Checklist

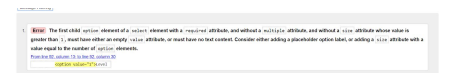| Assessment evidence *(What)*	Assessment strategies *(How)*	Other evidence *(teacher observation, conferencing)*	✓
Achieved: Use complex techniques to develop a digital media outcome.			
● applying appropriate tools and techniques to meet the purpose and end-user requirements	● A working outcome that meets the purpose and end-user requirements in the proposal ● The outcome uses more than of the listed complex techniques	● A website with multiple pages, navigation, images ● The images must be original ● The site must be a flask system	✓ ✓ ✓
● applying appropriate data integrity and testing procedures	● Code validation ● User test scripts/notes	● Code validation (template) ● User testing (template)	✓ ✓
● applying user experience principles relevant to the purpose of the outcome	● Completed UX planning activities ● Written summary, may include sketches, videos, audio etc	● wireframes/sketches/mock ups ● ((competition research reflection))	✓ ✓
● addressing relevant implications.	● Should be visible in outcome ● Written summary.	● Relevant implications - this will be covered in a lesson later this week	✓
Merit: Use complex techniques to develop an informed digital media outcome.			
● using information from testing procedures to improve the quality of the digital media outcome	● Testing documentation ● Written descriptions or reflections ● Iterations show that testing evidence has been used to improve the outcome	● Testing shows that you have improved the quality of the website based on the results of testing (validation, user tests)	✓
● applying user experience principles to improve the quality of the digital media outcome	● Iterations show that UX principles have been applied to improve the outcome ● Written summaries of decisions made based on UX	● Reflection on how you have used UX techniques to improve the quality of your website.	✓
Excellence: Use complex techniques to develop a refined digital media outcome.			

● iterative improvement throughout the design, development and testing process to produce a high-quality outcome	● Evidence of iterations planning ● Reviews and retrospectives ● Improvement visible in iterations (versions)	● At least 3 releases in github. Releases should have descriptions of features introduced in each version	✔
● using efficient tools and techniques in the outcome's production	● Efficient tools were used ● Design, testing, and development techniques used to produce outcome were efficient	● Bootstrap, Google charts were used	✔

Code validation

Route or page being tested	Screenshot or snip of test result	Action taken to fix this (or explanation why the warning/error is acceptable)
/login/user	Document checking completed. No errors or warnings to show.	No error.
/register/new	Document checking completed. No errors or warnings to show.	No error.
/	Document checking completed. No errors or warnings to show.	No error.
/new-standard/enter		This error corrected by adding the size attribute to the option tag, which changed the drop down to a select button-thing. I didn't expect that when I tried it out, but I think this will make it more likely for the user to see that they chance chose level 1 to 3. After that, the error was solved.
/new-achievement/enter		No error.
/overview	Document checking completed. No errors or warnings to show.	No error.

/gallery	Document checking completed. No errors or warnings to show.	No error.
/contact	Document checking completed. No errors or warnings to show.	No error.
style.css	Ergebnisse des CSS-Validators TextArea (CSS level 3 + SVG) Ups! Es wurden die folgenden Fehler gefunden (1) URI : TextArea 16 .piechart_block — Ungültige Nummer : padding `auto` ist kein `padding` -Wert : `0 auto` then Congratulations! No Error Found. This document validates as CSS level 3 + SVG !	(lit complains about 0 auto being no valid value for padding in .piechart_block) For this error, I followed the validator advice again, by removing the auto and making all padding 0. This change shouldn't make any difference in the usage of the website, since the auto would probably just be ignored. However, it makes the code clearer and might affect how the website is displayed on older browsers.

User testing

Test 1: Hana Reeve I

This feedback was provided by Hana Reeve who tested the website by entering her grades of a given standard. To solve this, I added a notice (if they successfully entered data) stating that they can find the entered standard unser /overview. This is her feedback: *It was easy to use in terms of putting in my grade, although it was a little hard to check that it was entered as I didn't know that it would show all my standards in overview, however I think that users would not have a hard time figuring out it was there if they did not have Ela with them.*

Test 2: Hana Reeve II

Task: Enter credits for a given standard.

Notes by Hana	Discussion with user	Changes based on testing feedback
I feel like there should be something above the top kine, even if just a photo/ nav	n/a	- I will add a nav
All credits has no pie chart but the others have one each saying "no credits done / left 100%"	Discussed the purpose of the All Credits pie chart.	- I will add a banner stating "You have no credits!"
I don't wanna copy the description or find the credits i'm lazy. Also how do ik if it's lit or num or ue. Why ask me to find it if it's really hard to find at least give instructions	Discussion about the purpose of the description field.	- I will add a more informative descriptions.
My success is red. Same colour as original message so i pass over it.	n/a	- I will change the colours of the button.

Test 3: Astrid Harris-Glasier

Task: Enter credits for a given standard.

Notes by Astrid	Discussion with user	Changes based on testing feedback
I don't know where to enter the grade after adding the standard	n/a	Change the nav description to "Enter Grade"
Design looks similar to Parent Portal	"This isn't a problem."	This is actually positive; the similarity helps in reading the website when you haven't gotten used to it.

Competitor research

Parent Portal

Strengths	Weaknesses
● "Official" version, told to use by teachers ● Further information on i.e. attendance → common access	● Terrible mobile design ● Not multiple pie charts
Opportunities for me ● Everyone wants three pie charts ● Terrible mobile design	**Threats it poses to me** ● Official ● Lack of ability to enter credits = error safe

Parent Portal is good at being quickly accessible due to being linked on wgc.school.nz. They are the official version and also include attendance etc., but my app does not include so much information, making it easier for the user to have an overview. Especially at the beginning, I found that I personally often was confused by parent portal, which my app will not do. My app will also provide a more detailed summary, and multiple pie charts that everyone wants.

NZQA

Strengths	Weaknesses
● Completely official ● In the end definitely does it right because NZQA knows how NCEA works	● Mobile design is bad & no pie charts ● Takes time for results to show up ● Clouded with other information
Opportunities ● More minimalistic design ● Mobile design, again	**Threats** ● Official & definitely correct

Learner's Login is terrible to be used on mobile; I can do better. I aim to provide a website that allows people to enter their own data and have control over it; people are also not required to wait until the results to show up as they can enter their own data.

Personas

Lia Taylor, 18yo, female from Wellington Goal: good grades	FRUSTRATIONS: - doesn't like the fact that she can't play around with stuff (i.e. include how she expects exam results) - Time frame between results & kamar showing them - Lack of control over things PERSONALITY: sarcastic, cynical gen Z, overachiever	Theodor Silverstone, 16yo, male from Auckland Goal: enjoy life, no stress	FRUSTRATIONS: - parent portal & NZQA are difficult to use because too much information in bad design - Nagging parents - Would like to show tweaked grades PERSONALITY: Lazy, bored, not interested at school
	Mum Ashley Liams, 59yo, female, from Wellington Goal: Help children at school, Understand how children are doing	FRUSTRATIONS: most info is not at the same place and spread over the internet, not good with tech PERSONALITY: busy, chilled, friendly (all persona images taken from Pinterest)	

Reflection on Testing and UX Technique Usage

The results and comments from Hana's testing helped me to improve the website and make it easier to use for the end user. Astrid's testing made me realise that a design similar to Parent Portal (in visual terms, no bad pie charts, …) would actually be helpful as people would be able to apply previous habits. Similarly, using the competitor research, I was able to find things that I could do better than said competitors, such as multiple pie charts.

The process of using the personas made me realise that my third persona does not fit my product. However, the other two helped me to decide whenever I wanted to use a full list of all standards or let the users enter their own (I chose enter-your-own, based on the persona's desire to be able to use and decide about what is entered). I created these personas based on people I know and who are within my target group, which helped me to determine things as well.

The validator testing helped me in finding coding errors that could affect the usage of the product in older browsers and how easily the overview can be understood. Other than these two cases, it assured me that my code is good. Through validator testing, I was able to find an error on the /new-standard/enter page, and able to confirm that the coding of each of the other pages was correct. This allowed users of the website to have an easier overview of the possible choices for which NCEA level they can chose.

Making sketches and mock up versions on paper and online helped me with visualising how the website would end up looking like. The current version looks a bit different from my sketches, primarily because I've been focusing on the database aspects of the project and the coding, rather than the overview of grades. While I do aim to include more graphics, I placed a functioning website as more important. I've also added another page (that allows adding standards) between making the sketches/mockups and now.

GitHub Multiple Releases Proof

Pre-release
 v2.7
 62d0d5b

Credit Calculator 2.7
Edit

ManuelaSpies released this 4 days ago · 2 commits to master since this release

- If the user has no credits, a box will appear instead of a broken pie chart.

▶ Assets 2

Pre-release
 v2.6
 cb68a34

Credit Calculator 2.6
Edit

ManuelaSpies released this 7 days ago · 6 commits to master since this release

- different colours for each warning message.

▶ Assets 2

Pre-release
 v2.5
 9b37a63

Credit Calculator 2.5
Edit

ManuelaSpies released this 13 days ago · 9 commits to master since this release

User registration works now, and if people register, they're automatically logged in.

- users can log in
- automatically logged in after creating account

▶ Assets 2

Pre-release
 v2.0
 a18889b

Credit Calculator 2.0
Edit

ManuelaSpies released this 16 days ago · 12 commits to master since this release

Adding standards and achieved credits work well, and server-based user accounts currently work in adding credits.

- adding standards
- logging in for pre-existing accounts

▶ Assets 2

Pre-release
 v1.0
 470a4a1

Credit Calculator 1.0
Edit

ManuelaSpies released this 27 days ago · 18 commits to master since this release
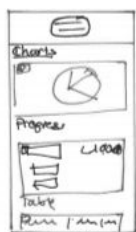
This version allows entering credits whose standards already existed in the system, as well as viewing a list of them and seeing them (with grade) on a pie chart.

- entering credits for pre-existing standards
- viewing list of credits & pie chart

▶ Assets 2

Sketches (Plans / Ideas)

Sitemap ≫≫→

Homepage → results overview (basic)

Contact   About

Calculator → detailed Overview

Acc Setting

Add C   Edit C

Login Sketch

TITLE
Der [   ]
p w [   ]
[Submit]
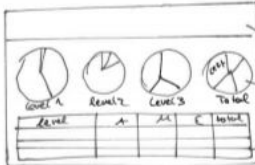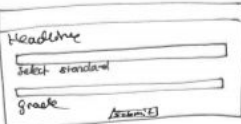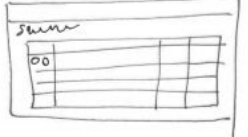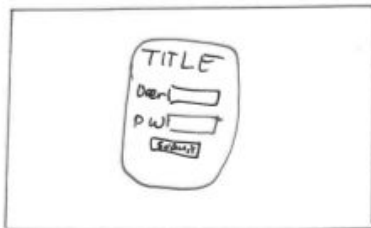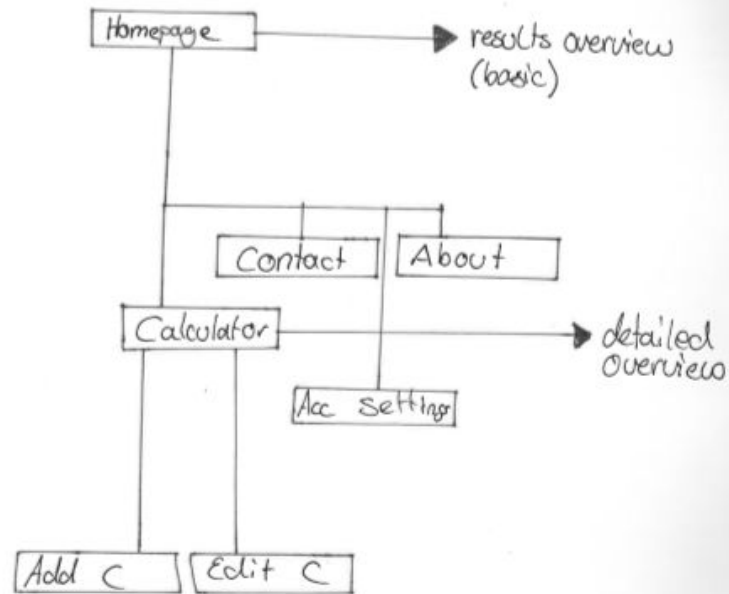
Sketches ≫≫→
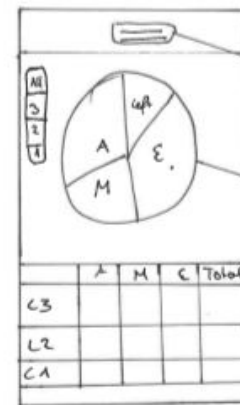
Homepage
- opens the home menu / pop up if chart of credits.
- pie chart (switch to change levels / total)

ISSUES:
What about the credit left? How do I know which level on?
→ left only on levels, not on total

HEADLINE
bla bla bla

MINOR HEADLINE

Contact / About
- Just text

Wireframes (Plans / Ideas)

Charts

Progress

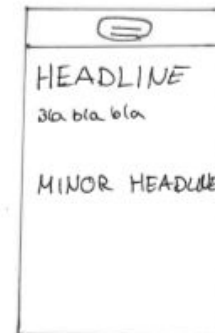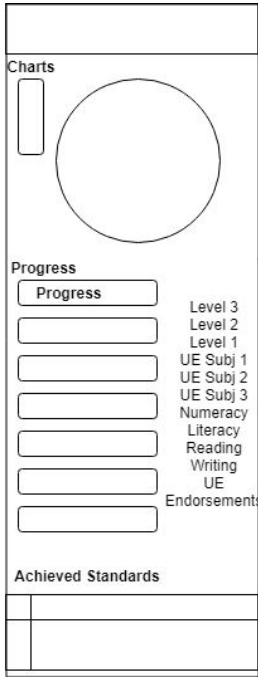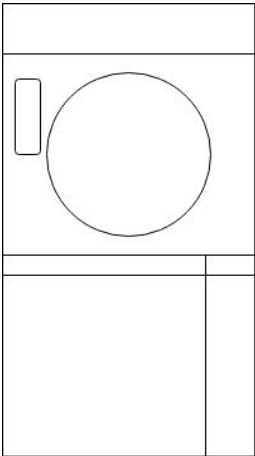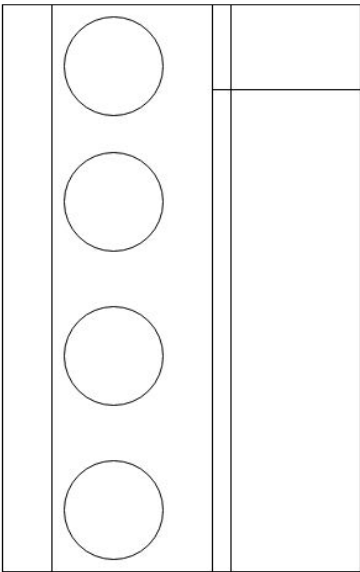Progress

Level 3
Level 2
Level 1
UE Subj 1
UE Subj 2
UE Subj 3
Numeracy
Literacy
Reading
Writing
UE
Endorsements

Achieved Standards
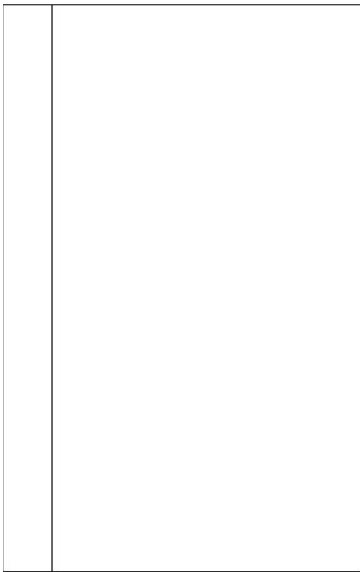
The chart can be expanded into all charts below each other as well as be used on a tabber.

The boxes next to the descriptions are progress bars, and they have the numbers next to them. L3, L2, L1 are given (although adding in two credits from other levels might be a bit difficult, it can be done). UE subjects take all approved subjects, count them together and check which has the most (and if there are 14).

Numeracy, Literacy, Red, Writ looks at the True/False statements respectively, while UE looks at L3, the UE Subjects, Num & Read/Writing. It counts each as 1, and only adds them if they are done (for now?)

Endorsements are given.

Text   num/num
Text   num/num

HEADLINE

Select a Standard

Select a Grade

Headline

Enter Standard

Select a grade
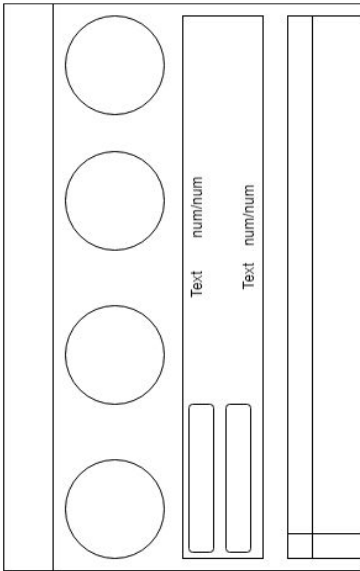
Table with standard, grade and ability to delete (sends query, refreshes) & Edit (leads to Add credits but lowkey different?)

Relevant implications

Copyright

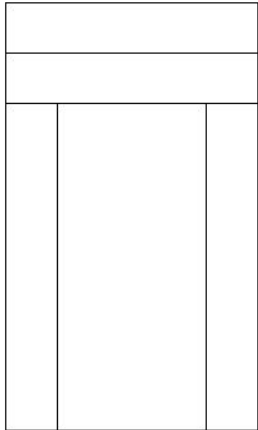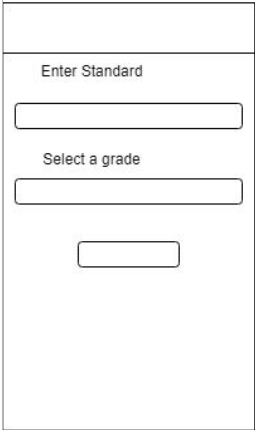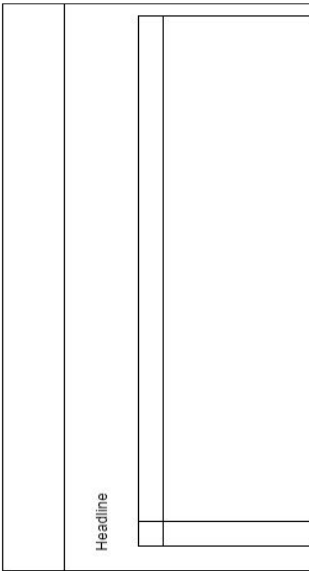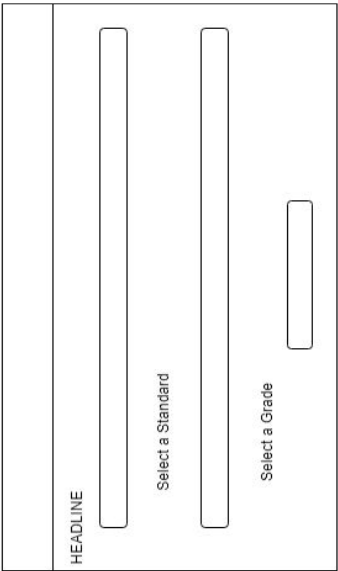Copyright is the right that are given to the creator and/or owner of an original content upon creation. It gives right of ownership to things you created, such as books, or programs which applies to this case. Copyright by default is very "closed", i.e. the creator has many rights and nobody else has any rights, and if anyone owns, sells, modifies, or uses it can be punished through the law. However, the creator of the property can grant people license that allow them to use the property under given restrictions, i.e. time period, whenever they can edit it, whenever they can sell it or publish it, and costs for licenses. There are various types of pre-written licenses, and individual ones, under which these things are made available.

This is relevant to me. Thus, through licenses, I can use various written codes and similar things in my project. I am using bootstrap (licensed under the MIT License), Google Charts (under Apache license) and other things that don't need to be noted going by Mr Harford. The outcome only used open licenses, meaning licenses for which you do not need to pay and where the restrictions aren't strict. The licenses allow me to use the code on my project, due to the circumstances and limits/lack of limits.

Sqlite is public domain and thus usable, as nobody owns the copyright. Because of copyright implications, I used my own photos and obtained verbal consent of the models.

Accessibility

Accessibility is a term used to define how easily a place, event, thing or, in this case, website, is usable for anyone. It particularly focuses on people with disabilities, such as i.e. blind people. This is very important in web design, as people who are not able to see struggle to use many websites that do not define things clearly for their usage / make their websites difficult to use for the screen readers these people use. As my project does not use sound, this is not relevant to my outcome, but if I used i.e. video or sound clips, providing subtitles would be essential.

For blind users, I have alt-tags on images describing them. This is important because people with visual disability, i.e. blind people, use screen readers. The text within the alt tag describes the photos. Similarly, I used short but descriptive page titles as screen readers use them too, and they are also used for web searches and bookmarks.

For people struggling to differentiate colours, I tried to keep most things on a black-white scale, while adding a little blue for the sake of appearance. This, alongside the lack of fancy colours, should allow the users to view the website easily.

For people struggling to use website, I decided not to use a drop down menu for the selection of NCEA level / grade, but one that shows all available answers, since people might not realise that you can use drop down menus. This is for i.e. elderly people who don't know how to use the internet. Since the outcome could be used by parents to track their children's results, this is relevant. Otherwise, I also tried to model the design similar to parent portal, but in a more effective way (i.e. pie charts) to allow the transfer of pre-existing skills for such people.

By making sure that the outcome is usable on different devices (by using i.e. difference lengths through Chrome's inspect tool), I made sure that people who might not have a laptop available can access the website. This was a particular issue when my table was too large for a small (i.e. phone) screen, or the menu did not work perfectly fine.

Input tests

Test	Outcome	What did I do to solve the error?
Without being logged in		
'/'	Redirect to '/login/user'	No error
'/contact'	Opened page	No error
'/gallery'	Opened page	No error
Opening 'register' through menu from Gallery	Clicking register is not recognised; the slide show is continued, and nothing else happens. This happens on every page when the menu is 'condensed', and is an issue.	I removed the CSS classes that cause the error. I will reconsider how I can work this issue at a later stage, as this is not needed for the website to function.
'/register/new', creating an account without anything entered	Pop up stating that the fields need to be filled out.	No error
'/register/new', creating an account with valid input	Account is created and the user is redirected to the '/' page.	No error
'register/'new', creating an account with an existing user name	Error message appears	No error
'register/new', creating an account but the passwords don't match	Error message appears	No error
'register/new', creating an account, but there's a space in the username	Error message appears	No error

'login/user', logging into account with correct data	Logging in was successful, the user is redirected to '/'	No error
'/logout/'	Logged out, redirected to /login/user	No error
'login/user', logging into non-existent username	Error message appears.	Made the error message a bit more helpful.
'login/user', logging into account with wrong password	Error message appears.	No error
Accessing '/' (basic overview)	Redirect to /login/login	No error
Accessing '/new-standard/enter'	Redirect to /login/login	No error
Accessing '/new-achievement/enter'	Redirect to /login/login	No error
Logged In		
Accessing '/'	Loads basic overview; tabber works	No error
Accessing '/overview'	Loads page	No error
Accessing '/contact'	Loads page, footer not fixed though.	Currently, fixing the footer to the bottom causes an error. In the current edition of the project, I will not fix it, as this does not influence the usability of the page at all.
Accidentally clicked on username ("Welcome, test")	Redirects to non-existent setting page	Fixed that for the moment; it'll redirect to '/'
Accessing '/gallery'	Loads page	Same issue as /contact.
Accessing '/new-standard'	Loads page	No error

'/new-standard': Entering a valid standard	Enters standard	No error
'/new-standard': Entering standard already added (same AS number(	Error message appears	No error
'/new-standard': Entering no data	Website doesn't process it, just shows error	No error
'/new-standard': String character in AS field	Error message appears	Made error message more informative.
'/new-standard': Entered a standard that adds 0 credits.	Success message	I decided not to add a minimum of 1 credit as this could be used for derived grades. If people still enter zero, then the user's an idiot and I can't do something against that. I did add a function to stop negative credits though.
'/new-standard': Too long AS number (99999999999999999999)	Internal server error	Added a maximum value
Accessing 'new-achievement/enter'	Loads page	No error
'new-achievement/enter': entering valid input	Internal server error: sqlite3.IntegrityError: UNIQUE constraint failed: result.as_id	The results table still views result.as_id as unique. Changed that, deleted table, made a new one. This also led to me finding some errors in how I check whenever the AS ID and the credits are integers or not. After that, no error.
'new-achievement/enter': entering standard	Error message appears	No error

again		
'new-achievement/enter': not selecting a grade	Website tells user that it's required to get that	No error
'login/user' while logged in	Redirect to '/'	No error
'register/new' while logged in	Redirect to '/'	No error

These tests helped me to find coding flaws that would affect the usage of the page. While working through these, certain pages work with messages sent through the URL (i.e. login/<message>). These should work for any message displayed. I intend to change this later on, but as of now, this is not required for the website to function correctly, and I don't have enough time because of the internal deadline.