ORIENTATION WEB APP FOR FIRST YEAR UNIVERSITY OF NEWCASTLE STUDENTS

COMP3851B – SEMESTER 2, 2020 PROJECT REPORT

Group 1

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Background:

The University of Newcastle currently lacks a basic information site for new students just starting out their university life, therefore an orientation site was proposed for these new students to use. This site would provide clear and concise information that is believed to be beneficial to new students by current students. Because of how frustrating it can be for new students to find out even just basic information on the Newcastle website ("University of Newcastle Australia", 2020) some students can experience an unnecessary amount of anxiety and stress even before their semester starts.

The current university website that houses all their information for new and current students has an excessive amount of irrelevant help for new students. Because these sites are catered towards everyone attending university the amount of information shown to a new student can become overwhelming and make it easy for a new student to miss some vital information. Therefore, a new webapp focused solely on new students is essential. There are also other sites such as AskUoN ("AskUoN", 2020) that help provide answers to any questions that a student may have, but as you can only use a search bar, unless you know exactly what you are looking for or the correct term it can be extremely difficult to find the answers to your question.

There are a few webapps that provide some similar functions as the proposed orientation app. Although none of these webapps have all the functionalities of the orientation app provided into one webapp, a user would have to navigate through three or four different sites to find what they need. One such example is MyUoN ("myUoN", 2020) while it provides students with convenient links to different sites and services, it does not give the students any information on what that service does or how to use it. Whilst our application will also provide links to other sites to provide more information it will also contain a summary of what the site is, and in some cases even provide tutorials on how to use it such as Blackboard. AskUoN is another application that provides some of the same functionality as our orientation app but again it only provides questions and answers, and the user must know their question before they can search for the answer. Our orientation app provides the necessary information that a new student will need so that if they have any further questions, they can make better use of AskUoN.

Aims and Objectives

1.   *Know the demographics and their needs:* Students come from different cultural backgrounds and contexts and therefore have different needs e.g. international students and domestic students are two major demographics and beyond that, there are more specific demographics e.g. Indigenous people. The website should acknowledge the differences by presenting information relevant to those demographics.

2.   *Provide the right balance of information and experience:* The website needs to achieve the right combination of facts about the university and advice from our experience of being first-year students. Having a strictly factual website does not give the experiential value that first-year students are looking for, whilst having a purely subjective website may lack the foundation of facts students need to know.

3.   *Provide a logical flow of information:* The website should present information sequentially and categorized meaningfully enabling students to keep track of a timeline of orientation events. This should also be manifested in the navigation of the website as opposed to having miscellaneous sections of information that lack context.

4.   *Provide an engaging and user-friendly interface:* The website should provide visual references in addition to textual elements and should also include dynamic elements that provide entertainment value to users. Moreover, page controls should be obvious to the user, either by stating it clearly or through interface metaphors.

5.   *Encourage students to seek more information:* The website should include links to allow students to conveniently explore more information from relevant resources. The website should avoid 'dead-ends' that leave students without anywhere to go further and explore more, in other words, it should take the initiative to provide more before the student has to take initiative to learn more.

Methods:

1.   Know the demographics and their needs.

We reflected on our experiences as first year students and the different struggles we have had coming from diverse backgrounds. We identified and took notes about what we think is important for new students coming from similar (international or domestic) backgrounds to know during their first semester for their orientation. In addition, we looked at university sources and the community to find more information and specific groups that may have different needs like Aboriginal people. We then considered how we should present our resources in the information design phase of our website.

2.   Provide the right balance of information and experience.

As per feedback on initial plans to have testimonials and facts for first year students, we have learned that offering these two information components in separation would be on the extreme ends of objectivity and subjectivity. Instead we decided to incorporate our own educated advice with the information we cherry picked that offer the most value for commencing students. This allowed us to achieve a balance of basic knowledge and experiential insight which students could apply themselves to facilitate their transition.

Provide a logical flow of information.

a.   We presented the information for the orientation on a stage-by-stage basis, from when the student first starts and has to choose their courses for their program, then settling into their new environment and taking the right steps to make progress in their studies and social life. The information was clearly categorized into sub-components to allow students to easily navigate and find information that is relevant to their issues, to avoid having to look through miscellaneous texts and having to make a connection themselves.

4.   Provide an engaging and user-friendly interface.

We ensured that we used buttons that demonstrate the action the user takes when pressed, in addition to arrows to indicate what happens when sections of the page are expanded or retracted. We also mixed up the elements on the website to break the monotony of having just text, by including dynamic page elements, colourful schemes, images, icons, visual guides, and videos about relevant orientation topics. The website sections were labelled clearly to represent its content and the use of whitespace, consistent patterns and compatibility with various screen sizes were considered in every part of the website.

5.   Encourage students to seek more information.

Hyperlinks to cross-reference other sections of the website, the university's website, or other relevant resources were consciously used to encourage students to continue exploring topics beyond just the piece of information they just consumed. In addition, students are made known ways they can seek out additional information if they are unable to find it on the website, such as through AskUoN or Student Central.

Every part of the aims and methods 1-5 above was implemented iteratively through various sprint meetings and continuous feedback from the lecturer and outside testers to reach a point. Both negative and positive feedback were used as indicators as to what aspects we should focus on providing more of and what we should look to tune down or improve on to allow the website to meet the required standard of expectations for an orientation application.

Results:

The primary goal of this web app was to make functional software which provided information to the user about orientation and their first semester at University, alongside providing some experiences from previous students. This goal was achieved by making clear and easy to read webpages which contributed to the user understanding the information that page was intended to provide. It was also achieved by adding experiences and advice from previous students from the University which should give the user a perspective and/or idea of what their first semester of University is all about. There are some examples of how this was achieved below.

Orientation Web App for First Year University of Newcastle Students

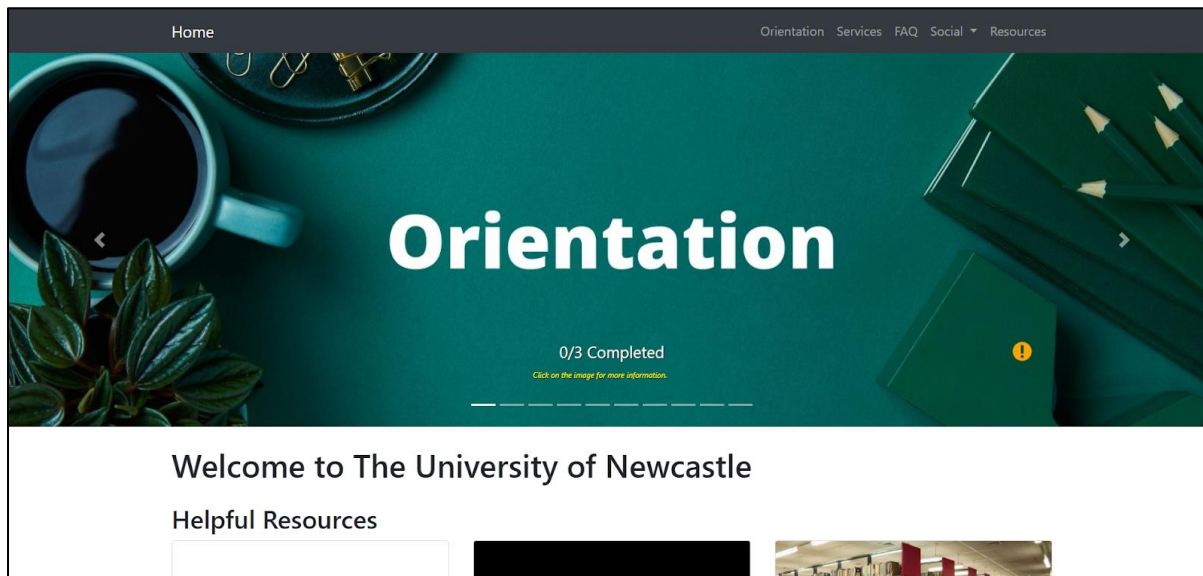## Figure 1: image of the home page

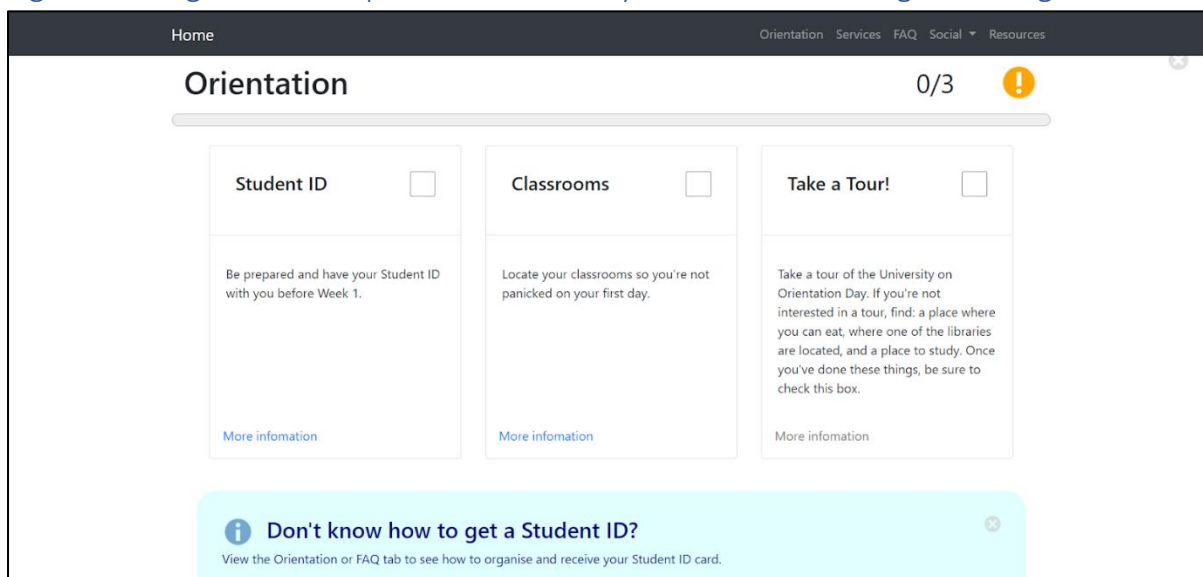## Figure 2: image of the drop-down bar when you click on the image from Figure 1

Figure 1 and Figure 2 are two images of the home page. Figure 1 is the home page when the user logs into the web app and Figure 2 is an image of the weekly task bar (including Orientation). To view the other weeks of the semester, the user clicks the arrow button on either side of the image. The user's tasks are directly related to that respective week of the semester. As shown in Figure 2, the tasks are related to the user's orientation day which include getting a student ID, locating the rooms for their classes, and taking a tour of the campus. Tasks for other weeks include preparing lecture notes, completing first assignments, and assembling lecture notes to use for final exam study. After the tasks are completed, the user can click the checkbox which will move the progression bar forward. When all tasks are complete for the week, the yellow warning icon turns into a green tick to inform the student they have completed all the tasks for that given week. The more information button provides additional information to the user about what that task means or access to further help. This page was designed this way because it is simple and easy to use, which means it does not require a big tutorial or explanation to use. Perfect for a first-year student who may feel intimidated after using other University pages.
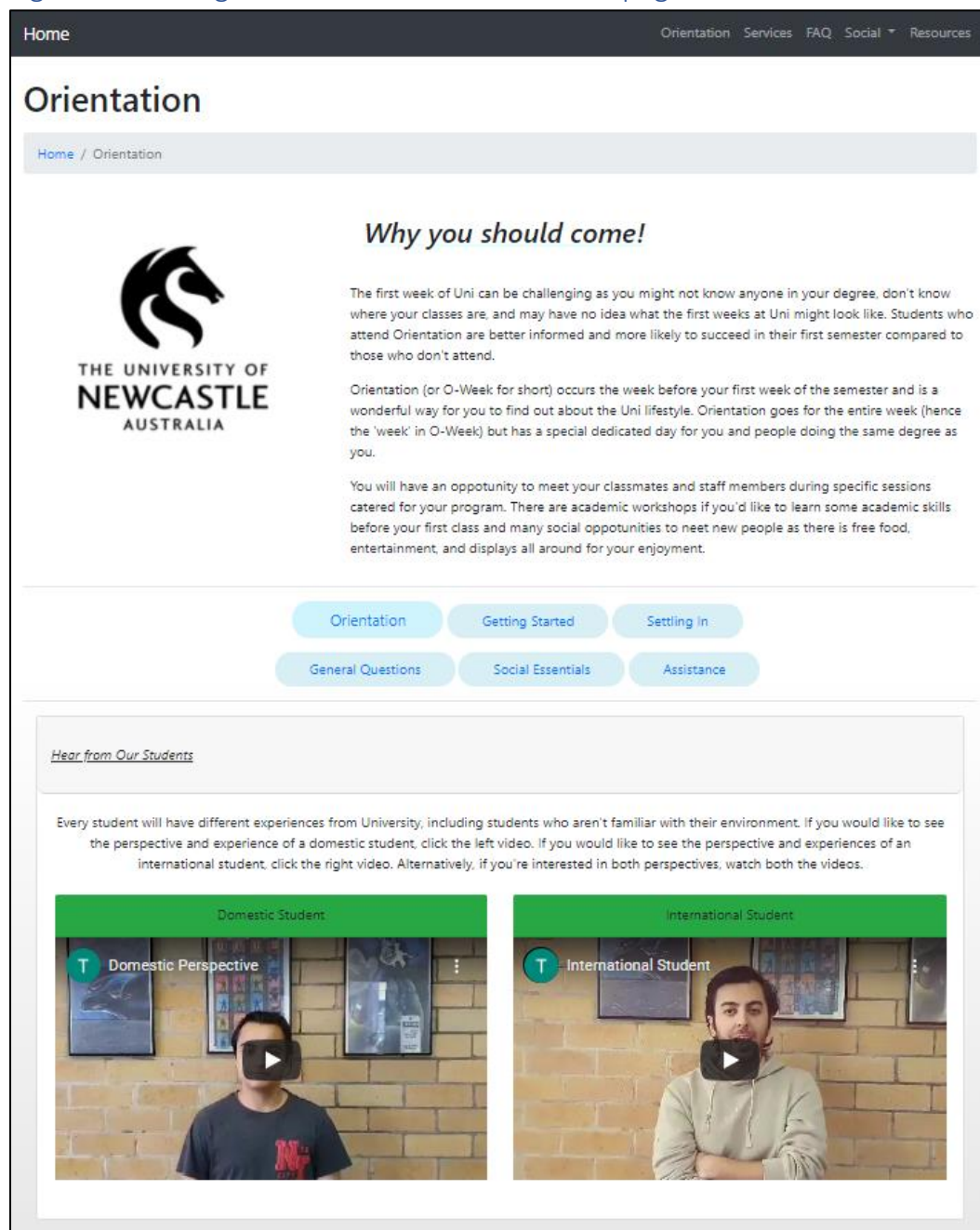
Figure 3: an image of the initial orientation webpage

Figure 3 is where the user will be sent if they click the "Orientation" navigation menu icon. This page demonstrates to users why they should attend orientation day alongside with the orientation navigation bubble buttons and "hear from our students" section. Aims 1 and 2 are shown on this page because there are a variety of non-textual elements being displayed and the videos provide information from previous University of Newcastle students. The short 1-2-minute videos are from the perspective of a domestic and international student, respectively. In these videos, both students are asked the exact same questions about who they are, what they study, and relevant questions a first-year student may have. These questions include what feelings did you have when you started university, what were you most nervous about, how did you overcome this, what did you enjoy the most when starting your first semester, and what advice would you give to a first year student. These videos are short, and change the dynamic of the webpage as long, lengthy amounts of text can be considered very boring. In comparison, having the same information in video form, provides a realness to the information as it is coming straight from the student and will more likely be considered more interesting than text on a page.

Orientation Web App for First Year University of Newcastle Students

Figure 4: an image of the getting started page located in the orientation navigation menu tab. The web browser has been zoomed out to show the webpage content
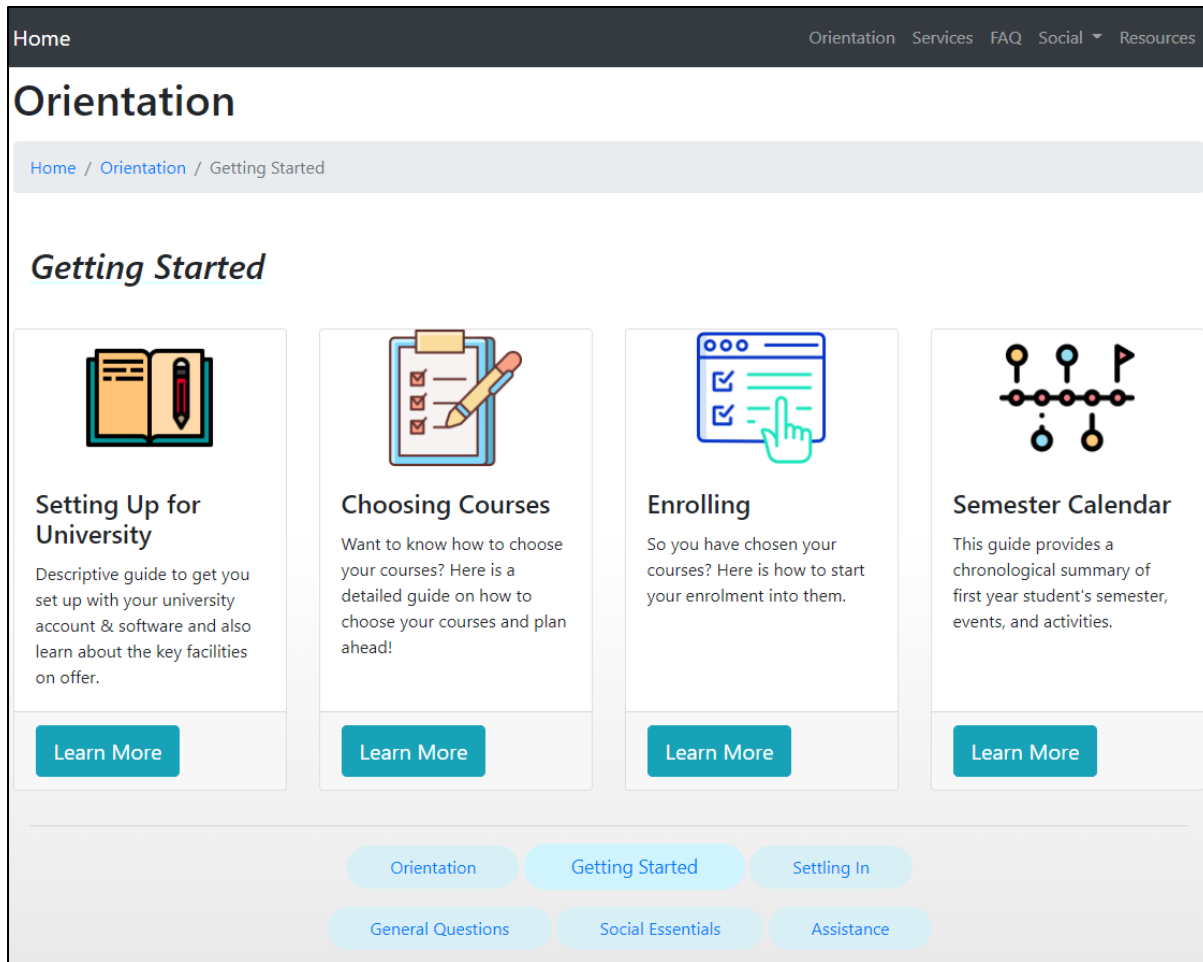

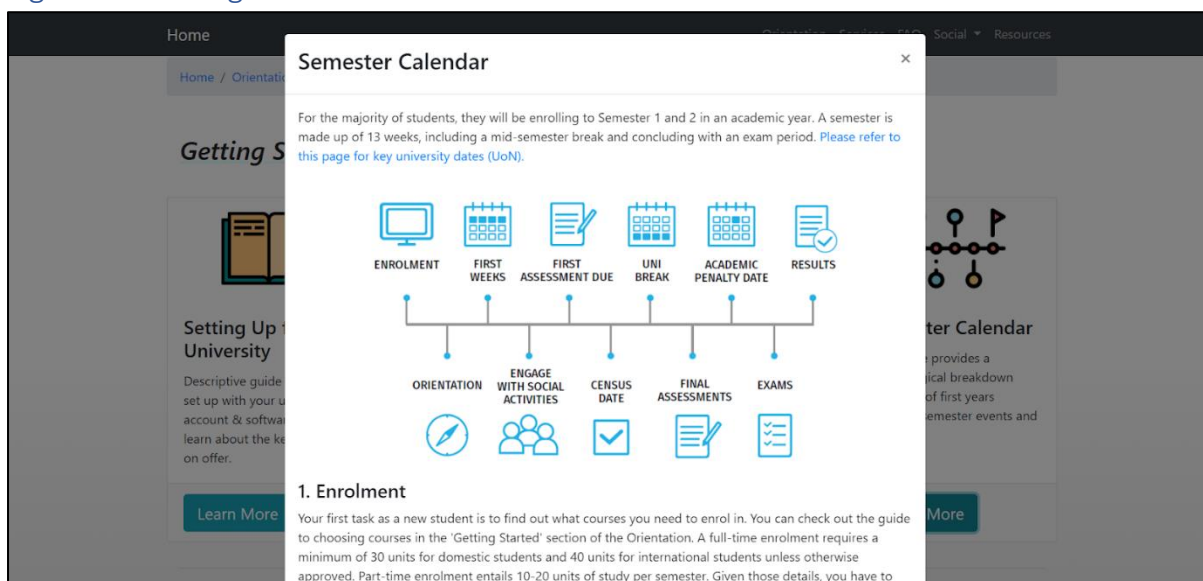Figure 5: an image of a modal box for the semester calendar card

Figure 4 shows one of the six bubble navigation buttons in the orientation tab, specifically, the "getting started" page. When the user clicks "learn more" on any of the page's cards, a modal box is popped up showing information about that topic (see Figure 5 for an example). The getting started page provides an informative overview of what to know when starting your University degree. Clicking on "learn more" gives an in-depth description for users to gain more information about that respective box. Everything on this page and other orientation bubble webpages are similar in flow and design to keep the webpages consistent. The information being given to the user is also in sequential order. From left to right, the information reads in an ordering that makes sense and is logical. For example, setting up for university is before choosing courses, choosing courses is before enrolling, and so on... This theme is vastly shown in our web app as all information is presented in this sequential matter. Another example of this is the FAQ webpage which shows questions and answers about assignments in a logical matter. These questions include what different assignment types are there, what is Turnitin, and what is adverse circumstances. If the ordering were reversed, the information would be hard to understand because the user would be seeing information about Turnitin before they even know what assignment types that relates to. These pages were created this way, so the user never felt confused, and it also looks good because it presents well.

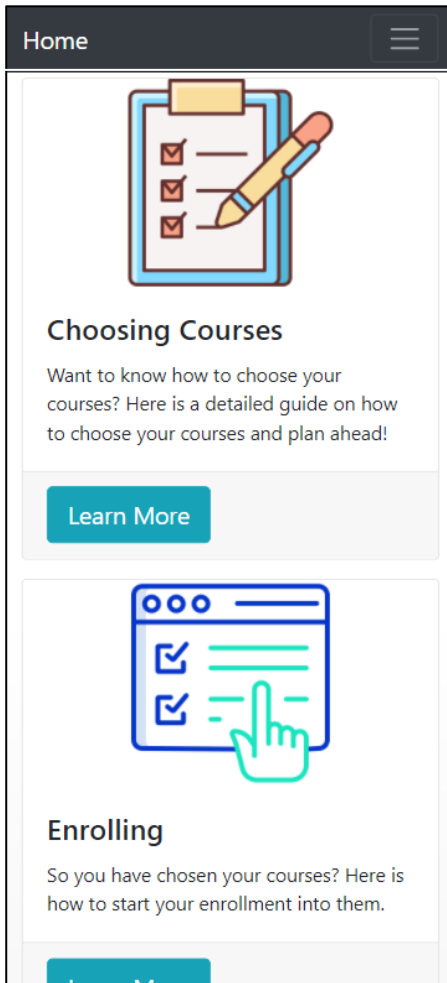Figure 6: and image of the getting started page on an iPhone X screen

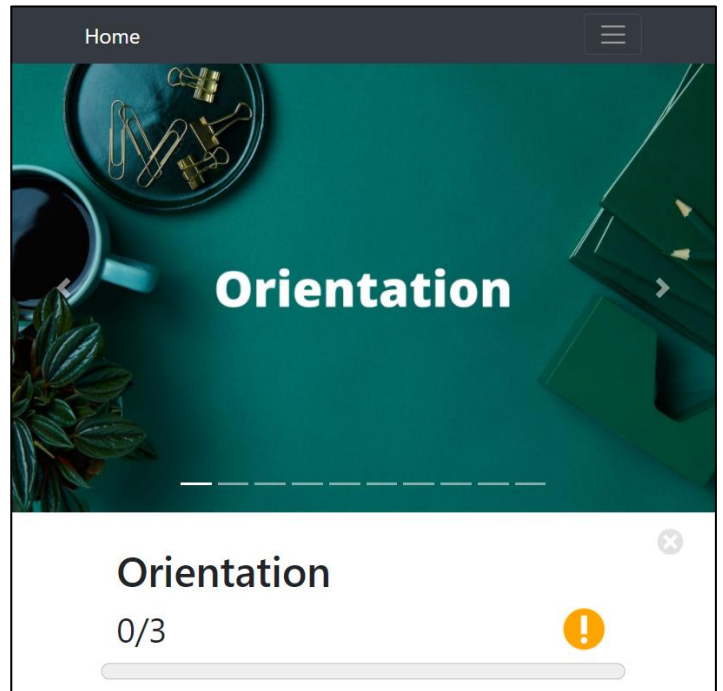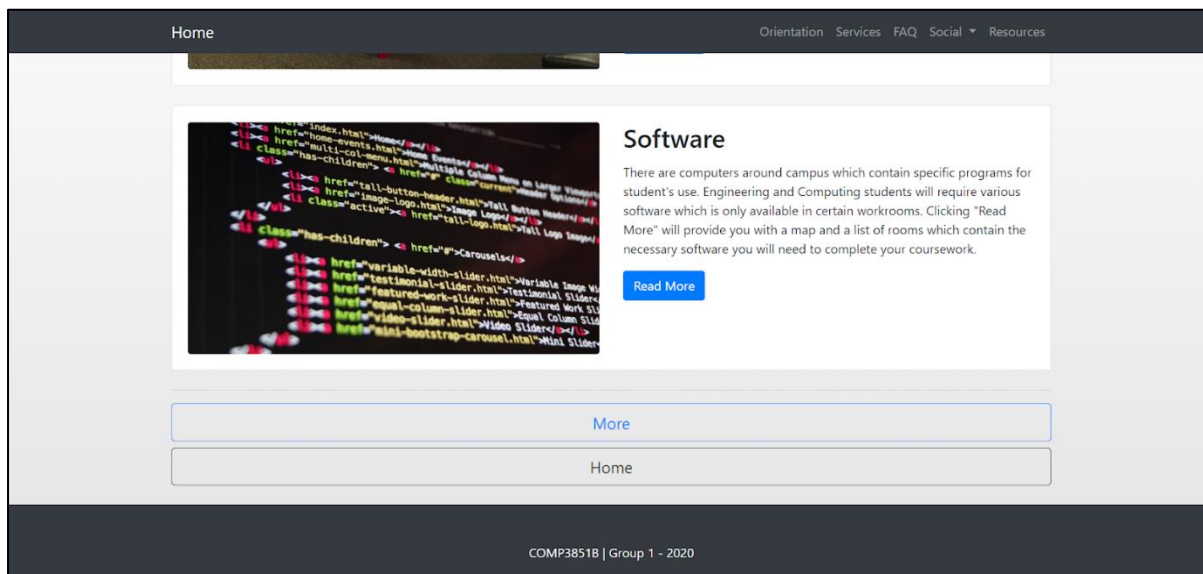Figure 7: an image of the homepage on a smaller screen

Figure 8: an image of the buttons on the resources page which take the user home

Some important functionality requirements which we address in our software is having responsive webpages which react to the users screen size and ensuring the user doesn't have a feeling of being "stuck" in the sense that they get to a webpage and there is nowhere to go afterwards. Using bootstrap, we were able to create responsive webpages which turned the navigation bar into a menu bar on screens that were not of standard monitor size, and have responsive images that didn't morph the page or interrupt the functionalities of the webpage. Figures 6 & 7 show/prove this. Each and every webpage has a home button on the bottom of it. This is to guarantee the user does not get "stuck" on a webpage. If a user was new to the system, and was unaware of its contents, there is the potential for that user to get to a page and not know what to do next. Having an explicit home button toward the bottom of the back allows the user to be guided back to the homepage and navigate through to the next page they are seeking. This is shown in Figure 8. Pages which have very specific information on them (e.g. aroma cafe, the forum, etc) have a "back" button displayed instead. This is so the user can read the information about one of the social services the university has and return to the page prior without the chance of the user being potentially confused as to where to go next. The majority of pages are also filled with numerous amounts of links. If the user reads about a service or resource that may be beneficial to them, there exists a link within that information to take the user to that service or resource they are interested in.

Limitations of our software include users not having a personal experience with the web app. They can click tasks that they have completed and view information relating to their studies and future experiences but are unable to receive an experience that has been purely curated for their field of study or personality. The software could be modified for similar projects by changing the information within the web app as the layout should meet the standard of expectation.

Ethics:

Web developers must be qualified experts and provide clients with resources, know the legal problems and rules that apply to corporations working on the Internet. Many laws relating to Online firms and activities are actually not fully clear; as legal decisions and rules are dealt with and decided, others grow every day. The Web (and market in general) has many agreed ethical norms of behaviour that should be practiced by all web developers, called ethics.

Ethics is a set of principles that regulate the actions of a profession's participants and establishes fundamental values within a practitioner regarding responsible behaviour and activities.

There are many examples of ethical considerations in web developments:

- Do not send bulk e-mail or spam.

- Do not buy web addresses (an activity also classified as domain squatting or cyber-squatting) that you do not wish to use.

- Do not spread malicious software code like viruses or worms intentionally.

- Do not transfer e-mail messages along the chain, particularly those that suggest threats.

Some ethics considerations which we undertook include but are not limited to:

- Not using copyrighted images as our group could get into legal trouble/fined for using copyrighted images.

- Ensuring any login information is held in a secure database without login details being shared to other users.

- Ensuring all information present on our website is true and not misleading in any way.

- Ensuring our website is available to everyone who is within right to view/access our website

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