Graded Unit 2 Evaluation

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# 1. Outline of the Assessment

At the beginning of the project during the inception phase (*Graded Unit - Inception Phase Report*) I discussed what I planned to design and produce as part of an invoicing system. During the inception phase I created a list of all functional requirements that were required for the application to fully function correctly. The list of all functionally requirements can be found in section *Graded Unit – Inception Phase – 1.2.1. Functional Requirements*. I plan on talking about how I managed to try and keep all designs as close as possible to the original plans and designs that I previously produced and where and why I changed certain aspects, features and function to help with the development of the application. Below is where I am going to discuss in great detail each functional requirement and my justification on why I did certain things and why/what changes were made from the original design I had proposed to create.

## 1.1. Functional Requirements

1. Creation and use of a database

For the application to function correctly I had to create and implement a database to store all required information. I was able to have the database function correctly to a certain extent with the application with the ability to pull required data out and display it to the screen when requested, however, I was unable to implement the ability to update the database through the application as I was intending on doing.

2. Display Homepage

The application is able to display the homepage when called upon where ever in the application. The homepage gets displayed to the screen with all intended information, buttons and images along with the dropdown menu display more options to for the menu. Unfortunately, I was only able to have two buttons working correctly on this page (the home button and the login/register button) with all other buttons and links not doing anything apart from showing they are clickable with the change of mouse cursor when hovered over. Although most features did not function as I intended, having the login button work was the main functionality purpose of the application that I need to have working on order to have the ability to carry-out any other tasks.

3. Display Login Page

The application displays the login page correctly when called upon. I managed to have the import/main functionality of the login page work correctly and that was to successfully login and stop any invalid logins. Having the main functionality of the login page was my main goal which meant I did not focus on other features included on this page leading to the forgotten password link not working or doing anything. On the other hand, I was able to have the sign-up link work correctly and have the user redirected to the register page.

4. Display User Account Page

This page was for the users/customers of the application which I did not implemented into this build of the application. I only created and implemented the employee account page. I decided to do this as the employee page displays the main functionality of the application with the database viewer. I will discuss more of my reasonings for the employee page in *9. Display Employee Page*.

5. Display Products Page

With only implementing the main important features into the application, I was unable to add this page into the system. In the previous stage (*Graded Unit – Development Report*) I discussed the reasoning and other details of how and why this page was not implemented. I will be discussing in more detail and into a personal sense of what I would and could have done differently in section 3*. Future Recommendations*.

6. Display Single Products Page

Not having the *5. Display Products Implemented*into the applications means that I was unable to have the display single products pages implemented. This page would of only of been possible if the displays products page was implemented as it would have been accesses via selecting a product from that page. I am going to talk about what I could have done and what I would do differently to have the page implemented and functioning in section *3. Future Recommendations*.

7. Display Users Basket Page

The user basket was meant to hold all items that the user has selected for purchase, but with functions of *5. Display Products Page* and *6. Display Single Products Page* not being implemented into the application I did not add this the function and page into the application. Without the other two functions ands pages, I did not feel the need to add this function/page into the application as I wanted to focus all my attention on the main functions of the application, making it work correctly. In section *3. Future Recommendations* I will be discussing why and how I would change and alter different functions and features involving all pages that relate to adding products into the users basket. I also be giving my personal point of view of where I could of spend more time focusing and how I would change the implementation of this function.

8. Display Checkout Page

Displaying the checkout page is another feature I did not implemented into the application as it would require *7. Display Users Basket Page* to function correctly. Not having the key function implemented into the application to have the checkout page working correctly I did not feel the need to have this page in the application, and instead I focused on the main features and functions of the application. In section *3. Future Recommendations* I will be going into further details on what changes and what I could have done differently in future iterations of the application.

9. Display Employee Page

Having the main functionality of the application implemented into this page, I focused a lot of my time and research on having the database working correctly with the application. Having been able to have the database connected to the application correctly I was able to have the user set what reports they want to display to the screen, but I was unable to have the option to set different parameters. I was able to implement the feature to display the update/edit database screen to the page through the use of a button but the functionality of it does not currently work (I will discuss more about this in section *10. Display Database edit screen*). With the ability of selecting reports and displaying them, I was able to implement a print feature that will print out the report displayed to the screen as required in the functional requirements.

10. Display Database edit screen

I was able to create and implanted the display database edit screen into the application, but I was unable to implement any functionality to it. I wanted to show what this feature would look like if it were to be fully implemented into the application. I managed to show all the buttons that would be used to edit the database but as I said, none of the buttons work or do anything apart from the navigation back to the employees account page. I section *3. Future Recommendations* I will be discussing what other features and changes that I would make in future or if I had more time to develop the application.

# 2. Assessment of the Strengths and Weakness

During this section I will be discussing my strengths and weaknesses that I encountered and felt during the whole process of this project.

One of my strengths that I felt was one of my very strong and main strengths was that I felt that my standard of documentation was very high, and I spend a lot of time doing it and trying to make it perfect to the best of my abilities, this should with the high makes that I received in the earlier stages. I feel as though with the time that I spent working on my documentation, it made the development stage fairly simple and straight forward to follow as it gave me a good bases to start with, with all the design that I produced it made designing and creating the application very easy and I did not have to put a lot of thought into it as I had already created and planned out everything that I was going to produce.

A weakness that I felt was that I did not interact with the client as much as I would have liked. This involved one on one meetings and showing the client iterations of the application. Interacting with the client more would have made the development stage a lot easier and clearer to develop and create as having client feedback would if made the development go a lot smoother and I would have a clearer image and understanding of what the client wanted. Having planned to have meetings with the client there were some meetings that were unable to go ahead due to unforeseen circumstances which I will be discussing in the later section: *4.3. Unforeseen Circumstances*.

Another strength that I feel as though I encountered was my ability to quickly learn how to create and implement a database into the application. Using SQLite I had to research and learn how to use it and I thought it did not spend a lot of time having to learn it as I thought it was fairly easy and straightforward to pick up.

Along with having to the learn the database side, I also felt like that I learned and picked up my unfamiliar library of Java FX. I feel as though this is a key strength for me as I know myself that programming is not my strong side of computing, so being able to learn new libraries in the time frame that I had was a big achievement. I spent A lot of time working with scene builder to create interfaces for the program. Having to use scene builder for a long period of time meant that I got familiar with it and grew more confident while using it.

A big weakness that I felt mainly during the development stage of the project was losing motivation and concentration when creating the application. Not being motivated with the project meant that I lost concentration a lot and got distracted very easily. This meant that there would be times, even days where I would not do anything and hold of to a certain day to start working again. Also, whenever I started to struggle with certain implementations I would sometimes stop or need to research which led to me being less motivated to carry on when ever I could not find the required solution. With this going on it caused me a lot of problems and could have caused crucial problems nearer the end of the development stage, I was unable to implement features that I had planned on implementing due to the fact that I was running out of time.

A strength that I feel that I achieved very well was that I followed my design plan very well. The application that I created follows the same design that I planned and intended on creating. Although there is certain features and elements of designs that are different to the planned designs they are only small things that do not affect majority of the plans. Following the designs that I produced, it made it very easy to create and produce the interface to the application.

Another strength that I had was the ability to easily create a project plan. This involved an unforeseen circumstance (can be found in section *4.3. Unforeseen Circumstances*) where I was unable to use a new software to create project plan which meant I had to resort to another software which was Microsoft Project. Having used project in the past I was able to use my knowledge and skills that I had previously gained to create and complete my project plan the in early stages of the project.

Another weakness that I encountered during the development stage while programming the application was that my skills of programming is not the greatest. Not being able to code certain things where I had to then research and look at previous notes and programs that I have worked on slowed down the development process. If I had more knowledge in the programming area I would been able to implement more features with the time that I used to research on how to implement and code features in the application.

A strength that ties in with my weakness with programming not being my strong point is that I feel as though the required research that I had to carryout was very efficient even though it consumed a lot of time over development. I was able to research into the specific aspects and features that I required and also with the research that I carried out during the Inception Phase at the start of the project. All the research material that can be found in that document (*Graded Unit – Inception Phase Report – Section 1.7.3. Other Resource References*) help a lot as it saved some time for me to work on the applications development rather than more time into research.

Quite a big weakness that I felt was my time keeping and following my project plan. A t the beginning of the project I was following strictly to my project plan with time scales but as the projects went on, I had underestimated the time it was going to take to complete certain tasks. This meant that I was behind schedule majority of the time, but I had to change how much time I was putting into different areas. Even though I was carrying out tasks in a different order form the project plan that I created, I managed to have everything that was required completed on time in the set time frame that I had set myself.

Another strength which also ties in with my good use of documentation is the user documentation that I created during the development stage (*Graded Unit – Development Stage – Section 3. User Documentation*). With the amount of detail that I put into this section, I believe it is very easy and straight forward to understand and follow along with.

A strength that I feel that I have greatly achieved is the layout of my code. I wanted to make sure that I had everything commented correctly and use white space when appropriate. I also feel as though I tried my best to make the code very easy to understand with the correct name of methods and variable throughout all the classes, I also tried to have each sections of code/classes in their own packages instead of it being messing and having everything in the one package.

# 3. Future Recommendations

An assessment of the strengths and weaknesses of the outputs of the practical assignment.

# 4. Summary of Modifications

A summary of any modifications to the project plan, solution design and/or implementation that were made during the project. Including reference to any unforeseen events and how they were handled.

## 4.1. Modifications to the Project Plan

## 4.2. Modifications During Development Stage

## 4.3. Unforeseen Circumstances

1. College Strikes

2. Asana

# 5. Identification of new Knowledge and Skills

Identification of any knowledge and skills which have been gained or developed while carrying out the project assignment and how the actions/process of carrying out the project could have been improved.