**Project Proposal (CW1)**

**A Digital assistant that can contain all your Daily Tasks/Routines, Appointments, Checklists, Financial Budgeting to assist you with your daily struggles and increase your work rate by ensuring an organized system for the user’s needs.**

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## Project Title

**A Digital assistant that can contain all your Daily Tasks/Routines, Appointments, Checklists, Financial Budgeting to assist you with your daily struggles and increase your work rate by ensuring an organized system for the user’s needs.**

## Introduction

The main issue throughout people’s daily routines and life was to keep track of what needed to be done, gave us the idea to create an app that assists with the daily tasks of an individual on multiple aspects. The main purpose of the idea is to simplify the user’s life by helping on a platform where the users can set a reminder/task or a deadline for an important project. This won’t be the only feature of the idea because the apps purpose will be to serve as a digital assistant that would remind the user of the tasks they have scheduled or need to get done but also help the user with other daily tasks like house chores and financially such as budgeting and other features that would simplify the users struggle of organization. The reason I want to develop this app is because I couldn’t find many apps that are able to assist a user with their day-to-day life tasks and provide a single platform that has multiple useful features for an individual looking to have more organization to their projects, day to day tasks and budgeting. This software links to my course due to the final project was to develop a software idea into a working prototype. The most challenging part about this project will be the coding of the app features because I don’t have much experience in application coding to develop a prototype. The skills and knowledge we currently have are limited by the experience of application development and will require a lot of adjusting and research to fully develop our skills and knowledge. The focus will be on researching the different languages available for mobile app development to figure out the best language to use for my app development. Once the language has been decided I would need to do some further research on how to develop an application. A blog on a website called “Fireart.studio” the title is “Topmost Popular Programming Languages for Mobile App Development” It mentioned all types of mobile app development and had some summaries about and the different types of app development and all available languages that can be used to develop a mobile application. This research allowed a clear understanding of the many ways to develop an application.

## Background

My idea came from my day-to-day life tasks and that I struggled to find apps to help me organize. I have always wanted an app that was like an assistant that would help the consumer have a much more organized work to life balance. I struggled to find the correct balance between working, studying and entertainment such as social media etc... My struggle was that I will spend to much time doing one thing that I forget I have other important deadlines or tasks to complete and end up having way too little time to complete the task which will cause problems or not as good of quality due to lack of time spent on the task. That is when I started looking for an app that would help users on multiple day to day life tasks and improve the life balance to ensure best productivity of the consumer. I have found a couple apps that have similar features to my idea such as Reminder app, Calendar and others. The main issue was that they were different apps with different purposes and wasn’t very interactive with the user and in my opinion its limited on its features. My main interest in my idea are the features I want to be included during the development of my idea. I believe my ideas aren’t unique but are an improvement on current apps that have been developed but aren’t as interactive with the user or require additional features to provide a better user experience. These features are very interesting to me because I think it will be a challenge to code them and learn to implement them with a good user interface. Due to this being a small project I wouldn’t require a team or any budgeting to complete the project, but my main technical challenge will be trying to keep up with new markets and ensuring the app is up to date with the updated tools. The target market for my application is not limited because I want to create this app to provide a platform with organizing features to provide the consumer with an app to organize their tasks and schedule to allow for the user’s best time management. This software idea will be interesting to the consumers because it provides a platform with multiple day to day features that would help the consumer with multiple management features to simplify the users stress of management. As mentioned, there are some similar apps such as the reminders, calendar, budgeting and other apps. I had completed some first-hand research using the Reminder, Calendar and a budgeting tool called “EMMA” and I found them useful, but I believe an app that is a merged and provides a much more interactive user interface will have a much better user experience. An article on a website called “Household Money Saving” by Money Saver Pete (10/10/2022) includes a full review on the Emma budgeting app which I have used to confirm some of my issues that I had with the app. The main research I gathered so far is from personally using the applications and noting down the issues I have had with them. On top of that I have made some other research on some general assistant apps and have come across an article on a website called “the muse” written by K. Smith (19/06/2020) The title is “8 Free apps that double as personal assistants” and it mentions 8 different apps that may help the user for different purposes but have limited features that would limit the user’s usage of the app. The main issues I come across is that some apps aren’t accessible on IOS or just designed for android phones. I want my software idea to be available for IOS and android to maximize the users in addition to being able to have access to all the features that help the consumer with their day-to-day tasks.

## Rationale

The aim of our project is to help the user’s organization problems of their day-to-day tasks. My project providing a platform that can track your tasks, deadlines, chores that is interactive with the user and other features that would provide budgeting. My client’s requirements were that they needed organizing their day-to-day task including budgeting which my project would fulfil. My final assessment for this course is to develop a software idea into a partially working prototype. The assessment was to show the entire progress of developing this idea into a prototype. Developing this software idea into a prototype will demonstrate my skills of application development. My work industry requirements include the development of software and coding in different languages but that includes documenting the progress of a project in development. After some research I have found a website that provides job description information called “Resources for Employers” it mentions the requirements for a software engineer and this application development module has similar steps regarding the development and the documentation of the process. I believe this software idea is something that is potentially very useful to many users. The reason is because I haven’t found an application that has the same purpose or lack the features to fulfil the requirements, I have listed from testing other applications with similar features of my software idea. My software idea isn’t a unique idea but a merge and improvement on features of apps that have been created but lacked to be maintained by their developers to the current standards. Apps such as the Reminders, Calendar, Notes have been developed but are separate apps that in my opinion would be much better if created into one app that has some additional features that would maximize the users experience and increase the targeted clients. This software idea could potentially be used by many due to the simplicity and useful features that are coded to provide day to day assistance to the user. My research for the software idea assisted me to complete the given tasks and questions.

## Ethical Considerations

When ethical considerations are considered this project, it is unlikely that ethical or moral issues will need to be faced. Taking the project assignment into consideration the nature of the project will require no information or data from users which will eliminate the risk of a data breach or any other ethical considerations. The assignment project result will be a prototype that will only gather feedback from users that will not require to put in any personal data to avoid any early data breaches. This project won’t have any ethical issues due to it being a prototype but throughout the documentation of the project we will discuss ethical issues that may occur during the development of the project. Mainly to avoid clients being harmed using their secure information. Securing the data inputted by the user will be essential to the final release of this project but the prototype will focus on ensuring that the features function. Feedback gathered from the prototype will help improve the features and find out any bugs that may have happened during the development in addition to simplifying the use of the application.

## Aim

The purpose of this project is to complete an assignment and demonstrate my skills and knowledge that I was able to acquire during the modules of my course. In addition to that I get to develop a software idea that I believe would be useful to many future users that are struggling with the same problems that I want to solve. This project goal is to provide a minimum working prototype of my software idea that can be tested to provide further feedback for further development and bugfixes. The purpose for my software idea is to provide a platform to organize their day-to-day task/routines in addition to financial budgeting aid. The app will help users with time management and increasing their work efficiency. The app will help organize the users with their day-to-day tasks such as washing dishes, laundry or more important tasks such as work deadlines or a daily reminder for some tasks you may sometimes forget. Another feature I want to add is to create quick checklists that may be useful to create shopping lists or daily checklist reminders to take your medication if needed. The final feature will provide budgeting features to the user to help them manage their finances. I believe the app will solve the issues of having to switch between different apps that aren’t very interactive with the user and provide a way users can stay organized and a better life to work balance. The perfect outcome for this software idea would be a fully working application that is able to be used by people. My hope is to receive positive feedback regarding the app I have created and to continue maintaining the app by improving it and increasing its features and usefulness to users.

## Objectives

**Development Objective**

1. A) Complete the app screens by creating a template. Creating the template and use template to create multiple screens for the different requirements to provide a working user interface to the working screens. Implement the different screens and assign them their requirement that will be implemented at a later stage.

(Provides a starting base for the upcoming parts)

B) Set up DATABASE/Data Storage for the data that has been inputted by the user to create or login their accounts.

After this objective has been completed the app should have a working interface with multiple screens that are linked by a navigation bar.

**Implementing the requirements**

1. Complete the coding of each feature and implement them into the correct screens that was created for each requirement.
2. Calendar Screen/ coded Features and implement into assigned screen
3. Reminder Screen/ coded Features and implement into assigned screen
4. Notes Screen/ coded Features and implement into assigned screen
5. Budgeting Screen/ coded Features and implement into assigned screen

At this point of the development, there should be some functionality of switching between the screens using the navigation bar in addition to the different features (A, B, C, D) of the app being functional.

**Final check of requirement objectives**

1. A) Completed the coding of requirements, Final Checks of the implemented features.

B) Adjusted the interface and features to work in sync

After 3rd objective has been completed, the app should be functional

**Implementing the Login/Create features**

1. A) Complete the login/ create account interface and link to data base.

B) Create the apps first prototype and test out the features.

## Risks

When talking about software development risks are included in many ways. Risk that could delay the development of the software such as coding problem, aggressive deadlines, low productivity and poor risk management. In order to avoid large setbacks, the project plan will include additional time between each objective task to avoid delay caused by a calculated or uncalculated risk. Coding problems may occur and cause delay and the probability of that is medium because the requirements contain multiple features that may collide and cause delays. The objectives are set to progress in the development of the project and not being able to complete one may cause serious delays and the prototype not to function as intended. The objectives have been split into sections that would allow skipping parts of the section but to continue to another objective the different sections need to be completed for the prototype to function as intended. The most concerning risk may be the deadlines and low productivity due to lack of time, If the project development is progressing slowly due to low productivity it may cause deadlines to be missed which will cause a large delay in the project plan. To avoid that progressing with the development needs to be consistent and efficient. It’s essential to progress with the project plan to avoid major issues and delays that could affect the development of the prototype.

## Literature Survey

Our current skills and knowledge of developing application software are basic and will develop with the progress of this software development. This may cause the project to be delayed throughout their development cycle but allow me to gain experience in developing software. According to an article written by Firenze, A. (2022) “14 essential App Development teams skills you must have” mentions the essential skills that an application developer requires to develop software applications. While searching for apps with similar features to my idea, I came across an article written by Ching, C. (2021) “How to make an app in 2021 from start to finish” provides a stepped guide on how to develop an application and the necessary steps to take to ensure your project will succeed. The research has allowed me to verify certain features are very useful to have into my project. The first feature included into my project is a calendar, an article by Stevens, G. (2022) “6 best calendar app features to help you manage your business better” it talks about all the useful features a calendar has that is able to help users with a variety of features that can assist one or a business. The second feature is to create reminders that can be customized to the users needs. The third feature is creating notes that are customizable to the user’s needs such as creating a checklist for shopping, or one to take prescribed medication regularly. The last feature would be budgeting, my research into the development of my software idea allowed me to find an article written by Shibli, A. (2022) “15 best organization apps for life & work in 2022” It mostly includes calendar and note applications that are supposed to help the user be more organized with their tasks. All the apps have similar features but was designed differently and have a different subscription fee. The main issue I have found was that the apps that help you stay organized with your day-to-day tasks are separate applications and each may possibly have a different subscription fee. Another day-to-day app users may require is financial budgeting. A review by Money Saver Pete (2022) “Emma App review” provided a clear understanding of the benefits of financial budgeting, in addition to budgeting being used by many people and potentially most of our future users. As many other apps EMMA provides more features the higher subscription you sign up for. My project is meant to be a solution to multiple problems, Firstly the issue of having multiple apps which sometimes causes disorganization. Secondly it would provide one app with multiple features that will be useful to the user’s organization troubles and mostly will allow the users to save money instead of subscribing to multiple app subscriptions. The research completed helped verify that the features will be useful to the users by providing them an organized system that is easy to use. The project plan and objective allow the project to be divided into sections when being developed. This allows the development of the prototype to be split into sections that will function as intended if the objectives have been completed no matter what order they were coded in.

## Glossary

Database: - According to an article by Lutkevich, B and Hughes, A (2021) “What is database?” it mentions that Databases are information storage the is easy accessed and managed by a computer used to store information given to it by users as a by-product of a service being provided.

Ethical Consideration: - A website by Bhandari, P. (2022) “Ethical considerations in research” mentions all the reasons why it is important to developing software. To summarize, Ethics is important to ensure the safety of the client’s information. It continues to mention that the (IRB) Institutional Review Board will require a research proposal for the developers to get approval to continue the development of their software.

## References

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**Glossary: -**

Lutkevich, B. and Hughes, A. (2021) *What is a database? definition from searchdatamanagement*, *SearchDataManagement*. TechTarget. Available at: <https://www.techtarget.com/searchdatamanagement/definition/database> (Accessed: November 4, 2022).

Bhandari, P. (2022) *Ethical considerations in research: Types & examples*, *Scribbr*. Available at: <https://www.scribbr.co.uk/research-methods/ethical-considerations/> (Accessed: November 4, 2022).

## Bibliography

## Appendix A: Project Plan

This section will provide a step-by-step plan to develop our software idea. Each step will take approximately 2-3 days unless it has multiple sections which would increase its work requirement which may increase the risk of delays.

1. Use the researched gathered to decide what language to code the software idea.
2. Start creating the template of the application screens.
3. Use template to create the screens for the individual features planned to be and assign them with the intended feature to be added.
4. Create screen for Calendar feature.
5. Create screen for Reminder’s feature
6. Create screen for Checklist feature.
7. Create screen for Budgeting feature
8. Create Account Screen
9. Create functioning user interface with a navigation bar that has linked all screens together and functions.
10. Check with objectives and ensure project is progressing according to the objectives.
11. Implementing the features stage was split into sections
12. Code Calendar screen
13. Code Reminder screen
14. Code Checklists screen
15. Code Budgeting screen
16. Code Account screen
17. Implement the coded sections into the assigned screen
18. Double check that the feature’s function and are good with the created interface.
19. Make final adjustments to the features and interface to ensure they work in sync an as intended.
20. Attempt to build the first prototype and test it by comparing it to the requirements
21. Final checks:
22. Check the features work (A, B, C, D, E)
23. Ensure the interface functions as intended
24. Prototype functions as intended

## Appendix B: Ethics Checklist

|  |  |
| --- | --- |
| 1 Applicant details | |
| Name of Lead Researcher (applicant): | Amir Mohamed |

|  |
| --- |
| 2 Project details |
| Project title: **A Digital assistant that can contain all your Daily Tasks/Routines, Appointments, Checklists, Financial Budgeting to assist you with your daily struggles and increase your work rate by ensuring an organized system for the user’s needs.** |
| Please provide a brief description of the project:  The purpose of my project is to provide an application to users that can store their Important appointments, tasks, deadlines and others in the app. In addition to being reminded about important task users needed to be reminded about, and a feature that is similar is the notes/checklists. Lastly the budgeting feature where users can manage their finances. |

|  |  |  |  |
| --- | --- | --- | --- |
| 3 Research checklist  Please answer each question by checking the appropriate box: | | | |
| Research that may need to be reviewed by an NHS Research Ethics Committee or another external Ethics Committee | | YES | NO |
| 1 | Will the study involve recruitment of patients or staff through the NHS or Social Care, or the use of NHS data or premises and/or equipment? |  |  |
| 2 | Does the study involve participants age 16 or over who are unable to give informed consent (e.g. people with learning disabilities: see Mental Capacity Act 2005)? NHS |  |  |
| 3 | Will tissue samples (including blood) be obtained from participants? |  |  |
| If you have answered ‘Yes’ to questions 1, 2 or 3 please refer to <http://www.hra.nhs.uk/> for guidance. If external ethical approval is not needed, University ethical approval will still be required. | | | |
| Research participants | | YES | NO |
| 4 | Does the study involve students within the University? |  |  |
| 5 | Does the study involve employees of the University? |  |  |
| 6 | Does the research involve potentially vulnerable groups: children, those with cognitive impairment, or those in unequal relationships? (eg your own students) |  |  |
| 7 | Does the research involve members of the public or people worked with in a professional capacity? |  |  |
| 8 | Will the study require the co-operation of a ‘gatekeeper’ for initial access to the groups or individuals to be recruited and/or to give permission for initial contact? (e.g. children, students, members of self-help group, residents of nursing home, employees). |  |  |
|  | | | |
| Research methods | | YES | NO |
| 9 | Will it be necessary for participants to take part in the study without their knowledge and consent at the time? (e.g. covert observation of people in non-public places) |  |  |
| 10 | Will financial inducements (other than reasonable expenses and compensation for time) be offered to participants? |  |  |
| 11 | Will the study involve discussion of sensitive topics or illegal activity (e.g. sexual activity, drug use)? |  |  |
| 12 | Are drugs, placebos or other substances (e.g. food substances, vitamins) to be administered to the study participants or will the study involve invasive, intrusive or potentially harmful procedures of any kind? |  |  |
| 13 | Is physical pain or more than mild discomfort likely to result from the study? |  |  |
| 14 | Could the study induce psychological stress or anxiety or cause harm or negative consequences beyond the risks encountered in normal life? |  |  |
| 15 | Will the study involve prolonged or repetitive testing? |  |  |
| 16 | Is there a possibility that the safety of the researcher may be in question? |  |  |
| 17 | Will any of the research take place outside the UK (excluding on-line surveys)? |  |  |
|  | | | |
| Data and confidentiality | |  |  |
| 18 | Will the research involve administrative or secure data that requires permission from the appropriate authorities before use? |  |  |
| 19 | Will the research involve visual/vocal methods where respondents may be identified? |  |  |
| 20 | Will research involve the sharing of data or confidential information beyond the initial consent given? |  |  |
| 21 | Will the research involve security-sensitive data? (eg commissioned by the military or under an EU security call; involve the acquisition of security clearances; concerns terrorist or extremist groups). |  |  |

If any item is checked “YES” you will need to seek advice from your supervisor / course leader regarding the appropriate sub-committee for ethical approval.

4. Declarations

I have read and will abide by the University’s *Ethics Policy*.

I have read and will abide by the University’s *Code Research Practice*.

I am aware of, and will abide by the ethical guidelines published by the relevant subject and/or professional associations most appropriate to my topic.

The responses given above are an accurate and true reflection of the nature of my research project.

Applicant:

|  |
| --- |
| Name (please print): Amir Mohamed |
| Signed: AMIR |
| Date: 06/11/2022 |

Project supervisor / Line manager

I confirm that the above details are accurate, the proposed methods are appropriate, ethical concerns have been considered and that time and resources are available for the research to take place.

|  |
| --- |
| Name (please print): Amir Mohamed |
| Signed: AMIR |
| Date: 06/11/2022 |

Note: Electronic approval by above signatories is acceptable

## Other Appendixes