SECD2613 : System Analysis and Design

Assignment 1 : Project Proposal

Project Title :

DapRecipe

Date :

30th April 2024

Faculty :

Malaysia-Japan Institute Of Technology (MJIIT)

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Executive Summary :

The DapRecipe project focuses on creating and designing an app-based that aims to bring new methods for recipe management for anyone who enjoys cooking or does it for a living. With this app,finding recipes has never been easier and not to mention that we also provide interactive features that will help with the management of recipes and even being able to alter the existing the recipe as the user continue to improve and finding new ways to improve the existing recipe.Our project aim to help the user by providing a simple but yet efficient library to ensure that the user has the best experience while using our app.

Background :

Our team has always been fascinated by cooking, especially since we're students and dining out isn't a luxury that we can afford. This interest had us approaching the idea of creating a highly customizable recipe library. We plan to create a platform where users could effortlessly edit, delete, and search for recipes based on ingredients or categories, helping those who share our passion for cooking. Our aim is to enhance the cooking experience while offering the convenience of mobile accessibility for all users through their phones,laptops or tablets.

Objectives :

- Create a user friendly interface that allows users to edit,store,organize, delete, and search for recipes based on ingredients or categories.
- Implement a public platform for users to upload their recipes and share it with other users whilst creating a forum for users to share their opinions and exchange culinary tips and tricks supporting the community.
- Develop administrative features for our team to manage data for the recipes and creating community guidelines so that it is safe for all ages to use and to ensure the safety of the users
- Promote users to develop a healthy lifestyle by offering a wide selection of recipes that prioritize fresh and wholesome ingredients and prioritizing individuals to have better control over the nutritional content of their meals, leading to improved overall health and well-being whilst providing them with a large range of recipes that users can tailor to their preferences and ingredient availability that cost significantly less from store bought meals or fast food

Methodology :

Based on the objectives that are provided, we are aiming to fulfill those objectives according to the time frame that was given. In achieving this, we will be based on Agile Methodology to ensure the success of our application. Thus, we will be implementing active collaborative design and development phases, as per below :

1. Requirement Gathering and Analysis:

During this phase, information and requirement needed will be gathered in a span of about two weeks to ensure the accuracy of the information. Requirements of the application such as the database of the recipes that will be stored, the interface that the most potential user would want and also the features that will attract potential users on using our application. To achieve this, we will conduct interviews and surveys with the stakeholders so that we will further understand their need and preferences. Research will also take place so that we will know what our potential user would want from our application.

2. Design and Planning:

In this phase, the team will define the scope of the work based on the objectives that already focused on for this recipe application. To do this, we will break down the objectives outlined into several, smaller actionable tasks or user stories.

i. Task Breakdown : Identify specific features and functionalities required to meet each objective such as the database for the recipes and the interface on to adding, editing or deleting the recipes, etc.

ii. Based on the requirements, we will define user stories that outline the actions user will take within the application. As an example,

- As a user, I want to be able to add a new recipe to the database.
- As a user, I want to be able to edit an existing recipe.
- As a user, I want to be able to search for recipes by ingredients.
- As a user, I want to be able to delete a recipe from the database.

3. Development :

During this phase, our development team will focused on implementing the functionalities and features that we have already identified in the Design and Planning phase. We will make sure the development process will be on schedule with frequent communication with the stakeholders to ensure the progress aligns with the project objectives.

i. Feature Implementation : The interface of the recipe application, on adding, editing, deleting and searching recipes based on ingredients or categories that are provided. Feedback mechanisms will be implemented for immediate performance evaluation.

ii. Database Schema : The development team will design the database schema to store recipes, ingredients, categories, and any other relevant data. The security and the capabilities of the database will be continuously checked to ensure the data security and reliability.

4. Testing and Feedback :
Comprehensive testing will be conducted to the application to make sure there are no bugs or issues regarding the functionalities of the application. We will perform unit tests, integration tests and end-to-end test to ensure the application works in every different scenarios that the user might encountered.

A meeting with the stakeholders will be conducted to get feedbacks and response from them regarding the completed application. This is to make sure that the requirements and preferences that they specifically outlined in the first phase are met.

5. Deployment and Retrospective :

The application will be deployed if there are no issues after the testing are made and all the requirements and preferences that are outlined by the stakeholders are met accordingly.

After the deployment, the team, as a whole, will reflects on the application successes and challenges while identifying the areas for improvement and planning adjustments for future projects. A meeting will be conducted to discuss what went well, what could be improved and what lessons that we get. Then, an action plan we will devised to address identified issues and improving processes for future application projects.

Resources :

1. Development Team :
    - Project Manager : The man/woman responsible to oversees the entire development process, manages resources, and ensures timely delivery.
    - Developers : Responsible for developing the user interface and database management, also the server-side logic.
    - Graphic Designer : Designs the user interface and user experience of the application to attract users and make sure the application are easy and user-friendly.
    - Application Tester and Debugger : Conducts testing to identify and fix bugs or issues in the application.
    - Database Administrator : Designs and manages the database used, ensures data integrity, and optimizes database performance.

2. Development Tools
    - Integrated Development Environment (IDE): Compilers such as Visual Studio Code and XCode for writing and debugging code.
    - Database Management System: Such as MySQL for storing and managing recipe data.
    - Frontend Framework/Library: Framework to choose such as React.js, Angular, Vue.js, or others for building the frontend.
    - Backend Framework: Framework to choose such as Node.js with Express, Django, Flask, Ruby on Rails, or others for building the backend.
    - Design Tools: Such as Adobe XD, Sketch, Figma, or InVision for designing wireframes and mock ups.

3. Infrastructure and Software Licenses

- Hosting Environment : Choose a cloud hosting provider like AWS (Amazon Web Services), Google Cloud Platform or Microsoft Azure for deploying the application.
- Domain Name : Purchase a domain name for the application's website.
- SSL Certificate (Security Software) : Ensure secure communication between the application and users by installing an SSL certificate.

4. Documentation and Collaborative Tools

- Documentation Platform : Use tools like GitHub Wiki for documenting project requirements, design decisions, API documentation, etc.
- Communication Tools : Utilize communication tools like Slack, Microsoft Teams, or Discord for team collaboration and communication.
- Project Management Tools : Use project management tools like GitHub Projects for task management, sprint planning, and tracking progress.

6. Testing Tools

- Testing Frameworks: Such as Jest, Mocha, Jasmine, or PyTest for writing and executing unit tests and integration tests.
- Browser Testing Tools: Use tools like Selenium, Puppeteer, or Cypress for automated browser testing.

Budget :

a) Personnel Costs :

Position's	Number of Personnel	Estimated Costs
Project Manager	1	RM 8000 – RM 15,000 per month
Developers	4	RM 6000 – RM 12,000 per month per developer
Graphic Designer	3	RM 6000 – RM 12,000 per month per designer
Application Tester and Debugger	2	RM 5000 – RM 10,000 per month per debugger
Database Administrator	2	RM 7000 – RM 14,000 per month per administrator

b) Development Tools Costs

The development tools that are used in this project, such as the Integrated Development Environment (IDE) Tools, Database Management System, Frontend and Backend Framework and Design Tools are mostly free to be used on only have the minimal costs associated to them. Therefore :

Estimated Cost : RM 100 – RM 300

c) Infrastructure and Software Licences

i. Hosting Environment : As the hosting provider are still not selected, the cost that will be inflicted for this part will be at the range of RM 300 – RM 5000 per month.

ii. Domain Name : Approximately around RM 50 – RM 150 per year, depends on the domain registrar and the domain chosen name.

iii. SSL Certificate (Security Software) : Depending on the certificate type and the provider we choose, the range of the price for the SSL Certificate is around RM 100 – RM 500 per year.

d) Documentation and Collaborative Tools

Documentation Platforms, Communication Tools, and Project Management Tools: Costs vary based on the selected tools and subscription plans. Many of these services offer free tiers with limited features and there is also the premium plan that will provide more features and advanced services. Therefore :
Estimated Cost : RM 500 – RM 4000

e) Testing Tools
Most of the testing tools for Testing Frameworks and Browser Testing Tools, are open source or does have free versions for the public to use freely. Thus, give us the a free usage of these tools.

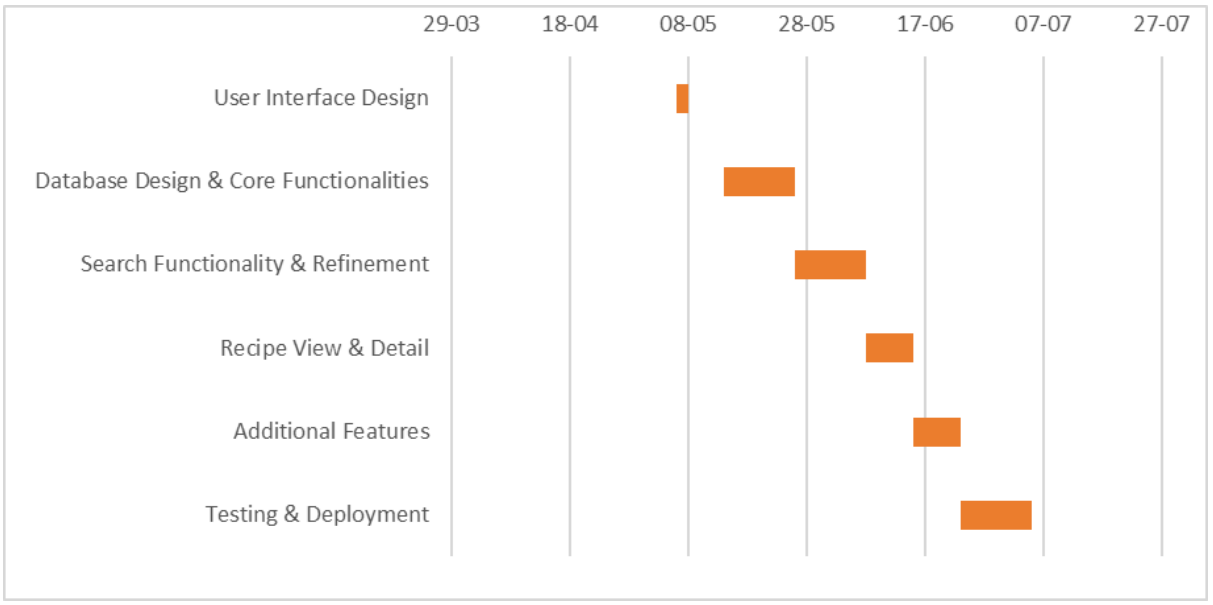
f) Miscellaneous Expenses

This expenses are expenses that are not directly involved in the development of the application. Still, these expenses are necessary to ensure the smooth progress when we are building the application. The expenses are as below :

i. Training Materials and Documentation : RM 1500
ii. Travel Expenses : RM 3000
iii. Research, Surveys and Interviews Expenses : RM 500
iv. Contingency Fund : RM 17,000 (10% of total budget)

Total Budget : RM 80,050 – RM 161,950

Measurement and Reporting :



Risks :

1) Bugs and Errors

- Bugs can manifest in various ways, such as crashes, incorrect calculations, features not working as designed, or visual glitches.Unit testing might involve testing individual functionalities

2) Other recipe apps exist

- make sure the application can interact with users by posting on social sites or there are videos of chefs teaching about the cuisine

3) Users struggle to use the app

- make sure the user interface is easy to understand by the user by making sure the shape of the icon is simple and similar to the social media applications that are always used