detail (April 10)

"I would envisage that Andrew will provide word and excel files of information to be displayed within tab settings e.g a home page with general info about who we are, a product list complete with PDF drawings and/or photos of the product being sold, a stock list (which we would want to be able to update on a regular basis), a price list (again able to update and amend), ordering and delivery info page.

Andrew will supply all the technical and narrative detail. Also photos etc.   He will begin communication with you once we have heard from Mrs McMahon or the school.   You would build the website and input into artistic display/ease of use issues etc."

The detail was (6 May):

> **Comment:** This section exemplifies the ongoing interactions with the client to determine the attributes of and specifications required for the intended outcome. The student addresses issues as they arise and reflects on the interactions and further actions
> This material is also exemplified in the communications journal

Current stock list

SIZE	PROFILE	LENGTH	# PCS PER BUNDLES	BUNDLES IN STOCK
30x10	SQUARE DRESSED	5.2	10	77
		5.2	10	64
40x10	BEVELLED ARCHITRAVE	5.4	10	9
40x10	BULLNOSE ARCHITRAVE	5.4	10	39
40x18	BEVELLED CORNICE	5.2	10	24
40x18	SQUARE DRESSED	5.2	10	3
40x18	SQUARE DRESSED	5.4	10	3
60-10-PJP	PAINTTED BULLNOSE ARCH	5.2	10	36
60x10	BULLNOSE ARCHITRAVE	5.4	10	3
60x10	BEVELLED ARCHITRAVE	5.4	10	9
60x10	SQUARE DRESSED	5.4	10	3
90x10	BEVELLED ARCHITRAVE	5.4	10	9
31x11	SQUARE DRESSED	5.4	12	32
31x11	SQUARE DRESSED	5.4	12	17
31x11	SQUARE DRESSED	5.4	12	42
42x11	BULLNOSE ARCHITRAVE	5.4	12	9
42x11	BEVELLED ARCHITRAVE	5.4	12	14
42x18	SQUARE DRESSED	5.4	12	45
42x18	SQUARE DRESSED	5.4	12	8
66x11	BEVELLED ARCHITRAVE	5.4	12	17
66x11	BULLNOSE ARCHITRAVE	5.4	12	15
67x11	BULLNOSE ARCHITRAVE	5.4	12	6
		5.4	12	11
		5.4	12	16
		5.4	12	16
		5.4	12	16

Payment

Payment options

Bank deposit

Cheque with positive ID

Cash

No EFPOS facilities on site

Pickup/Delivery

Pick ups by arrangement from the production factory site located on

Crancross st (off Dukes Road)
Mosgiel

Contact Andy Dingley on 021 999 134 to arrange a suitable pickup time.

Delivery by arrangement at buys cost

Otago region	$	(to be advised depending on location)
South Island	$	(to be advised depending on location)
North Island	$	(to be advised depending on location)

Contact

Pick up site address

Pick ups by arrangement from exporter's production factory

New Zealand Moulding Co Limited
Dukes Road
Mosgiel
Dunedin
New Zealand

Ph   03 489 7078
Fax   03 489 9849

Contact person Andrew Dingley
Email   andy@nzmoulding.co.nz

Second Detail (June 4)
Met with Client. Discussed the purpose of the website, the target audience, and specifications.
He wants the website to:
Be simple so that even those who dislike using computers and the internet find it appealing and easy to use
Have no associations what-so-ever with their parent company
Checked styles – he liked a sleek, modern style
Discussed navigation bar placement – there aren't many links, so we agreed it would be good to place it along the top
Discussed copyright issues – should I come up with a logo for their company?
He wants a way to update prices (about once a week). He usually keeps these updated in a excel file
He needs a way to add new "profiles", image included

An information request form for clients is low-priority, but not a bad idea.
Colours to work with are white, green, blue, and whatever else I want.
"Any" feel I deem appropriate is okay for the website – they wish to use my design knowledge.
I decided it should be crisp and simple, so I will not use a lot of fancy design things – just keep it simple.
They have an existing host, and they are happy to handle the cost etc of whatever is associated with that – so there aren't size constraints except for download time.
I learned that:
They had two websites in mind for this project – one from scratch, one just needs a huge graphic update.
They have some salesmen who are going to be communicating with me in the future, and will have input into the final design of the website.
Note to self:
The page will be aimed at adults etc, so the tabs etc should probably be LARGE, with 14pt(?) text
Look up again that page on how to make resizable rounded tabs
MAKE SURE to use sizes such as "small" "large" when setting type on website – DON'T specify pt sizes. It could cause confusion or irritation to user if they try to resize and the text doesn't work.

Researched trademark and copyright laws – it seems to be expensive to trademark a logo, so the company decided that they didn't want me to create a new logo for them. Sent email asking when I could go to their company to take photographs.

Other things that came out of the interview:
do I need to redevelop the main site? It badly needs it. I would like to if I have time.
Need mock up of form. Does there need to be a phone number?
Shipment should happen after payment. How will the company keep track of orders? Is this a software problem or a management problem?
There are two other sales assistants involved in this. What does this entail for the project? I will need to allow more time for work etc to be examined by them.
Webspace, domain name; all these still need attention/decision.
How to deal with constantly updating..?
Disclaimer
Layout should be centred to fix maximum number of browsers. Client agrees.
There are only two main types of Wood Mouldings so the nested link idea is not helpful
They don't have physical mail outs
I could integrate a query form
Conditions of Sale should be on the site somewhere
I need to go do a photoshoot in Mosgiel

Third Detail (July 4)
(From Martin Savory, IT Manager, and not my previous correspondent)

"Looks to me that it would be best to leave the SCFP web site alone and
set up a new web site - www.woodmouldings.co.nz ? As I said Xtrahost is
not geared up for transaction based web sites.

As regards getting the information out of StreamLine and in to Access, this should not be a problem. You can do an excel query on the StreamLine items you want to sell (question - how to identify these?) and then import (get external data) in to access the generated xls file.

Have attached rough cut example query and generated access database from my playing. I AM NOT AN ACCESS EXPERT."

(This was mildly unhelpful as it didn't answer any questions I had about how they wanted the site to work.)

Response from Andy Dingley, correspondent, to my queries on designs (he emailed this first to others within his company)

"I like agree with Lee the # 5 option looks the best with the wooden strip below the heading.

The stock list page looks clean and simple to use to order what ever we may have to offer in the future. The only thing that she has been advised to ask us is could we load the stock onto an Access database that can run in the back ground of the website. This is not something I know a lot about could one of you guys advise whether I could pull this info out of Streamline and dump it into Access?"

Correspondent confirms a design

Hi Lee,
Yes go ahead with option 5 that's the one we liked best I look forward to seeing the end result.

Regards,

Andy

The shocking message that my correspondent was leaving the company. He also confirmed that mySQL and php would be suitable

This will work better for us as you are aware we use excel and I don't think it will be a major problem to load the items we want to sell onto a spread sheet. Have a look at the attached file let me know if this is what you can use it.

We do have SKU's for each item we produce right through our process but these are generic to this site and may identify us to others in our industry. They would also be very confusing to anyone else other than the people who use them every day so for that reason I think we will

rename the items to make them easier to tell what they are.

What sort of time frame is looking at because I have handed my notice in and will be leaving this company by the Sept 12th at the latest. Do not worry about this as I will make sure that someone else takes over from me.

There was then a two week gap with no response at all from the client.

Then, suddenly, there was a very different response from previously from a different person (September 10)
Lee…….

Unfortunately Andrew Dingley has left our employ but I will be your contact to enable you to complete this project.

In viewing the work attached:

The home page design I liked the best was page 6
The products and prices tab I felt was most striking (and simple) was on page 9

The test.endgathering.com host site looks really good. Some errors to fix. Address is Carncross Street (off Dukes Road). In one page carncross is spelt wrong; on another it does not appear. All address references should be as above. The contact person is now Mike Crawley and his email is mike@nzmoulding.co.nz   We will not use cell phone references and also delete NZ Wood Mouldings phone numbers.   Final point is to delete wood moulding trader as being a Ltd. Just show it as Wood Moulding Trader.

The question of running the web site once complete. Because it is an external use web site (customers dial in), we have to worry about security so hosting it on our existing server system is not an option.

Given that it is a static display website (no moving pictures) it probably can be hosted externally for very little per month and this would be the safest and most cost effective option. I believe our contract with telecom allows a certain amount of free web time/capacity via xtra who host our email system.

I will now copy this message into our group IT manager, Martin Savoury. He is based at Thames in the North Island but will be helpful in accessing our telecom arrangement with Xtra. Feel free to contact him and he may well be able to make the arrangements for you; to install the web site with Xtra hosting.

Martin… Lee White is a year 13 student and is setting up our trading web site as part of her final examination requirements. Please assist her as required and advise me if there are any issues.

Lee….two of the above attachments would not open but I have viewed the web site temp site.

I couldn't find the original brief in Andys file so perhaps you can email it me so I can provide feedback on what has or hasn't been achieved so far. From memory, one critical part is the ability for our staff to go into the web site and make changes easily. Could be to add and delete products, change prices or delivery terms etc. This is very essential. Please comment on this.

Overall you have done a great job so far. Email me if you need any further information.

Regards,
Tom Whitefield

Changes:
- requested different site design from previous correspondent

More details arrived from Mr Savory
(September 22)
Hi Tom,

Apologies for the delay in replying.

Anyway, point by point –

1)   Static web site removes the need for MySQL support and associated cost. I would suggest something like a daily/weekly FTP upload to the web site of an Excel spreadsheet (saved as an HTM web page file) with associated images. I have attached an example that I created from Excel, although the images are just standard Windows sample pictures.
2)   Telecom Business Hub do web site hosting –
Website Starter
Package includes:
Domain name for 1 year, UNIX 200MB Hosting:-200MB of storage space-2GB of traffic-2 email accounts-SSL Secure Server-EasySite Design Tool $12.95/per month + GST
3)   Agree and use one of the email addresses in the Starter package above forwarded to the nominated NZWM person (Mike Crawley)
4)   Of course the email will come from person@nzmoulding.co.nz
5)   Agreed
6)   It is possible to interrogate the source documents on a web site to see say author information. If the Excel spreadsheet of skus etc is uploaded by Mike @ NZWM it is possible his information will appear in the source documents. To get over this we need to download and install Microsoft's Remove Hidden Data Tool on Mike Crawleys PC. Once run against the SKU's spreadsheet author information is removed.

Other comments –

1) Need to check with Lee she has not/will not do anything on the web site that precludes UNIX hosting.
2) Contact Page still has New Zealand Moulding Company Ltd – I believe in the light of your suggested re direction this page can be removed.
3) Pickup/Delivery Page should say Delivery only with content amended as appropriate.
4) We will need a domain name for this site – currently www.woodmouldingstrader.co.nz is free.

Regards,
Martin

-----Original Message-----
From: Tom Whitefield
Sent: Thursday, 18 September 2008 09:18
To: Martin Savory
Subject: FW: Wood Mouldings Trader website

Martin………

Can you go through this and comment. My view is we need to re-direct Lee to the following:

1.) The website is static (non –interactive) but is able to be updated with new pricing and product info easily. This doesn't mean the layout or the formats are changeable. It means the column and row information about how many packs are available, what the price is and what the items are (skews) can be changed.
2.) The website can be hosted somewhere cheaply ($10-30 per month type thing).
3.) That it doesn't allow for ordering on line but simply refers to an email address for ordering purposes. i.e. customer will order manually via an email to an address we set up to receive such orders. Buyer includes full delivery address details and phone contact details.
4.) Once the order is received a confirmation is sent (by us) to the buyer along with a quantified cartage cost additional (this can only be quantified when the delivery address is known anyway). Again manually via email along with an invoice which is payable prior to the dispatch of the product. Our invoice would have details for direct bank deposit or cheque payment.
5.) That we exclude the option for on site pickups (for safety and disruption reasons) i.e. we do it as a carton programme where the product is packaged in a carton and delivered to the buyer. This is done only after payment has been received/cheque has cleared.
6.) The web site design and layout is great. We will want to delete any reference to NZ Wood Mouldings or other company information. Our theme is a site that can offer cheap export over runs and seconds for a number of wood manufacturing sources. Southern Cross FP has to be careful it doesn't get

attention from any NZ based customers who see us selling to their customers (i.e. selling to your customers customer).

Any other points or critique would be helpful.

Changes:
- *they wanted a static website now, because of "the need for MySQL support and associated cost." This would require the entire project to be rewritten, and was unpleasant to hear at this late stage. This comment halted design for a while.*
- *They want to be sure that the site doesn't allow for ordering on line. It doesn't, (at least not in the cash exchanging sense) but this seems to have been a confused issue.*
- *Various smaller text issues such as "we exclude the option for on site pickups (for safety and disruption reasons)"*

mySQL issue was resolved (with difficulty, due to confusion with Telecom), and production of the site moved on. I created the order form idea without client input (hard to get a clear answer on how they pictured clients getting orders in – more of a "what not to do"). Images also continued without further comment, except for confirmation that it was okay if they didn't pop-up.

Mr Savory called with fixes to the website:

(September 24)

- I had forgotten to put a logout box on the pages in the Admin only section on the second half of each set of pages.
- If there were no checkboxes selected and someone clicked "place order" on the products page it output nonsense. This needed to be changed to output a message such as "no profiles selected, try again"
- Some text needed changing; "minimum purchasable amount" → "minimum order quantity"

I hence fixed these.

Then he found some more errors
(October 16)

Please change password to *********.

Have done some more tests on the website and found some anomalies - see attached document.

Hope you can fix.

Thanks,
Martin

Attachment:

Home page and Contact Us page – change e-mail us to E-mail Senior Trader with E-mail only as hyperlink.

Should convinience below be spelt convenience?

IMHO –
View Total Database should say View Database
Sorry, but unless you are logged in you do not have permission to upload new data should say Sorry, but unless you are logged in you do not have permission to view the database.

Note also the above screen is 'taller' than the other admin tabs/screens. Reduce to match size below.

From the prices/products page -
You can order multiple profiles from this page by selecting the assosciated checkbox in the "Order" column of the table, then using the "Place Order" button.
Spelling mistake – associated I believe is correct.

Can you make the tick/check boxes line up please. Looks untidy as it is – see below.

Clicking Products Page below gives Page Not Found error,
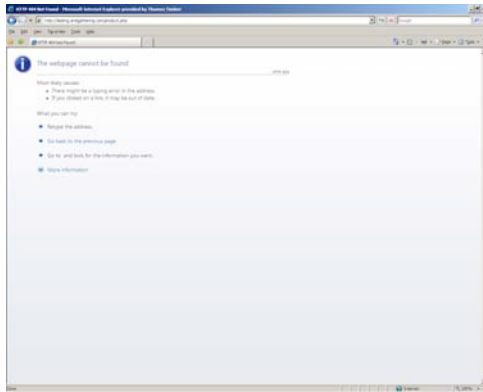
Referring to Place an Order screen below
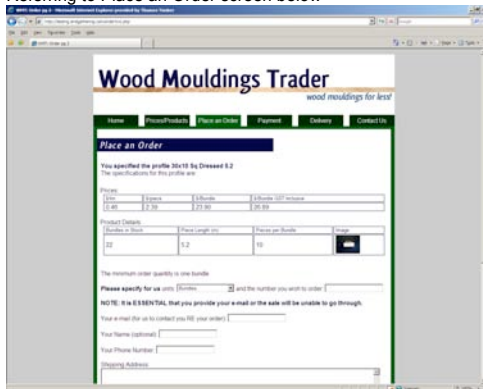
Hit Place Order from above page without entering quantity or e-mail and you get below.

Incorrect IMHO. Should have said something along the lines of E-mail address and/or quantity (i.e. not null or zero) required with a go back button to take you back to the Prices/Products page.

Hitting login on the admin page without entering a user/password gives error below. Needs a back button added to go back to Admin login page. You can get back by using the browser back/forward buttons but it is messy.

I also received details for their server to get site up and running for real

Hi Lee,

Yes, Telecom a mess but I think I have sorted it (had to go for amore expensive plan).

The web site is http://woodmouldingstrader.co.nz

Click on the Control Panel link and use userid ***** password ****

Expand Databases on left hand column and lo MySQL and phpMyAdmin.

MySQL password is ******

This only allows you to disable MySQL or change password though.

Clicking on phpMyAdmin shows it is enabled and clicking on Administer

MySQL with phpMyAdmin (user is admin with no password) should let you do your stuff.

Have a look also at the rest of the stuff - Addons Hit Counter may be useful to add to the site/your code.

Let me know if any problems.

Thanks,

Martin

Hi Mr Savory,

After some experiementation (as always happens with logins and websites) the way to get in the phpMyAdmin turns out to be

username: ******

password: *********

Not sure why, possibly I managed to change the default my accident without realizing it (oops).

So that's if you ever need to get into the phpMyAdmin.

On that line, do you want brief instructions for managing the database through phpMyAdmin? Almost anything you alter also needs php altered, but if you, say, wanted to change the username and password for the site, that only exists in the database, and I didn't make a front end for it (complicated and probably difficult to secure).

At the moment the host seems unable to read php files. I work on fixing this over the next few days.

Regards,

Lee

The latter stages of the project were better for client communication, and Mr Savory was very helpful in the trouble-shooting stage. The site was repeatedly updated and improved.

Hi Lee,

A couple more things -

Please add Length(m) to the Profile (Size(mm), Description) heading so it reads (Size(mm), Description, Length(m)). Sorry, I know we asked you to remove Length from the heading before but I discovered a problem with ordering with the two sq dressed profiles without length on them. You

got both profiles even if you only wanted to order one.

Note also that you can order more bundles than are in stock. We should prevent this I think. Error message and allow user to reduce quantity on order.

Thanks,

Martin

Hi Lee,

Yes please, brief instructions on managing the database with phpMyAdmin would be useful.

Can I also have some notes/documentation on updating the web site -

What program did you use to create the web site?
How can we change the web site?
Can we have a copy of the web site files/programs/scripts etc. as a backup should we need to reload?
How do we load the web site on to BT's server?

Regards,
Martin

Home Page –

Remove e-mail link at bottom.

Change "E-Mail Senior Trader" to "E-Mail Senior Trader".

Contact Us page –

Change "E-Mail Senior Trader: e-mail" to "E-Mail Senior Trader".

On the administrators pages (with no login) the view database page is larger (more blank rows) than the Load Image, Load CSV and Home Pages.

Cryptic Error messages when no product selected should be removed/hidden.

Problems with emails – expected order from trader01@woodmouldingstrader.co.nz not anonymous@woodmouldingstrader.co.nz – see below.

Also definitely typed in a shipping address but it does not appear to be printed?

Change "to shipping address" to "to be shipped to:"

Can you also reduce the number of blank lines that appear in the email to make it more readable.

Some problems with this page –

"22/16/5/5" should not appear.

"You ordered bundles" should not appear.

"You may wish to record this for your records" should say "You may wish to print this page for your records."

"Your Order comes to a total of 54.79" should not appear.

Issues with associated email –

Sent by anonymous?

"espectively," should say "respectively,"

"They ordered Bundles" and "Total cost comes to: 54.70" should not appear.

Can you also reduce the number of blank lines that appear in the email to make it more readable.

Can you add the Hit Counters Code to the web site please – see www.woodmouldingstrader.co.nz/controlpanel (user ****** password *****) ADDONS, Hit Counters.

Still to do – lineup tick boxes on Products/Prices pages please.

And more similar. Lots of small errors, which I was then able to work through and fix. There were some larger projects mixed in (if statements in php for the "don't send if email is empty" issue).

The code explained (html, css, php)

For the creation of my website, I worked first with html and css, the later with php and mySQL databases. I used html to set up the basic data and page instructions, and php for all of the formatting and graphic effects. To explain my working, I will guide you through index.htm, and also parts of the CSS (Cascading Style Sheet).

html

The blue is the html, and the orange is my comments on what each part does:

The <!DOCTYPE part sets the language that the browser should use to decode the site. The <head> contains data that will not be displayed in the body, i.e. the main part, of the website, but is still needed for it to function. For example, <title> sets the title for the site, which will be displayed in the header bar of your browser. The meta tags tell search engines the content of the site. The <link> is to an external style sheet, and easy way to set the visual styles for the site.

<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN" "http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">

<html xmlns="http://www.w3.org/1999/xhtml">

<head>

<meta http-equiv="Content-Type" content="text/html; charset=utf-8" />

<meta name = "keywords" content="Wood, Mouldings, Trader, Timber, housing, purchase, quality, new zealand, moulding" />

<title>Wood Mouldings Trader: Home</title>

<link href="wmtv2.css" rel="stylesheet" type="text/css" />

</head>

<body> The body of the website contains all the important information that viewers see

<div id="container"> A <div> allows programmers to separate data into blocks, and usually contains other divs within it to give the page its structure. <div>s are easy to apply styling to in CSS sheets, and so are very useful, especially when applying the same name to divs across different pages. They are all able to link back to the same style sheet (I used this extensively in my site). "container" is the large white background box which contains all the other divs.

<div id="top"></div> I wanted to use a fancy font for my website's header on each page, but because fonts vary from user to user, it is appropriate to use an image file to ensure a consistent look.

<div id="nav"> The div "nav" contains the navigation bar. The "id" tags ("lefttab") refer to the css and tell it more about how to display. Class= "active" is another link for the css, which will be discussed next.

The <a href> tag creates a link to the specified page for each tab.

      <li id="lefttab" >Home

     <li id="lefttab">Prices/Products

     <li id="lefttab">Buyer's Page

     <li id="lefttab">Payment

     <li id="lefttab">Pickup/Delivery

     Contact Us

  </div>

The "mainhome" div is unique to this page, and was used specifically to set the background as an image in the CSS so that I could display a visually interesting frontpage with images in very set places with the assurance that it would display consistently across differently sized screens.

       <div id="mainhome">

"textblock" is also unique to index.htm, and in other pages I used "centerbox" to perform the same purpose of containing the main text of the website. In the css, I used this to set the font family and colour etc for the text in paragraphs, and also the size of the container so the text remained in the space I wished it to.

           <div id="textblock">

Again, I wanted a decorative font. For consistency across different users' browsers, the heading on each page is also an image.

    <h1></h1>

      The text displayed on the homepage<p>

         Take advantage of export overruns and seconds

Buy at 50% or less of retail price

A range of architraves available including scotia skirting and many more timber profiles

These quality timber profiles are available direct from the exporter's production factory

</p>

</div>

I wanted a div which would stay locked in the lower right of the website and display the address etc for the company, so I created "lowerright".

<div id="lowerright">

Wood Mouldings Trader

Carncross Street, Mosgiel, Dunedin

New Zealand

Fax   03 489 9849

</div>

</div>

In the footer, I placed contact information etc for the site (this is the small dark green bar across the bottom).

```
<div id="footer">

        <ul>

  <li>&copy;2008 Wood Mouldings Trader</li>

  <li><a href="mailto:mike@nzmoulding.co.nz">Contact Us</a></li>

  <li>Coding by Lee White</li>

  </ul>

</div>



</div>




</body>

</html>
```

CSS

The CSS is too large to go through all of, so I will only go through the parts relevant to index.html.

This sets the encoding to be used for the CSS document

```
@charset "utf-8";

/* CSS Document */
```


body sets the background colour for the main part of the website (this is the gray you see behind the main site) and also the font family to use if no other is specified.

```
body {background-color:#CCCCCC;

                font-family:Geneva, Arial, Helvetica, sans-serif;

                }
```

is used because "#container" refers to the "container" div, and divs are denoted by a # sign in CSS. This sets the margin to auto, making the container div center, and specifies a width, 800px, which I deemed would display as tolerable on the large majority of browsers.

```
#container {

                              width: 800px;

                              margin: auto;

                              }
```

/*HEADER*/ A comment so I can tell which section I'm working with.

The formatting and background colour (white) for the div which contains the header image

```
#top {background-color:#FFFFFF;

    width:180px;}
```

/*NAVIGATION*/

Sets the background colour to white

```
#nav {background-color:#FFFFFF;}
```

It is customary to do navigation bars as unordered lists – this also sets the height and line height

```
#nav ul{

        height: 30px;

        line-height: 30px;

        margin:0px;

        padding-left:0px;

                }
```

The formatting for the text within each "tab" of the navigation bar

```
#nav li{
```

```
        float: left;

        font-family: Arial, Helvetica, sans-serif;

        font-size: medium;

        list-style-type: none;

        line-height: 30px;

        width: 120px;

        background-color:#003300;

        text-align:center;

}
```

Because lists have specific formatting rules that must be adhered to, much of the formatting for the navigation bar was contained in the "link" formats – this way, I was able to specify widths and confirm heights so that the display would be uniform across the bar. The text within the navigation bar is all links, so this method works. Whether it is a visited or non-visited link, in this case we wish them to be identical, so they share code.

```
#nav a:link, a:visited {

        font-family: Arial, Helvetica, sans-serif;

        font-size: medium;

        line-height: 30px;

        color:#FFFFFF;

        text-decoration: none;

        display:block;width:120px;

        }
```

The a:hover must in this case be forced to be consistent with the other a:'s, with the exception of colour.

```
#nav a:hover{

        font-family: Arial, Helvetica, sans-serif;

        font-size:medium;
```

```
        color:#FFFFFF;

        text-decoration: none;

        height: 30px;

        display:block;width:120px;

        background-color:#016110;

}
```

I wanted white spaces between the tabs, and the best way to do this was to give them borders. However, because I wanted the tabs to be flush with the edges of the "main" div, I had to specify borders on the left for all but the left-most tab. This was difficult, because I couldn't just make "lefttab" and apply it only to the leftmost one specifying border=0, as the other border instructions would overwrite this. The workaround I came up with was specifying left tab on all the tabs except the leftmost one instead.

```
#lefttab {

        border-right-color:#FFFFFF;

        border-right-style:solid;

        border-right-width:16px;

                }
```

This class tag (with a ".") specifies that the page the user is currently on should have a background colour matching the "main" div (lighter green). On each page, I applied this class only to the current page. This created a clear and informative layout.

```
.active {

        background-color:#016110;

}
```

```
/*HOMEPAGE ONLY*/
```

This is the specifications for the image displayed in the background for the homepage. The background colour (visible slightly around the image) is set to green. Heights and widths are also specified to give even spacing around the image, and compensate for the padding.

```
#mainhome {
```

```
        background-color:#016110;

        background-image:url(images/frontpgbg3.jpg);

        background-repeat:no-repeat;

        background-position:center;

        color:#000033;

        padding: 5px;

        width:790px;

        height:541px;

        }
```

This specifies width for the block the text is contained in.

```
#textblock {

        width:500px;

        height: 350px;

        font-family:Arial, Helvetica, sans-serif;

        font-size:small;

        padding-left:5px;

        margin-top:30px;

        }
```

This specifies placement and size etc for the div containing the address etc for the company.

```
#lowerright{

        width:256px;

        height:163px;

        padding:5px;

        margin-right:5px;
```

```
        margin-bottom:0px;

        margin-top:65px;

        float:right;

        color:#FFFFFF;

        font-size:11px;

        text-align:right;

        }




/*MAIN*/
```

This sets colours etc for the main div

```
#main {

        background-color:#016110;

        color:#000033;

        padding-top:5px;

        padding-bottom:5px;

        height:auto;

        }
```

This was added to prevent strange spacing appearing and separating the footer slightly from the main.

```
#main:after {

        display: block;

        visibility: hidden;

        content:".";

        width: 100%;

        height: 0.1px;
```

```
        clear: both;

}
```

This sets the header images to the same relative place on each separate page for continuity

```
        h1{

        padding-left:-20px;

        }
```

This sets colour, font, family, and padding for everything in the entire site tagged <p>

```
p{

        color:#0d004c;

        font-size:medium;

        font-family:Arial, Helvetica, sans-serif;

        padding:10px;

        }
```

```
/*FOOTER*/
```

The footer also needed alignment and colours specified, and as it was also a list, it needed similar ul and li treatment to the navigation bar (only easier, as these were not required to be consistent widths)

```
#footer {

        color:#FFFFFF;

        font-family:Arial, Helvetica, sans-serif;

        font-size:12px;

        background-color:#003300;

        vertical-align:middle;

        text-align:left;
```

```css
        }


#footer ul{

        padding:4px;

        margin-top:-0px;

        }
#footer li{

        list-style-type:none;

        display:inline;

        padding-left:10px;

        }
```

Specifying the link text colour and decoration, so that it doesn't default to bright blue which doesn't match my website.

```css
#footer a{

        color:#FFFFFF;

        text-decoration:underline;

        }
```

php

I will explain the most complicated php that I ended up doing, near the end of the project. This was for the multiple order system.

Stage one: Getting the checkboxes to appear in the table with the product details:

Profile (Size(mm), Description)	$/lm	$/piece	Pc length (m)	$/Bundle	$/Bundle GST Inc	Pcs/ Bundle	Bundles in Stock	Image	Order
30x10 Sq Dressed 5.2	0.46	2.39	5.2	23.90	26.89	22	10		☐
30x10 Sq Dressed 5.4	0.46	2.48	5.4	24.80	27.90	16	10		☐

This mostly involved adding to a php already created to output the details as a table.

Segment of products.php:

```php
<?php
```

include "connect.php"; this connects to another php file, which contains instructions to connect to the database (such as password, username, etc)

This defines what "$result" is; "mysql_query" gets data from the database (which has already been "connected" to. The "SELECT" portion tells the php which fields to take from the database. "FROM" defines which table in the database. "WHERE" specifies that it should only grab fields who's corresponding BundlesInStock value is greater than zero.

$result = mysql_query("SELECT Profile, PerM, PerPieces, PieceLength, PricePerBundle, PricePerBundleGST, BundlesInStock, PiecesPerBundle FROM Stock WHERE BundlesInStock > 0")

or die("SELECT Error: ".mysql_error()); if there is an error (a generic php/mySQL error) the script will stop running, and will print the error to the screen.

$recno = mysql_query("SELECT STOCKID FROM Stock") This defines what the value "$recno" is. This part will be used later for the checkboxes.

or die("SELECT Error: ".mysql_error()); again, this stops the script and outputs errors

$image = mysql_query("SELECT Image FROM Stock") This defines the value of "$image"

or die("SELECT Error: ".mysql_error());

$num_rows = mysql_num_rows($result); This specifies the number of rows in the output table as the number of rows in the variable "$result", which will be the number necessary to display data retrieved from the database.

echo "<table>"; "echo" is used here as a way to create html tags for a table within the flow of the php.

echo " these are the headings for the table

<td>Profile (Size(mm), Description)</td>

<td>$/lm</td>

<td>$/piece</td>

```
<td>Pc length (m) </td>
```

```
<td>$/Bundle</td>
```

```
<td>$/Bundle GST Inc</td>
```

```
<td>Pcs/ Bundle</td>
```

```
<td>Bundles in Stock</td>
```

```
<td>Image</td>
```

```
<td>Order</td>
```

```
";
```

while(($get_info = mysql_fetch_row($result)) && ($get_rec=mysql_fetch_row($recno))

) the "while" statement means that the code will perform not just once, but until the condition is no longer fulfilled. This allows it to output the entire table, rather than just one row of it. It was necessary to group the fetching of "$result" and "$recno" into the same while statement, so the php didn't get confused.**{**

$get_image = mysql_fetch_row($image); we included this within the while statement, as we wanted the image to output in co-ordination with the associated data.

print "<tr>\n"; opens a row

foreach ($get_info as $field) defines $field as the information from the table retrieved earlier.

print "\t<td>$field</td>\n"; outputs the main data (profile, prices etc) from the database into separate rows, and separate cells (since this is within the while loop, it repeats)

foreach ($get_image as $img){ gets the name of the file from database, converts to a format usable later

?>

<td>

<img src = "stockimages/<? print $img; ?>" alt="No Image"> prints the name of the image file (different for each image) into the appropriate cell of the table.

</td>

<?

foreach ($get_rec as $recn) { specifies $recn with relation to data retrieved from the database earlier

?>

<td>

<form name="purchasing" action="addtocart_.php" method="post"> tells the form to action another php file, which will be explained next

<input type="checkbox" name="recordnumber[]" prints a checkbox for each cell of the table. The "[]" allow the recordnumber to be output as an array in the next step.

value="<? print $recn ?>"> Defines the value for each checkbox as a value from the database (the stockID). This allows each checkbox to correspond to a unique stockID.

</td>

<?

print "</tr>\n";}

}}

echo "</table>";

?>

   <div id="submit">   <input type="submit" name="submit" value="Place Order"> </div> Moves the order process on to the second php file.

          </form>

Step Two: Getting the checkboxes to output as an Array to a table which customers can view

Profile	Bundles in Stock	Piece Length (m)	Pieces/Bundle	$/Bundle	$/Bundle GST Incl	Select	Number to order
35mm Scotia 5.4	10	5.4	10	56.70	63.79	Bundles ▾	
30x18							

And **including forms within the table that customers can fill out.**

<?php

// dBase file

include "connect.php"; connects to the database

$recarray= ($_POST['recordnumber']); defines an array based on which checkboxes the customer has clicked. 'recordnumber' is retrieved from the checkbox form.

echo "<table border=1>"; headings for the table

echo "

<tr>

<td>Profile</td>

<td>Bundles in Stock</td>

<td>Piece Length (m)</td>

<td>Pieces/Bundle</td>

<td>$/Bundle</td>

<td>$/Bundle GST Incl</td>

<td>Select</td>

<td>Number to order</td>

</tr>

";

print "<tr>\n";

foreach ($recarray as $stockid){ this is so that the array will output all variables contained in it, not just the last one.

$result = mysql_query("SELECT Profile, BundlesInStock, PieceLength, PiecesPerBundle, PricePerBundle, PricePerBundleGST FROM Stock WHERE STOCKID = '$stockid'") this uses the "$stockid" variable defined in the previous step to retrieve from the database only information on the products with corresponding checkboxes selected in the previous step.

or die("SELECT Error: ".mysql_error());

?>

<form method="post" action="orderplacedsix.php"> This will output the form to a php discussed in the next step.

<input type="hidden" name="stocknumber[]" value ="<? echo ($stockid) ?>" /> This is necessary so that the stockID is usable at the next stage – otherwise it would output from the array and cease to exist except as table output, which is unusable in php.

<?

while($get_info = mysql_fetch_row($result)){

foreach ($get_info as $displayrow){

print "\t<td>$displayrow</td>\n";} This displays the data retrieved previously for products with the stockID selected in step one.

?>

<td>

<select name="unit[]" size="1"> This is a dropbox contained within the php table. This form input is contained within the foreach so that it outputs the correct number of times (if there are three rows, three times, two rows, two times etc etc). The "[]"s are once again necessary (as for the "number" form later) so that an array can be output at the next stage.

<option value="Bundles">Bundles</option>

<option value="Bundles_GST_excl">Bundles GST exc</option>

</select>

```
                                    </td>

                    <td>

                    <input type="text" name="number[]" n="5" /> This also needs to output the
correct number of times, so is contained within the php flow.

                    </td>

                    <?

                    print "</tr>\n";

            }

            }
echo "</table>";


            ?>
```

Step Three: Create the output to email


```
<?

$email = $_POST['email']; this retrieves the customers email from the form where they have
input it in the previous step

$stock_array=($_POST['stocknumber']); gets the stockID as an array from the previous step
(where it was preserved as a hidden form)

$number_array = ($_POST['number']); gets the number ordered from the previous step as an
array

$unit_array = ($_POST['unit']); gets the "unit" (GST exclusive/inclusive) from the previous step
as an array

$name = $_POST['name']; gets the customers name from the form on the previous page

$address = $_POST['shippingad']; gets shipping address from form on previous page

$phone = $_POST['phone']; gets phone number from form on previous page


include "connect.php"; connects to database
```

$stock=var_export($stock_array, true); creates an output of the stockID array which can be used in the email as a single variable. The "true" part forces the array to output not as soon as "var_export" is called, but when "$stock_array" is called.

$units=var_export($unit_array, true); same as above

$number=var_export($number_array, true); same as above

$to = "[companyname]@somemail.com"; specifies sending the email to the company

$subject = "Order Placed by $name"; outputs the subject line, with the name of the customer as a variable

$body = " Outputs all the variables previously specified. The difficult bit was to get them to display in simple enough format to be read within the flow of the email (using var_export).

Order placed by $email, phone contact $phone.\n\n

Order of products with stock number of: \n\n

$stock

For, respectively, the following units:\n\n

$units

And, respectively, the following number:\n\n

$number\n\n\n

To be shipped to:\n\n

$name\n\n

$shippingad"

;

if (mail($to, $subject, $body)) { if the email sends successfully…

  echo("<p>Order successfully placed!</p>");

  echo("   You ordered:");

  echo "<table border=1>";

```php
print "<tr>\n";  Prints the table of what the customer ordered so they can copy it for their
records.  Uses variables defined at the top of the page.  Same ideas as with previous tables.

foreach ($stock_array as $stockid){



$result = mysql_query( "SELECT Profile FROM Stock WHERE STOCKID = '$stockid'" )

          or die("SELECT Error: ".mysql_error());



                  while($get_info = mysql_fetch_row($result)){

             foreach ($get_info as $displayrow){    foreach statements had to be printed on
separate rows to avoid unnecessary amount of repeating.



print "\t<td><font face=arial size=3/>$displayrow</font></td>\n";}}}

                  print "</tr>\n";

          print "<tr>\n";

foreach ($number_array as $numberid){ print "\t<td><font face=arial
size=3/>$numberid</font></td>\n"; }



          print "</tr>\n";

          print "<tr>\n";

foreach ($unit_array as $unitid){ print "\t<td><font face=arial size=3/>$unitid</font></td>\n"; }



                  print "</tr>\n";



echo "</table>";



echo("<p>You may wish to record this for your records</p>");

}
```

else {

  echo("<p>Order did not place, please try again. We apologize for any inconvinience.</p>"); Outputs if the email was unable to send.

 };

?>

The email outputs as:

Which I was later able to change to:

Order placed by kyler@thames.co.nz, phone contact 07 8683731.

Order for the profiles: array (
 0 => '40x10 Sq Dressed 5.4',
 1 => '60x10 Sq Dressed 5.4',
)

For, respectively, the following number: array (
 0 => '2',
 1 => '2',
)

Order for Bundles_GST_inclusive

To be shipped to:

MY HOUSE

Order placed by , phone contact 03 482 2010.

Order of products with stock number of:

array (
 0 => '13',
 1 => '14',
 2 => '15',
 3 => '16',
)
For, respectively, the following units:

array (
 0 => 'Bundles',
 1 => 'Bundles_GST_excl',
 2 => 'Bundles_GST_excl',
 3 => 'Bundles',
)
And, respectively, the following number:

array (
 0 => '2',
 1 => '4',
 2 => '5',
 3 => '9',
)

To be shipped to:

Lee White

154 Coast Rd,
RD1 Waikouaiti
Dunedin 9013

I changed by having code on the multipleorder page which retrieved and preserved the profile name in a similar way to the stock ID for use on the order page.

Codes of Practice

- I made sure that the font I used for the header bar was free for commercial use.

- I used Cascading Style Sheets to make my code tidy and compact.

- I used images for the header bars, because I wanted to use a fancy font which not everyone would have installed on their computer. To have a consistent look, and image is safer.

- I used labels in my html, css, and php code, so that it would be possible for someone else to edit it later.

- I used divs rather than tables, for a nicer layout.

Comment: The student justifies the use of particular elements of the web site development based on codes of practice

Site map
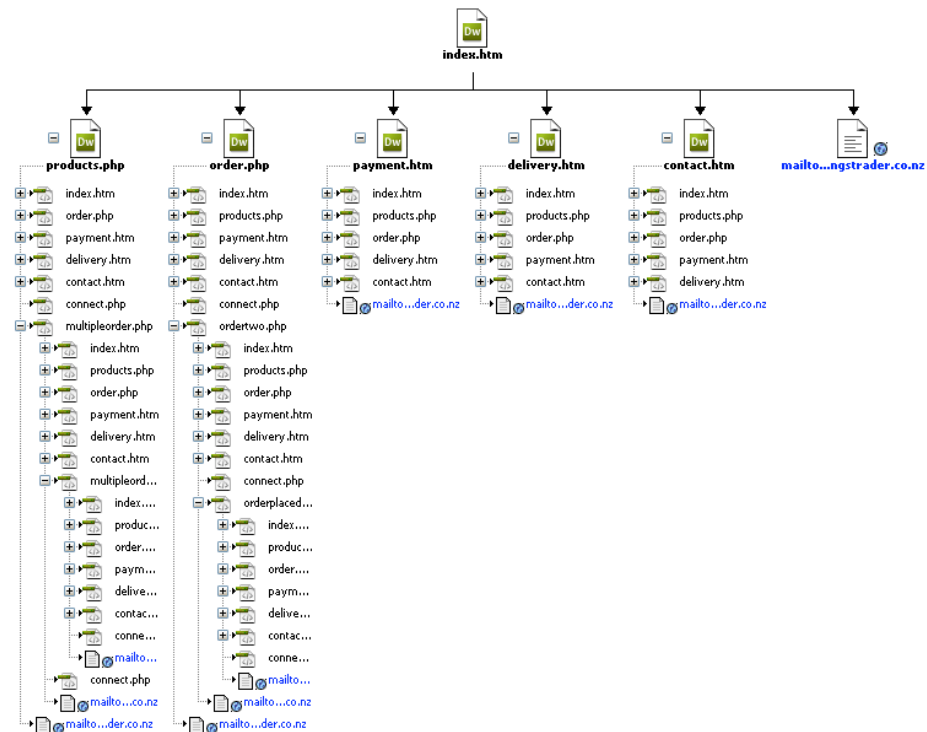
Showing just the most important bits
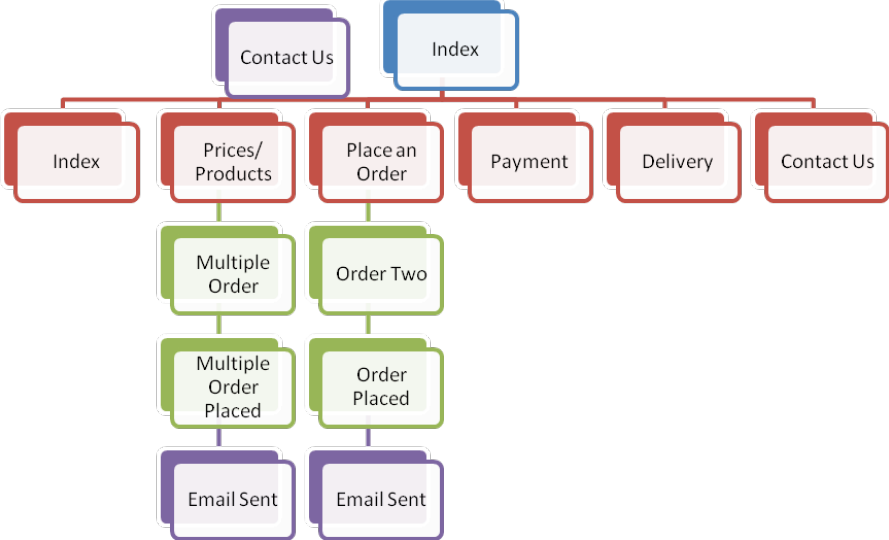
Home Page
Navigation Bar
Order System
Automated Emails /Email link present on every page

Complexities

> **Comment:** The student has structured a separate section dealing with a range of complexities surrounding the intended outcome Aspects of the practice undertaken are also explained and justified

Because the client wished to update the website periodically, and also to incorporate images, the website had to use much more complex technologies than a standard site. Because the updating would be done by people who were did not necessarily have a high level of computer literacy, I had to make a form which allowed the .csv file to be uploaded to the site. I also had to write extensive instructions (see below). This was a great coding challenge, and the client seems quite able to upload data to the site in this way. Making a non-static website allowed me to learn php, and to see the huge potential it has for managing and manipulating data on an interactive website.

> **Comment:** The student justifies why a static web page was used in this learning experience, therefore identifies the nature of her practice undertaken

The images also presented a challenge. Since these had to relate to the moulding profile the depicted, they needed to be in the same table. Since the profiles would be updating and changing position based on updates to the database, the images needed a way to update and change order as well. The solution to this was place the image filename in the database, so that php could be used to retrieve it at the appropriate part of the table. This allowed image to update and change order as required. However for this to work I also needed to create an image upload form for the client, so that it was possible to load images to the site as required (so they could then be retrieved and displayed in the table).

The most complex challenge was to create email output from the order forms. This was very simple for a single profile order form, but for multiple orders. This made use of the checkboxes on the products page initially designed for the shopping cart system, and allowed customers to select and order several profiles at once. However the email output required use of arrays. The issue here was that the only tag I could find that would output arrays to single variables usable in email was var_export. I wanted the table that shows up on the page for customers to view to send via email, but I couldn't find a way to include the php within the body text of the automated email. Email body text only seems to allow simple variables, and it was also unable to communicate with the mySQL database, making the table idea impossible. As a consequence, even if on the site you see this:

> **Comment:** Use of snap shots from the portfolio to exemplify the practice and outcome development

You ordered:		
35mm Scotia 5.4	30x18 Bev Cornice 5.4	40x18 Bev Cornice 5.4
2	3	2
Bundles	Bundles	Bundles

In the email sent to the company (not to customers, I disabled that because it was not user friendly) you will see:

"Order of products with stock number of:

array (

```
  0 => '15',
  1 => '16',
  2 => '17',
)
```
For, respectively, the following units:

```
array (
  0 => 'Bundles',
  1 => 'Bundles',
  2 => 'Bundles',
)
```
And, respectively, the following number:

```
array (
  0 => '2',
  1 => '3',
  2 => '2',
)
"
```

This tells us that the customer ordered 2 bundles of stock number 15, 3 bundles of stock number 16, and 2 bundles of stock number 17.

I later improved this slightly, so that the email output was something like:

trader01@woodmouldingstra, Order Placed by

Message | Attachments | Annotations | Raw view

Reply | Forward | Copy | Move | Delete | Print | Digest | View | Find

From: trader01@woodmouldingstrader.co.nz
To: texakiwi@orcon.net.nz, kyler@thames.co.nz
Subject: Order Placed by
Date sent: 31 Oct 2008 02:33:21 -0000

Order placed by kyler@thames.co.nz, phone contact 07 8683731.

Order for the profiles: array (
  0 => '40x10 Sq Dressed 5.4',
  1 => '60x10 Sq Dressed 5.4',
)

For, respectively, the following number: array (
  0 => '2',
  1 => '2',
)

Order for Bundles_GST_inclusive

To be shipped to:

MY HOUSE

I achieved this by adding code on the previous page like so:

```
/////////////////////set profile name to be taken as an array in the next stage
foreach ($recarray as $stockid){
$profileresult = mysql_query( "SELECT Profile FROM Stock WHERE STOCKID = '$stockid'" )
        or die("SELECT Error: ".mysql_error());
        while($get_profile_info = mysql_fetch_row($profileresult)){
        foreach ($get_profile_info as $displayprofile){ ?>
  <input type="hidden" name="profile_for_next[]" value ="<? echo ($displayprofile) ?>" />
  <?
}
}
}


/////////////////////
```

This code sets "$profileresult" for use on the next page. $profileresult is set by selecting the profiles where the stockID is equal to $stockid, and so $profileresult is an array of the profiles any given customer orders. This can then be printed in the email output in place of the stockID, so it is slightly easier to work with (it eliminates issues with, say, customers ordering a profile the day before the database is updated and the stockIDs may change). The hidden form input is what preserves the profiles as an array – each profile is 'printed' in the same way a checkbox form would work. Thus, it is necessary to have the "[]" marks to allow array keys to be assigned at the next step:
(in multipleorderplaced.php)
$profile_array = $_POST['profile_for_next']; This specifies the values in profile array – it gets them from the previous page's hidden form.

then some other stuff, then

$profile=var_export($profile_array, true); This assigns the array to a variable printable in the email.

then some other stuff, then

```
$body = "Order placed by $email, phone contact $phone.
Order for the profiles: $profile  here's where the profile outputs.
For, respectively, the following number: $number
Order for $units
To be shipped to:
$name
$address"
;
```

And so the array $profile can be printed out in the email form, in place of the array for stockIDs.

> **Comment:** The student uses examples of problem solving in the coding to exemplify the practice undertaken and outcome development

Instruction sheets sent to client

Instructions for adding data to the website

In Excel:

1. You should have no headings, only data, or the database will reject the file.

2. Make sure there are no $ signs, and that the "bundles in stock" column has *only text*, or the database will reject the file.

3. Make sure you have 8 columns (9 with image included), in the same order as the example I was sent (Profile, Bundles in stock, $/lm, piece length, $/per pcs, pcs per bundle, $per bundle, $per bundle GST inclus, (images)) . Even if some columns are empty (say it doesn't have a GST exclusive value) make sure the columns are still there and blank – *the program will get confused if there is an incorrect number of columns, or if they are in the wrong order.*

4. The number of rows doesn't matter (as many as you want). However, if data has changed from previously, or if you have a product currently out of stock, you will need to include that bundles of stock = 0 so that the old number in stock will be overwritten.

5. Make sure that the table is placed at the *extreme* top left of the spreadsheet.

	A	B	C	D	E	F	G	H	I
1	60x10 Bull	10	0.76	5.4	4.104	10	41.04	46.17	wmt1.gif
2	90x10 Bull	10	1.32	5.4	7.128	10	71.28	80.19	wmt2.gif
3	40x10 Sq I	10	0.59	5.4	3.186	10	31.86	35.8425	
4	60x10 Sq I	10	0.76	5.4	4.104	10	41.04	46.17	
5	90x10 Sq I	10	1.32	5.4	7.128	10	71.28	80.19	
6	135x10 Sq	10	2.72	5.4	14.688	10	146.88	165.24	
7	35mm Scc	10	1.05	5.4	5.67	10	56.7	63.7875	
8	30x18 Bev	10	0.69	5.4	3.726	10	37.26	41.9175	

6. Make sure that there are *no empty columns* in between data columns

7. Double check everything. No funny symbols, no empty spaces, no graphics, no headings.

8. Go to "save as" and choose ".csv". Excel will do the conversions

Once you have the file nicely formatted, use the "browse" button on the csvposter.php page to browse to the location of the file on your computer, and hit "send".

All previous data in the mySQL database will be erased, and replaced by the data in the new file you have uploaded.

The website will automatically update from the database.

If you have added a new profile, this will also be added

Instructions for adding images to the website

Before uploading:

1. You should optimize the image for the internet, making it the smallest file size possible (e.g. save as a jpg if it's a photo, as a .gif if it uses only a few colours).

2. You should size the image (website resolution, which is 72ppi) so that it will display nicely in the tables on the products page

3. Any additional privacy measures you feel necessary

4. Save with an appropriate name – *the name must not contain spaces or unusual characters.* Letters, numbers, and underscores only. Probably best to leave full stops out as well, though possibly these are okay.

In Excel:

You will need to put the image's file name into Excel in a column next to the corresponding Profile (see below example). The file name *must* be complete with extension (jpg, gif, etc).

Unpainted FJ Mouldings	Bundles In stock	$/lm	Piece Length (m)	$/per pcs	Pcs/per Bun	$/per Bundle	GST inclus	Images
30x10 Sq Dressed 5.2	22	$0.46	5.2	$2.39	10	$23.92	$26.91	30x10SqDressed52.jpg

30x10 Sq Dressed 5.4	16	$0.46	5.4	$2.48	10	$24.84	$27.95	30x10SqDressed54.gif

Upload the image:

Use the image upload form at www.woodmouldingstrader/imageposter.php. Browse to the image and hit upload. The php script will post the image to your host server.

You are now finished. As long as file names etc are consistent, the php will get the file name from the database, get the address of the folder from more php, and display the image on your products page.

If you are having issues with images not displaying properly, please double check that you have entered all file names and extensions correctly in the Excel file uploaded to the mySQL database, and make sure you have loaded the right file.

Brief instructions on managing the database with phpMyAdmin

If you login to phpMyAdmin…

This is the homepage:

On the left there, you see "test" in blue. This is the name of the database. "Stock" and "Users" are tables within this database.

If you click on "Stock"

You will see the "Fields" correspond (with the exception of STOCKID) to the columns on the products page. The names of the fields are what the php refers to when it takes data from the database. If I tell the php to get data from "Profile", it will return only profiles, and so on. These names are case-sensitive, and if they are changed (without updating the php files accordingly) the site will cease to function.

But say, for example, you wanted to add an image name for something and didn't want to reupload the entire CSV file. You can do this from phpMyAdmin.

Click "browse" in the tab navigation bar at the top:

This shows you the contents of the database. If you click the pencil symbol, it will allow you to edit that line of data:

And then you see:
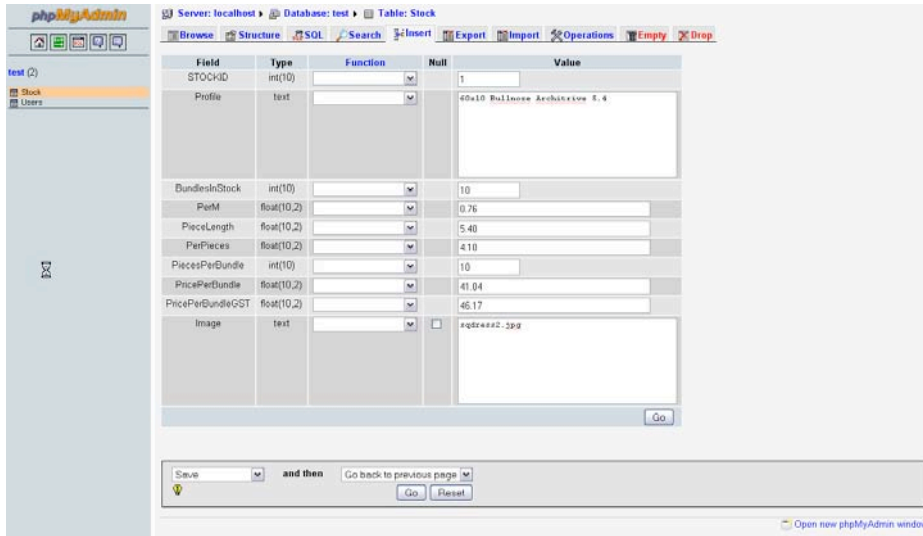
Click into the field you want to edit:

Then edit it.
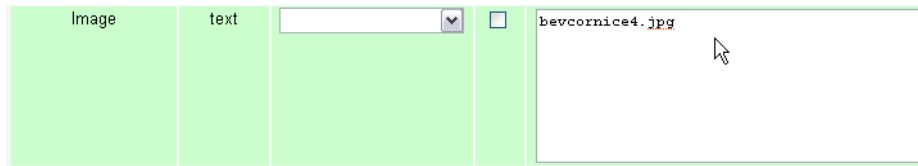
Then click "Go" on the lower right and the change will be saved.

Or to change your password:

Users:

Browse:

Edit:

Comment: In these examples the student has preserved the confidentiality of the client when describing the development and use of the upload, demonstrating ethical aspects of her practice

and change:

Field	Type	Function	Null	Value
Username	varchar(20)			PRIVATE
Password	varchar(20)			

Field	Type	Function	Null	Value
Username	varchar(20)			PRIVATE
Password	varchar(20)			icecream

Go

and "Go".

Notes/documentation on updating the web site for client

1. What program did you use to create the web site?
2. How can we change the web site?
3. Can we have a copy of the web site files/programs/scripts etc. as a backup should we need to reload?
4. How do we load the web site on to BT's server?

1. The program I used to create the website was Dreamweaver CS3 (Adobe owned version), and also Dreamweaver Mx 2004. The files are simple htm or php files, so they will open in programs such as notepad as well, if you need to edit them. Dreamweaver is a bought-only program, but you can download freeware pure code editors if you need to change something (the advantage of this over notepad would be that sometimes those can show colours for working/not working code).

2. I'm not quite sure what you mean by "change the website". If you need to edit the text on the website, you could do that by going directly into the code. I don't know how familiar you are with html, but the main "tag" you need to know about is <p>, which means "paragraph". Basically, anything that appears between a <p> and a </p> is paragraph text, i.e. the text you see outputting on the website. This is the area where you will want to edit, say, delivery prices. As an example, a paragraph in the site is:

```
                <p>
          <strong>Delivery by arrangement at buyer's cost: </strong>
            <br />
<br />
Otago region                            $(to be advised depending on location)
<br />
<br />
```

South Island $(to be advised depending on location)

North Island $(to be advised depending on location)

   Once you place an order you will be contacted by e-mail or phone to arrange delivery
time and place. Payment will also be arranged by e-mail or phone.

Once your order is received a confirmation will be sent quantified with additional cartage cost.
The invoice will have details for direct bank deposit or cheque payment.

</p>

This is in delivery.htm.
 is a line break,   is emphasized, or italic. Around this are a bunch of <div> </div> tags. <div> tags are like "dividers", and are really important to the spacing of the website. Take care not to touch these unless you have someone who really knows what they're doing.

A lot of the site is php files, which are more complex coding than html ones. Some of these have text that displays normally in them, so again, if you stick to things inside <p> tags you should be fine. <p> starts a paragraph, and </p> ends one, according to html conventions.

If you're not sure which file to edit, look at the page address in the web browser. If it is, say, http://woodmouldingstrader.co.nz/products.php, you want to edit "products.php". If it's http://woodmouldingstrader.co.nz/delivery.htm, you want to edit "delivery.htm".

The colours all of the styles are contained in the external CSS (Cascading Style Sheet). So if you want the text to all show as, say, black instead of navy, you need to get into that. The CSS for the main site is "wmtv2.css", the one for the managers site is "wmtvM.css". As a sample of what it looks like:

body {background-color:#CCCCCC;
                font-family:Geneva, Arial, Helvetica, sans-serif;
                }

#container {
                width: 800px;
                margin: auto;
                }

#container refers to a div with id "container" (it's in every single page on the site). The CSS allows you to change formatting on all pages at once. Here, the background colour for the body

is #CCCCC, which is light grey. If you wanted it, say, white, it would be changed to #FFFFF, and it would change on all pages when you updated that one file.

CSS redefines the look of a tag. If you find something referring to a <p> tag, it will be redefining the look of that (the colour, the size, etc), and so on for other tags.

3. Yes, I will supply you with all of the files that make up the site. I may have to make a "map" of these to show how they work, it's a bit complicated.

4. The way that I'm loading the site onto BT's server is by using their own FTP services, which are really slow. You need to navigate to "All Files" under the heading "Utilities and Files", then click the folder labeled "www", then the one labeled "htdocs". Once you're in this folder, hit the "upload file" button at the top right, and select the file you want to upload. You have to do them one at a time. If it's images you want to upload (not the stock images, just one for the homepage or something) you need to be in the "images" folder (within the htdocs folder) to upload these.

An alternative way to upload/update the pages in the site

For updating the site, I often use the website http://webftp.dreamhost.com/, which allows upload of multiple files at once, and writes over existing files of the same name rather than requiring that they be deleted beforehand. It also loads somewhat faster than Telecom's own "Add Files" function. I initially thought this site would not work with the Telecom package, but since it actually does, I will provide instructions for this alternate method.

1. Go to the site http://webftp.dreamhost.com/
2. Put your details in the box like so:

FTP server: website address (www.woodmouldingstrader.co.nz)
Username/password: As if you were logging into the Telecom control panel

Initial directory: Can be left blank, or set to htdocs.
Other: leave on default

3. If you left "initial directory" blank, the page will now look like this:

Choose the folder "www".

4. Choose the folder "htdocs"
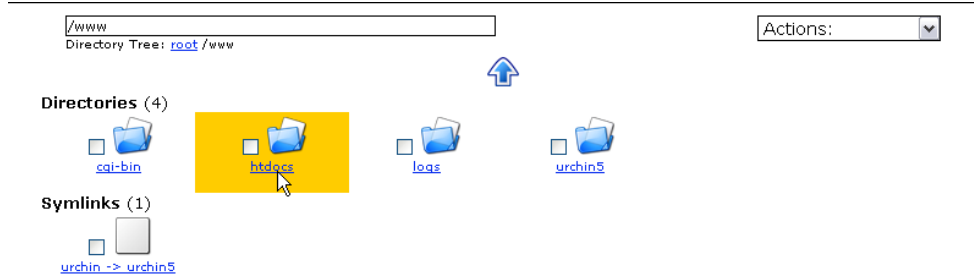
5. If you specified "htdocs" as initial directory, you will have come in at this point:
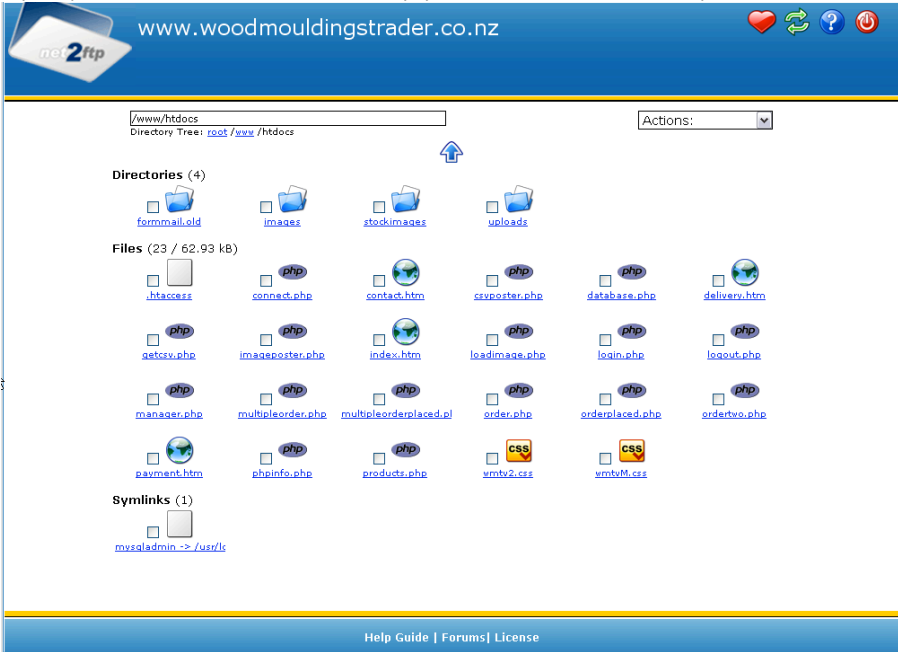
The page will display all the files currently on the server.
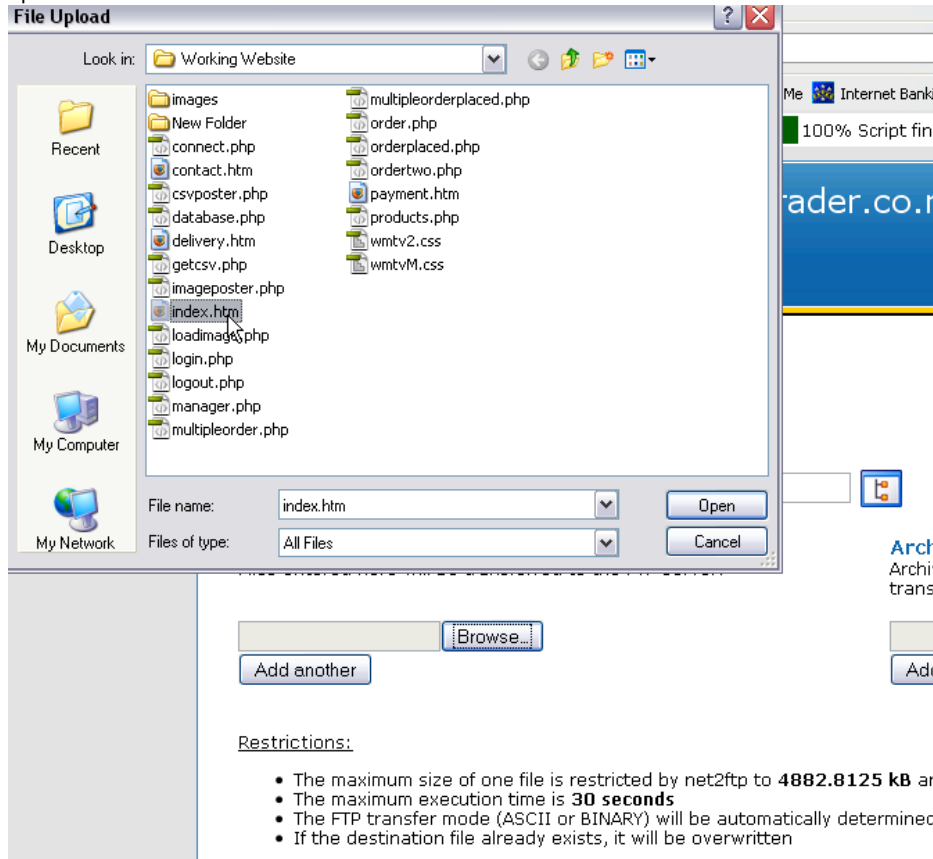
6. To upload a new file/load an update of an existing one, go to the drop box at the top right and choose "upload"
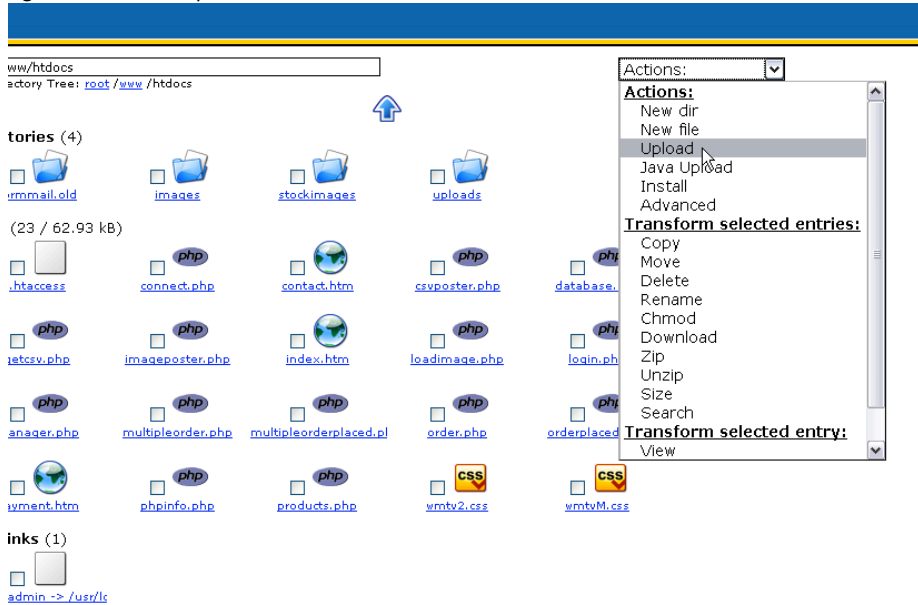
7. Browse

8. To the file you want to upload/re-upload

9. You can upload lots at once

10. Click the big green tick to upload

11. It tells you they've been uploaded
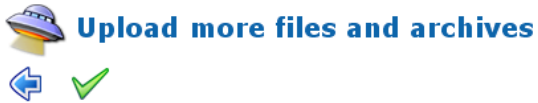
12. You're done

This is faster and easier for bulk uploads/testing stages.

> **Comment:** The student explains in the user manual to the client the different ways to use the upload function and explains the advantages of each method

Unforeseen Problems

> **Comment:** Dealing with the complexities of a changing situation

On first meeting the liaison, he seemed very reliable, and I did not foresee any issues with getting the necessary feedback for my website. However, throughout the project the liaison grew progressively less responsive, eventually telling me that he was leaving the company for good. This meant that I was now liaising with the manager, who had different tastes, and initially wished for different things to the original liaison (though upon request for further information he changed his mind). On the positive side, I gained a lot of experience in working with a company, and a better idea of the time frames one should consider when doing so. I learnt that if you are going to need any information from a business, you should ask them for it a month before you need it, and probably remind them twice a week in the meantime.

I also did not foresee the problems with making a website which would allow customers to order goods. Initially I thought this problem could be solved with a login and shopping cart system, but after making the login and receiving further information about what would be in the Stock database from the client, I realized that creating a shopping cart would be much too difficult. This required that I change direction abruptly, and instead I created an order system using drop boxes and an automated email output. This also means customers don't have to sign up, which is a positive. The problem with this solution was that it only allowed for single orders, and so later I created a multiple order system using elements from the original shopping cart idea – this was a huge challenge, but in the end it was possible, though it could still do with improvements.

> **Comment:** The student explains how she overcame issues related to the ordering system and reflects on the process, demonstrating ingenuity and inventiveness in order to realise the outcome. This also exemplifies the ongoing interactions with the client

Also, when I began the project I knew only html. To create this website, it was necessary for me to learn php and mySQL, which required that I work with a different teacher from my usual one, who had more knowledge of php. Because php was something I had never done before, it was very difficult to plan the timing for the project (I had no experience to measure against), and this resulted in several functions I initially wanted to include having to be dropped from the project because their coding was just too complex, such as the previously mentioned shopping cart system. I have a new respect for the teams of coders who create huge websites such as amazon.com, which have to get information from so many different places and update constantly. Doing this project gave me something of a glimpse into the workings behind websites such as that, though on a hugely smaller scale.

Client communication proved to be the biggest difficulty. The client repeatedly changed his mind, and sent inconsistent information. If the website had been static and the information was merely text to be updated, this would have been alright. However, the client changed his mind on much larger issues, such as altering the data to be placed in the database. Having made a rough plan based on original data sent, I requested that the client send me a sample of the spreadsheets he would want uploaded and received a spreadsheet with twice as many columns. This disrupted the layout of the website, but since I was just starting the mySQL, this wasn't too difficult to deal with. If anything, this taught me that I should not be so quick to rush ahead with work in an attempt to save time, because when dealing with a client often they will change their minds frequently, and the work needs re-doing anyway.

> **Comment:** Student reflection on client interactions and the complexities of dealing with external clients and how they were resolved

A larger issue was when the client decided that mySQL, on which the website is based, incurred too many extra costs. However on further research he changed his mind again and said mySQL was alright. However after that Telecom forgot that they had said their package supported mySQL and claimed that it didn't. Eventually the client resolved this for me by purchasing a more expensive package, for which I was grateful. This package does support phpMyAdmin and mySQL, but initially the server could not read php documents. I phoned Telecom to resolve this, and eventually reached a person who was able to refer the problem to "Level 3", and said that if it was not fixed within 48 hours then Telecom would admit a fault with their service. Within the next few days the fault was fixed, and I was able to upload and update the website, so that it now functions fully on the server http://woodmouldingstrader.co.nz.

> **Comment:** The student exemplifies ingenuity in overcoming issues with the development of the web site

The client also changed his mind a third time on the data to be input into the database. This decision was made after the mySQL had been written, and required that I rewrite all data associated with the database, as well as rearranging the output tables on the products page. This taught me that working with companies means you need to be ready and willing to change things. Changing the mySQL communication script repeatedly to suit the client also meant that I became extremely competent with that aspect, so I now have experience for the future in mySQL/php communication coding. Having reworked that so many times, I believe I could manipulate similar data with ease, even in a different situation.

> **Comment:** The student reflects on the client interaction and the flexibility required to respond to their needs and feedback. This section also demonstrates synthesis and integration of new knowledge and skills required to overcome issues raised by client need

There was a noticeable increase in development speed towards the end of the project, when the client became more responsive. The responses from the client allowed me to troubleshoot and improve the website according to the client's wishes, and hugely improved the project.

Changes made to the original plan

As previously mentioned, originally I dreamed big for the site, and brainstormed all the things that would make a commercial site accessible, not realizing their difficulty. Initially, I wished to include both a search function and a shopping cart system. Upon later research, both of these proved to be far beyond my level of programming, and I was forced to drop them from the project. This meant that I had to create an order form to replace them, with associated email output.

I also changed the functions of the tabs, one of them repeatedly. The third tab from the left originally started out as a "stock list", but to me this seemed redundant, as we already has a products list. I decided to replace it with a tab to be associated with the shopping cart, a view-cart or something similar. After deciding to drop the shopping cart idea, the tab became a "GST exclusive page" (as the client had added GST exclusive prices, which had not been there originally, to the database). The tab finally ended up as the "order" tab, and the GST exclusive prices were moved to the products page and placed below the GST inclusive prices. The client then decided to remove GST inclusive prices from the site almost completely, and added a "piece length" value instead. This required rearranging of the display tables on the products page.
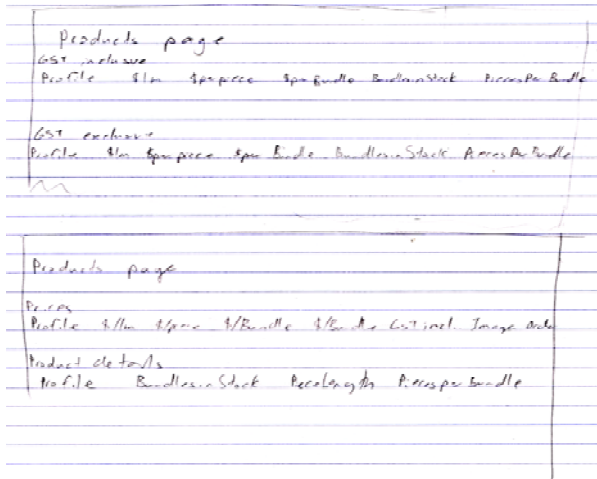
Comment: Examples of functional modeling to communicate with the client

Prices

Profile (Size(mm), Description)	$/lm	$/piece	$/Bundle	$/Bundle GST Inclusive	Image
30x10 Sq Dressed 5.2	0.46	2.39	23.90	26.89	
30x10 Sq Dressed 5.4	0.46	2.48	24.80	27.90	
40x18 Sq Dressed 5.4	1.18	6.37	76.44	86.00	
40x10 Bev Architrave 5.4	0.59	3.19	31.90	35.89	
40x10 Bullnose Architrave 5.4	0.59	3.19	31.90	35.89	
60x10 Bullnose Architrave 5.4	0.76	4.10	41.00	46.13	
40x10 Sq Dressed 5.4	0.59	3.19	31.90	35.89	
60x10 Sq Dressed 5.4	0.76	4.10	41.00	46.13	
90x10 Sq Dressed 5.4	1.32	7.13	71.30	80.21	
35mm Scotia 5.4	1.05	5.67	56.70	63.79	

Product Details

Profile (Size(mm), Description)	Bundles in Stock	Piece Length (m)	Pieces per Bundle	

This table was then altered again to contain all data in a single table, so that users would not have to scroll:

Profile (Size(mm), Description)	$/lm	$/piece	Pc length (m)	$/Bundle	$/Bundle GST Inc	Pcs/ Bundle	Bundles in Stock	Image	Order
30x10 Sq Dressed 5.2	0.46	2.39	5.2	23.90	26.89	22	10		☐
30x10 Sq Dressed 5.4	0.46	2.48	5.4	24.80	27.90	16	10		☐
40x18 Sq Dressed 5.4	1.18	6.37	5.4	76.44	86.00	8	12		☐

It was also quite difficult for me to tell what the client initially wanted. Rather than changes to an original plan, the project was a process of defining a plan, which became much easier once the client started giving me feedback on what he wanted. This included steps like adding the hit

counter – it wasn't in the original brief – and also changing the order.php and associated so that the form would not send unless email and all other relevant fields were filled out. I could not plan for these initially, as initially the client did not state that they were necessary.

Feedback from Wider Community Stakeholders and the effects thereof

Research in the wider community
I created and distributed a questionnaire form to two different community stakeholders, the results of which are included here. The feedback I received from this form pinpointed some issues that needed attention, and was very helpful.

Respondent 1 (Jeremy Noble of Ovoss Builders)
Questionnaire:
For the image-only copy:
Do you like the look and "feel" of the design? The current design is 13b.

The overall design of the website is appealing. It doesn't seem overly complicated and looks clean.

Do you like any other design better? Why?
Yes, number 7, because I like the rounded edges in the tabs.

Does the current site (13b) have a feel of "bargain"? Do any other
numbers give a better bargain feel?
It looks very white the way it is. It looks professional and simple which could imply bargain but it's hard to say what a bargain website would look like.

Does it look professional and crisp? Do any others look more so?
No variety of materials at first glance, the only picture there is of skirtings. It needs variation of selling materials.

Is all text readable (this applies to heading fonts only, the body copy is
filler text)?
Everything is readable. Maybe more contrast behind each site (a lot of very white white in there at the moment).

For the draft site:
Is it compatible with your web-browser? (i.e. does it display similarly to
the image-only copy?)

Yes it does. Looks the same.

Is it easy to use (the parts that are working)?
Yes, it is easy.

Is it easy to navigate?
Yes.

Is the load time tolerable on your computer?
Yes.

Other:
All other things being equal, would you choose this company's site
(design-wise) to buy from?
Yes, no reason not to.

Is the information clear?
Yes, it is.

Any other comments:

- In the product section you could put pictures/diagrams of where/how to use each product to make it more accessible to the general public. They would be unfamiliar with the terminology.

- The page doesn't fit into the browser window, I have to scroll to see the information at the bottom of the page.

- Gray gaps on the side of the page???

- Contact us tab: no names to contact, makes it very impersonal, also a brief location map wouldn't go amiss.

- I think the price information and stock etc. information should be under each other (maybe in different colours) to avoid scrolling up and down

Respondent 2 (an employee at a store called "step up joinery" which sells products such as wood mouldings)

Questionnaire
For the image-only copy, please refer to the printed sheets, which are labeled for your convenience.

Image only copy:

1. Do you like the look and "feel" of the design? The current design is 8b. Do you like any other design better? Why?
   Yes, easy to use

2. Does the current site (8b) have a feel of "bargain"? Do any other numbers give a better bargain feel?

I don't like to sell goods for the lowest price. Quality – service value.

3. Does it look professional and crisp? Do any others look more so?
   Wording could be better
   Great prices – who do you want to sell to? What are your current clients going to think?
   Quality wood? I thought – product range. Say "large product range". Quality Guarantees.

4. Is all text readable? (This applies to heading fonts only, the body copy is filler text)
   Yep good.

For the draft site (http://www.testing.endgathering.com):

1. Is it compatible with your web-browser? (i.e. does it display similarly to the image-only copy?) Please state which web-browser you use. Do you normally browse full screen?
   Don't know web browser. Yes full screen.

2. Is it easy to use?
   Yes

3. Is it easy to navigate?
   Yes

4. Is the load time tolerable on your computer?
   Yes

5. Is the order process comprehensive? (Please feel free to test this, the order will not be filled or required to be paid for).
   Not enough info with product – How long are they? How many in each bundle?
   Delivery cost should be inclu.
   I like the photo (of the item you are purchasing) to get larger if you click on it.

Other:

1. All other things being equal, would you choose this company's site (design-wise) to buy from?
   ? Don't know maybe?

2. Is the information clear?
   No how long are the length of timber?

Any other comments:
www.(illegible).com
very good site.
View price $ - (country you come from).

Look at the photos how they change. Cost here!
Another site to look at www.sopers.co.nz

In response to this

1. It became clear that the products page would have to be changed from its original format of two tables (one containing prices and one containing product details, so they fit easily across the page) to a single table. The second respondent didn't even see the product details table, which contained details such as piece length.

2. Everyone has varying opinions. Neither of the respondents was entirely happy design-wise, though the overall look appealed to them. They pinpointed different things, so the design was not something that it would be beneficial to change.

3. Respondents were not hugely familiar with computers (e.g. not knowing what web browser they used). This matched my initial idea that the website would have to be very simple. Fortunately, the respondents both seemed to be able to navigate it. This was good to know.

4. Images should be able to resize, but this is not a large issue for the client, so is low priority.

Comparison of Brief with reality

Compared to Brief 3

Brief	Reality
Easy updating	Relatively easy. They have forms to upload, but the data does require minor manipulation before hand
Ability to add new profiles	No problem at all. Mixed in with "updating"
Images to pop up	This was a gimmick which didn't seem necessary. The hover effect was scrapped, but the images are still present
Appealing design, easy navigation; visually appealing, easy to use, and appropriate for use by DIY persons, builders, and contractors.	All respondents thought it was easy to navigate, and there have been many comments on the appeal of the design (positive ones)
Search bar	This was scrapped as being too difficult.
The colours to use are green, white, and blue (others possible).	Company colours were used.
These people are not always fond of computers, so the website should be simple.	Website is relatively simple
Tabs should be large, with large and resizable text to make it easier for people whose vision is not as good.	Text is not resizable, due to coding constraints. It is, however, set to use an easy-reading font.
The website should be easily compatible with older browsers	I have viewed it on Safari, IE7, IE6, Firefox 2 and Firefox 3, and it displays well in all of these.
Website will deal with purchases of wood by cash, cheque, or direct deposit, but will *not* need to be secured, as it will only direct the purchaser to contact the company to arrange payment and pick-up.	The site has hopefully comprehensive instructions on ordering, paying, and shipping included in it
The client does not want the website to have any associations with the parent company	The site does not have any associations with the parent site
Load time needs to be very short	Load time is short
The pages should be consistent throughout the site,	Pages are consistent
It should be easily scannable and avoid large blocks of text.	This has been adhered to

It needs to take into account commonly used browsers, screen resolutions, and download speeds.	This has been considered in the creation. The width is set at 800px, which displays well on most screen sizes, and is the smallest possible physical screen anyone could have
I need to take steps to make the website visible to Google and other search engines	
Website should look credible or users won't trust it	Hopefully it looks credible
I should also consider other ways to increase sales, such as support for reordering or an information request form for clients.	This has been disregarded in the final site.
Second website in mind to be redesigned, brought up to web visual and compatibility standards.	There was no time for this after all, and judging from client response in current project it would have taken a very long time
Navigation bar should be consistently placed to avoid confusion	This is consistent

Compared to Brief 4

Brief	Reality
The client uses excel sheets to keep product lists up to date, so it should be possible to easily update the site from these (about once a week).	This is possible
An upload form will need to be created so that the client can update profiles with minimum hassle.	This has been created
Php will need to be written to convert a csv file output by Excel into data in the mySQL database.	This has been done
The database itself will need to be set up on the client's server prior to handing-over of the site, and instructions will need to be written both on uploading data and on managing the mySQL database (simplified).	This has all been done
The client has requested that images be included in the table of data.	Images are included
An upload form will need to be created for these, and php to retrieve image name from its place in the database then display the	This has been done

image in the table will also need to be written.	
The site will also feature a hit-counter add-on from Telecom (the service provider) and this will need to be integrated with the rest of the site.	This has been integrated and aligned
An order form will need to be created which will automatically email both the customer and the client when an order is placed.	This has been done
The site will need multiple order capability.	It has this
The forms used to output the emails to the client/customer needs to tell the customer if they have ordered more bundles than in stock, or if they have forgotten to fill in their email and/or address/phone/etc. In this case, the order needs to not go through.	
There should be a minimum of scrolling involved.	
Appealing design, easy navigation; visually appealing, easy to use, and appropriate for use by DIY persons, builders, and contractors.	All respondents thought it was easy to navigate, and there have been many comments on the appeal of the design (positive ones)
The colours to use are green, white, and blue (others possible).	Company colours were used.
These people are not always fond of computers, so the website should be simple.	Website is relatively simple
The website should be easily compatible with older browsers	I have viewed it on Safari, IE7, IE6, Firefox 2 and Firefox 3, and it displays well in all of these.
Website will deal with purchases of wood by cash, cheque, or direct deposit, but will *not* need to be secured, as it will only direct the purchaser to contact the company to arrange payment and pick-up.	The site has hopefully comprehensive instructions on ordering, paying, and shipping included in it
The client does not want the website to have any associations with the parent company	There are no associations with the parent company
Load time needs to be very short	Load time is short

The pages should be consistent throughout the site,	Pages are consistent
It should be easily scannable and avoid large blocks of text.	This has been adhered to
It needs to take into account commonly used browsers, screen resolutions, and download speeds.	This has been considered in the creation. The width is set at 800px, which displays well on most screen sizes, and is the smallest possible physical screen anyone could have
I need to take steps to make the website visible to Google and other search engines	
Website should look credible or users won't trust it	Hopefully it looks credible
I should also consider other ways to increase sales, such as support for reordering or an information request form for clients.	This has been disregarded in the final site.
Second website in mind to be redesigned, brought up to web visual and compatibility standards.	There was no time for this after all, and judging from client response in current project it would have taken a very long time
Navigation bar should be consistently placed to avoid confusion	This is consistent

In conclusion, I feel that the site fulfils all the main requirements of the brief very effectively. It is a very "intelligent" site, which is completely user interactive, and can be updated continuously and still function. It is also easy to navigate even for those not especially familiar with computers.

Viability

I think that the site is particularly viable because it uses php which allows it to be updated constantly with little hassle to the client. This makes it ideal for the business, and the easy-upload forms I created for the client complement this. The "life-cycle" of this site is potentially unlimited, because of this ability to constantly update. The design is also somewhat timeless, not a "fad" design which will go out of fashion in a few years. The code is also quite clean, so it should be compatible across most platforms. The use of css to format the site is a new convention, reducing page size, and as the site utilizes this, it is up-to-the-minute. It is unlikely to have any environmental impacts, and it is unlikely to harm any part of society. The font used on the header was downloaded from dafont.com, and I made sure I chose one which was free for commercial use. The future demand is impossible to predict, as it will largely depend on the effectiveness of the company's advertising directing potential users to the website. The ease of maintenance varies. Simply running the site as is requires no maintenance except for uploading

a new CSV file every week to update prices/profiles etc. If the client wishes to change some of the basic html, this should also be quite easy. Changing the CSS would be slightly more complex, and require more coding knowledge, and altering any of the php would require very advanced coding skills, so it is unlikely that the company will be able to alter the php. The only resources required for its maintenance would be web programmers and coders, of differing skill depending on which part of the site the client wishes to modify. To separate maintenance from modification more clearly- it is the modification that would be a difficulty. The maintenance has been created to be very easy, by use of upload forms and the like.

Client Feedback

Lee........

The original brief/scoping of the website project was too broad and ambitious. Modifications to the brief occurred as we, the client, learnt what was and wasn't feasible.

In a sense we, the client, modified our goals and aspirations to the project as you, the designer, raised the issues and impacts.

While it would have been good to have every aspect of the work pre-planned, it provided an opportunity to evolve our thinking as we went and involve a broad range of people in our organisation.

To your credit, you remained calm and focussed during the projects evolvement and we have ended up with a great result. We see the 'Wood Mouldings Trader' as a good base to work from; one in which we will look to expand its use and purpose.

I believe we have no further demands of your time on this project. Some of the technical issues still outstanding are minor and our IT manager will attend to these.

Well done on achieving a great result for our group of companies and all the best for upcoming examinations.

Yours sincerely,

Tom Whitefield

Managing Director

SOUTHERN CROSS FOREST PRODUCTS LTD

Future development

There is a lot of room for the website to be developed further by someone (or several someone's) with more programming expertise. If I were to continue working on my coding skills to the level required to add a search function and shopping cart system, this would be a good direction for the in the future to expand the website in. I would also like to add the feature of images increasing in size when clicked, but due to time constraints this is not possible. The email output of the multiple order system could also be improved. For this website, future development is infinite in that the site could be improved endlessly, but the company does not really require too much extra. The site is functional, and meets the brief fully. A more beneficial next step with relation to this particular client would be to redo their other website, which currently is not functional in Firefox.

Conclusion

If I were to do a similar project again, I would plan much more carefully. I would need to spend more time talking with experts about ways to implement ideas before I started coding. This would avoid the multiple changes to plan which I ended up making this time.

I have learned a lot from working on this project. Not only have I gained insight into the possibilities of php, but I have also gained valuable experience in working with clients. One thing I did notice was that I should request data such as photos a long time before I needed it – but if I requested it before it was mildly urgent, the request would be forgotten – businesses seem to require reminders fairly constantly. Also, as they have very busy schedules too, often they could not respond as quickly as I would have liked. It also seemed that communication within the business was somewhat limited, and I had to learn to keep this in mind too. Just because I explained something to one person did not mean it would be passed on accurately. I

also learnt valuable problem solving skills when working through issues with the php, and learnt a lot from my mentor, Mr Smith, about the functions in php and their uses.

I feel that this project has been particularly valuable because of the "real life" work experience opportunity it gave me. In addition, it was an amazing challenge to learn an entirely new coding language while creating the site. I feel that, given the starting point, I have achieved a very functional, totally user interactive website.

Resources Used

I would like to acknowledge the help of my teachers Mrs McMahon and Mr Smith in coding the website. Other major resources used include php.net and w3schools.com. Other websites were used to a more minor degree, such as tizag.com and countless others.

Comment: The student has acknowledged the input of teacher and technologist and some of the websites used to inform their practice in developing the outcomes