Project Diary

Logs

September 2023

25/09/2023

- Scheduled a 30 minute supervisory meetings with supervisor on a weekly basis, **every Tuesday** at **13:30pm**.

- Need to collate all background research done during the summer in order categorise the findings according to a specific problem domain.

- Then select a particular topic in interest regarding eye health.

- Need to select a project methodology that is appropriate for the project.

- Create a project plan document yielding background researches.

26/09/2023

- Need to sort references in project notes document

- Separate background research into key areas and ideas.

  ◦ Medication reminder.

  ◦ Logging measurements.

  ◦ Eye games and exercises.

  ◦ Educational apps for managing eye health.

- Organise into sections, the existing mobile applications that I have researched.

27/09/2023

- Organise the literature review and background research of the project.

- Start draft of project definition report and attempt on poster.

28/09/2023

- Making sure harvard referencing is used in referencing section in report.

- Delve into background research for literature review.

  ◦ Review research paper https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6561043/

  ◦ Look through the advantages of a smartphone being used for opening opportunities for online health care.

- ◦ During Covid-19 lockdown, it was an important time for online health services.

- ◦ Substantial numbers of patients are stilling missing their regular eye check since the Covid-19 lockdown, and opticians are currently requesting patients to book for an eye-test appointments. Resulting patients have uncorrected eye conditions/problems that have not yet been diagnosed during the period.

29/09/2023

- • Identify the benefits and setbacks from the existing solutions.

- ◦ This will then be used in order to discover improvements, when proposing a solution.

- ◦ Review app reviews from application vendors such as App Store, and Google Player Store

- ◦ Add to references

- ▪ https://play.google.com/store/apps/details?id=eu.smartpatient.mytherapy&hl=en_GB&gl=US

October 2023

1/10/2023

- • Review literature review on eye health, and removed parts of the literature study that were not relevant to the background research.

- • Need to review the following research paper:

- ◦ https://link.springer.com/article/10.1007/s40135-023-00308-9

- ▪ For discussing about the significance of health apps during CoVID 19, and how it has revolutionised how we receive health services from the health sector.

- ▪ How ICT has benefited the health sector in terms of delivering the health services and appropriate treatment to patients.

- • Think of Software Development Models

- ◦ Waterfall Model

- ◦ Iterative Model (Cyclical model)

- ▪ May not adhere to time constraints.

02/10/2023 – 16/10/2023

- • Focused on collating more background research on the topic of eye health.

- Consulted guides on literature review, and how to improving search query for research papers/journals.

- Updated schedule in bar chart.

17/10/2023 – 27/10/2023

- Focused on collating background on technologies and development tools used for mobile app development.

November 2023

27/10/2023 – 10/11/2023

- Focused on ethics approval

- Using interviews as a way collecting responses based on a given use-case of an eye health application being used.

- Focus on collating historic dates and papers from topic related to eye health.

13/11/2023 – 04/12/2023

- Performed knowledge elicitation activities of the conducting of interviews through in person and online.

- Analysed responses obtained from the interviews.

- Explored existing eye health applications.

- Identified Non-functional and Functional requirements from Background research and Knowledge Elicitation activities and has prioritised them using MoSCoW.

- Identified potential risks that may occur and has documented them in Risk Management report.

- Identified key constraints regarding time management, hardware availability.

December 2023

04/12/2023 - 15/12/2023

- Need to perform justification of selected hardware and development tools, whilst performing comparisons.

- Currently in the design process of creating wireframe designs, use-case diagrams, and database schema.

15/12/2023 – 05/1/2024

- Prepared git repository for the implementation of the eye health application

- Setted up IDE for Android mobile app development.

- Created a basic template of the mobile application.

- Reviewing API documentation on navigation, creating ViewModels to communicate between UI Screens etc.

- Attempted a start on the navigation between different screens, navigation components, and created first interactive vision tool game.

- Need to focus on implementing database scheme, need to choose database package, decide if database is going to be a local database or one that is to be hosted.

January 2024

05/1/2024 – 15/2/2024

- Database Schema has now been fully implemented.

- Created minimal viable product of the eye health management application.

- Configured on GitHub, Continuous Integration tools that are designed for Android applications to identify if a particular modification of a module, or a new module causes potential software breakages.

- Created Tests on the backend of the mobile application using Android Unit Tests.

- Created Integration Tests on the Mobile applications, and integrated unit tests to identify potential software breakages or defects in a particular software module.

- Revising Chapters in the Final Report.

February 2024

- Created database migrations for database schema.

- Refactored source code for Tumbling E Test and Colour Blind Test.

- Placed Tumbling E Test and Colour-Blind test in their own activities.

- Used RecyclerView API for managing dynamic list.

- Created notification reminders for reminding users to take their medications.

March 2024

- Refactored source for notification reminders.

- Modified existing functionality for allowing users to receive notifications at a specific time of the day using AlarmManager API.

- Created Settings for enabling notifications using SharedPreferences API.

- Refactored source code for managing notification using intents provided the Settings service.

- Encrypted Database using third-party API.

- Updated release for Mobile Application prior to major changes.

- Completed Ethics declaration forms and relevant documents required for approving eht

- Conducted Usability Tests.

- Analysed test results obtained from usability tests.

April 2024

- Evaluated tests results obtained from usability tests.

- Revised background research chapter, and drafted new report.

- Updated release for Mobile Application prior to bug fixes and changes to the library used for encrypting database.

- Reviewed other chapters and rewritten them in new report.

- Finalising report for submission.