Development Report   
Assignment 2

CIS099-2

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# User Evaluation:

## Plan:

There are several different areas which we would like to evaluate with our application. We feel that we designed the application in a way which would improve usability with a simple and easy to use layout, with clear navigation buttons for the different sections. As our application is setting out to improve the speed it takes to plan a week’s meals and produce a shopping list, it is vital to evaluate its efficiency. Finally, we will evaluate how attractive the application is and how satisfying it is to use.

For our initial user evaluation, we will be using empirical methods such as; Think aloud and Observation during tasked activities (Appendices 1) as well as asking the users to fill out a short questionnaire (Appendices 2) at the end of the session. The tasked activities will be designed to see how effective the design of the application is at usability by seeing if users find the application easy to learn. The questionnaire will collect quantitative data such as; a 1-10 rating on how appealing the design is and how efficient they felt the layout was. There will also be optional comment sections to collect qualitative data. Once the user is more accustom to the application, we will also be doing some time to complete tasks (Appendices 3). The results of these timed tests, along with the results from the tasked activities and questionnaires, will helps us gauge how efficient the application is at solving the problem of how long it takes to create a week’s meal plan and shopping list. As our application requires users to input a few ingredients it would be a good idea to have a recipe book during the evaluation to help the users from having to think of a recipe.

## Results:

The results of the user evaluation (Appendices 4) suggest that our application has a good usability and is efficient in its navigation and ease of functionality. Over all the users were very satisfied with the process of adding a meal to creating a shopping list. Finally, the majority of the users thought the design was fairly attractive.

To conclude, we seem to be on track to creating a great product which solves the problem of how long it takes to create a week’s meal plan and shopping list, using Easy as pie it takes around 3 minutes to add a meal and around 1 minute to produce a seven-day meal plan and shopping list once several meals have been added. From here we can set about getting more data on the user evaluation by finding more users or approaching experts in usability.

# Critical Analysis and reflection of the project:

## What went well and what went wrong?

Overall as a group I feel that we generally worked well together and got one with one another. We all chose to divide up the different roles of the project and work individually on different parts of the assignment. I would say the work completed was to a high standard and overall the final product is of a high quality and we have successfully fulfilled the assignment brief.

However, there were some issues we had in terms of things that could have been handled better. One of these issues was primarily communication, as can be common when working on a group project. This included things such as certain members occasionally working on the same things or certain members of the group not communicating with other members as to what work still needed to be completed.

In addition, another possible issue was that certain members of the group contributed more largely than others, leading to a slight discrepancy in the amount of work produced by each member which should have been a more collaborative effort.

## What we would have done differently:

I think what we would have done differently would be to be more efficient in our time and roles in the group, we also would have taken more time to make decisions in the conception of the app such as the designs and content of app as well as been more efficient with time to make sure we have time to make the app in multiple stages for testing.

## How we would improve it in the future:

To improve we would have extended the conception time to look through the concept more thoroughly and make better decisions for when we started designing and coding as well as make sure we use the time more efficiently when starting the development of our app so we can make sure the app is ready and tested at an earlier stage in case improvements our needed.

# Contribution:

## Zak – Group Leader:

My focus was the backend JavaScript which involved learning how to use Google Firebase and coding the button functions to get data from the Firebase database and display it on the page. I also wrote a lot of the HTML for the pages. I took part in peer programing with Dominick and Sam as neither felt confident enough to do it on their own. The attendance for meetings wasn’t the best and only occasionally did we have a full group when we met up, however everyone was very communicative and easy to get hold of. Occasionally deadlines on tasks weren’t met but they weren’t missed by very long. Overall, I feel the group could have been more productive at the beginning.

## Saiber:

CSS was the main consumer of time for me, during this project. I was luckily able to get it done to an optimal state where everything worked and looked fine. I was able to squeeze in some html coding thanks to the CSS that I had finished as well. The hardest part of the CSS for me was probably getting the buttons and text in positions that would look the best and help users to easily navigate through the app. I had lots of issues at first with CSS as this is my first experience with it. However, I quickly adapted and started to understand how it worked. In addition, the layout of the app was something I had also contributed with some group members also helping out with ideas.

## Sam:

My primary role in the development of our application was testing the application itself. This involved creating a testing table for our application and testing different functions of the app that the user will use when using our application. Such as testing all the different buttons and features of the application to ensure that they are all working correctly.

In addition, I also highlighted any bugs or issues I discovered during my initial testing so that they could be fixed during later versions of the application (Appendices 5). As a result, I worked on the data validation for the application to help fix some of these bugs or issues.

This involved utilising some JavaScript and HTML skills in order to get error messages to appear when an invalid input was put in by the user or for the application to reject any incorrect inputs.

After this, I conducted some further testing on the updated version of the application to test any new features that were added as well as ensuring that any previous issues or bugs had been resolved or addressed (.

Overall, I am happy with my contribution to this assignment and am satisfied with my use of both HTML and JavaScript skills which I was able to develop during this unit.

## Dominick:

While I did some coding for the project My main area of focus was in the area of designing the app; creating the conceptual designs of the app, I worked on the layout of the app along with Saiber and worked on some HTML as well as some JavaScript. I also created the GIF for the loading screen as well as the app Logo to go on the log on screen.

# Mobile Application Search Engine Optimization and Marketing Strategy:

## Marketing:

The plan to market the app is pretty simple. Our first idea is to market it through the Android’s Google Play store as well as IOS’s App store, since these are the two leading platforms for mobile apps and games. Marketing our mobile app here would gain the most traction as well as inform the greatest amount of our target audience about us. Other places that we could possibly market our app is through social media sites such as Instagram or Facebook. Using adverts on these social sites would hugely help us get our app in the open and benefit the mobile apps downloads. Since the app is going to be free, our source of income will be coming from running adverts of our own through the ‘Easy as Pie’ app. This makes sure that we are able to make a profit and continue updating the app to our user’s needs. The reason that we decided to go with a free app is because it’s helpful in getting the most users since potential users are more likely to try out a free app over a paid one.

## Planning Search engine Optimization:

There are multiple different ways we could achieve a good search engine optimisation. Such as using key words that would consist of common search terms. This would allow our application to appear at the top of lists when these keywords are searched by users. In addition, we would want a short simple name which our application already has. Moreover, by using a user-friendly and easy to understand design, we could also achieve a good SEO.

## Our IP:

### Protecting your IP:

There are multiple ways of protecting your IP to make sure that your app is safe from thieves. Protection is always of importance as without this your IP could be stolen and used to gain income, without your consent. This is the same for our app and so getting protection for our app is a must. Here are a few ways that we can have legal protection for our ‘Easy as Pie’ app:

* Patents are used to protect your inventions and give you the right to take legal actions against anyone who imports or sells without your permission. This is a must for any mobile app developers if they wish to secure their app and make an income in the future, so it’s a no brainer for us as well.
* Trademarks allow you to take legal action against anyone who uses your brand name, logo or slogan. It also allows you to sell and license your brand. Just like to the previous one this is a must for anyone since it makes sure that your product isn’t mistaken for another with a similar logo or name.
* Copyrights are an automatic protection for your IP and doesn’t cost a fee like the other two examples of protection. It is also one of the most known ways of protecting your IP

### Developing your IP:

Developing an IP always depends on the IP itself. Since our IP is an app our main focus to increase growth will be to update the app to fit the user’s needs while also adding features that rekindle users interests for the app. Spreading the brand to other markets such as food, and fitness equipment, would definitely help in the growth since we would be able to spread the ‘Easy as Pie’ brand to further reaches giving us more potential users for the app. Finally, collecting as much feedback as possible from users allows us to plan out our next expansions for the IP and have a rough idea of any potential changes that happen to our target audience.

## Appendices:

1.Tasked Activities

1. Please could you register a new account with the email address “beta@easyaspie.com” and password “easyaspie”.
2. Please could you add a new meal.
3. Please add the meal you added in the previous task to today’s section on the meal planner.
4. Finally, could you please generate a shopping list for today.

2. Questionnaire

1. On a scale of 1-10, how attractive is the design of Easy as Pie?

Comments:

1. On a scale of 1-10, how efficient do you feel the layout was for navigation and completion of tasks.

Comments:

1. On a scale of 1-10, how easy was it to learn to use the application?

Comments:

1. On scale of 1-10, how satisfied were you with the process of adding a meal, creating a plan and producing a shopping list within the application?

Comments:

1. On a scale of 1-10, how happy where you with the presentation of the content of the application?

Comments:

3. Timed Activities

1. Please add this meal from “Pasta Dishes” cookbook p5:

Spaghetti Bolognese

30ml olive oil

400g mince

1 onion

2 garlic cloves

1 carrot

800g tin tomatoes

400ml stock

400g spaghetti

1. Please create a seven-day meal plan and generate a seven-day shopping list.
2. User Evaluation Results

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Tasked Activities | Task 1 | Task 2 | Task 3 | Task 4 |
| Person 1 | User was easily able to register the account | User noticed the navigation buttons quickly and found the meals page. They then found the add meal button quickly and had no issues inputting a meal. | Again, the user located the navigation button and quickly worked out how to add a meal to the planner. | The user experiences no issues completing this task. |
| Person 2 | user registered a new user with no issues. | The user found the navigation and menu button quickly. The user was able to find how to add different measurements for the ingredients naturally. | The user was able to add a meal to the plan with no issues | The user quickly generated todays shopping list. |
| Person 3 | The user had no issues registering. | The user was able to navigate the app easily and noticed how to change the unit of measurement quickly. | The user was quick at completing this task. | The user had no issues generating the shopping list. |
| Person 4 | The user had no issues. | They quickly learnt how to navigate the application and use the dropdown box to changes the unit of measurement. | The user had no issues with this task. | The user was able to find how to generate today shopping list easily. |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Questionnaire | Q1 | Q2 | Q3 | Q4 | Q5 |
| Person 1 | 7 | 10 | 10 | 9 | 7 |
| Person 2 | 7 | 9 | 8 | 9 | 9 |
| Person 3 | 8 | 7 | 9 | 8 | 8 |
| Person 4 | 9 | 8 | 6 | 10 | 7 |

|  |  |  |
| --- | --- | --- |
| Timed Activity | Add a Meal | Create a Seven-day meal plan and shopping list. |
| Person 1 | 2m48s | 48s |
| Person 2 | 2m28s | 1m06s |
| Person 3 | 3m01s | 1m10s |
| Person 4 | 2m36s | 56s |

5.Testing Document 1

|  |  |  |
| --- | --- | --- |
| **Input:** | **Expected Output:** | **Output:** |
| Enters valid email address and password | Ability to register | Page says ‘welcome’ |
| User clicks back button to return to original login page | User returns to original login page | Page says ‘welcome’ again and user cannot return back |
| User clicks add meal to the plan despite any meals having been added | Nothing happens | The text boxes for each day of the week disappear including the add meal box |
| User clicks the shopping list button | User is taken to the shopping list page | User is taken to the shopping list page |
| User adds an item to the shopping list and selects the measurement as ‘g’ and with a quantity of 1 | The item is added to the list | The item is added under the correct quantity and unit of measurement |
| User adds the same item but this time with a quantity of 0 | The item will not be added to the list and an error will be given | The item is added with a quantity of 0 |
| User clicks the add item list having entered nothing into the items box | The item will not be added to the list and an error will be given | An item is added with no name regardless |
| User clicks the clear shopping list button | The shopping list is cleared | The shopping list is cleared of all previous items |
| Users clicks the generate meal plan button despite no meals having been added | An error will be thrown, and a message indicated to the user | An error is thrown but no message is indicated to the user |
| The user clicks the meals button | The user is taken to the meals page | The user is taken to the meals page |
| User clicks the add meals button | The user is taken to the add meals page | The user is taken to the add meals page |
| The user clicks the add ingredient button without having entered an ingredient | An error will be given | An item is added with no name regardless |
| The back button is pressed | The user is taken back to the meals page | The user is taken back to the meals page |
| As the save button was not pressed, nothing should have been saved that was entered previously | Nothing should be present in the add meals page | Nothing is present in the add meals page |
| The user enters an ingredient but with a quantity of 0 | An error should be thrown | No error is thrown, and the meal is added regardless with a quantity of 0 |
| The user adds an ingredient with a correct quantity and amount | The item should be added | The item is added |
| The save button is pressed | Any previously saved meals should appear on the meals page | The previously saved meals now appear on the meals page |
| When clicking on the add meals drop down menu for a specific day, any previously saved meals should appear | Any previously saved meals should appear on the list | The previously saved meals appear on the drop-down list |
| A previously saved meal is added under a specific day | The meal should appear under that specific day | The meal appears under that specific day |

The following are registered issues that I have discovered when testing the application:

* The user cannot return to the original login page once the user has already logged in – this could be rectified with a sign out feature within the application
* When the user tries to add a meal despite not having been added the drop-down menu and text boxes disappear from underneath each day as they are clicked – this could be fixed by having an error be thrown when this occurs or by an error message appearing informing the user that no meals have been added
* Whenever an item is added with a quantity of 0 in both the shopping list and the add meals page the item is added regardless – this could be fixed with the same solution as the last issue
* In addition items can be added despite the user having entered nothing into the required boxes – this could be fixed with the same solution as the last issues

In addition the flagged issues have been highlighted in RED.

1. Testing Document 2

|  |  |  |
| --- | --- | --- |
| 1. **Input:** | **Expected Output:** | **Output:** |
| Enters valid email address and password | Ability to register | Page says ‘welcome’ |
| User clicks the shopping list button | User is taken to the shopping list page | User is taken to the shopping list page |
| User adds an item to the shopping list and selects the measurement as ‘g’ and with a quantity of 1 | The item is added to the list | The item is added under the correct quantity and unit of measurement |
| User clicks the clear shopping list button | The shopping list is cleared | The shopping list is cleared of all previous items |
| The user clicks the meals button | The user is taken to the meals page | The user is taken to the meals page |
| User clicks the add meals button | The user is taken to the add meals page | The user is taken to the add meals page |
| The back button is pressed | The user is taken back to the meals page | The user is taken back to the meals page |
| As the save button was not pressed, nothing should have been saved that was entered previously | Nothing should be present in the add meals page | Nothing is present in the add meals page |
| The user adds an ingredient with a correct quantity and amount | The item should be added | The item is added |
| The save button is pressed | Any previously saved meals should appear on the meals page | The previously saved meals now appear on the meals page |
| When clicking on the add meals drop down menu for a specific day, any previously saved meals should appear | Any previously saved meals should appear on the list | The previously saved meals appear on the drop-down list |
| A previously saved meal is added under a specific day | The meal should appear under that specific day | The meal appears under that specific day |
| The log off button is pressed | The user is logged out | The user is logged out |

Overall, after the data validation work I have done since the last testing table, all of the previous issues/problems have been resolved. The following table shows that there are no longer any problems or issues I found when testing this version of the application. In addition I was able to add an extra row to the table as a result of an additional log out button.