IN PARTNERSHIP WITH PLYMOUTH UNIVERSITY

Group Number: A67

Module Code: PUSL2021 - 23/AY/AU/M	Module Name: Computing Group Project
Coursework Title: Project Proposal	
Deadline Date: 25 October 2023	Member of staff responsible for coursework: Mr. Pramudya Tilkaratne
Programme: BSc (Hons) Software Engineering	

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Group work:

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We confirm that we have read and understood the Plymouth University regulations relating to Assessment Offences and that we are aware of the possible penalties for any breach of these regulations. We confirm that this is the independent work of the group.

Signed on behalf of the group: aParindya

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Overall mark _____% Assessors Initials _____ Date_____

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Overview

Introduction

We are excited to introduce our Personal Finance Manager (PFM) software, which is a user-friendly, powerful tool designed to control your financial resources. It is a mobile application created to assist individuals in handling their finances. It offers users a platform to arrange and monitor their information. This allows them to make informed choices and manage their financial objectives and this can be used by people of almost every age group.

This system will be capable of income tracking, budget tracking, expense tracking and setting financial goals. We would add different features to make our system more user friendly and more attractive, graphical representation this feature helps users to identify the areas they have overspend, helps to adjust of budget and set goal for future needs. Therefore, individuals can make realistic plans and face challenges. Also, this will help you to increase savings and you can save your time and reduce effort.

Problem Scenario

Many people in the country do not have access to financial education. They may find it challenging to make financial decisions. Some people have lower incomes when compared to modern-day financial status. This can make it difficult to save money and meet their needs.

Moreover, this opens mainly for university students who run multiple responsibilities such as for tuition payments, and living expenses, including food, traveling, hostels, etc. With limited time and resources, this may be challenging for graduate students also to manage their finances.

A personal finance manager can help people track their spending, identify areas, and get a better understanding of their financial situation. The cost of living in some cities can be high, especially for food and transportation. This can make it difficult for people to save money.

Solution

A personal finance manager can be a valuable tool for individuals in the country who are looking to improve their financial situation. A personal finance manager can serve people in the country by reaching their financial goals, and by helping them to track their expenditures and make wise financial decisions.

Also, this will provide a user-friendly interface that allows students to easily input and monitor their financial data.

Objectives

- Saving
  - This will help the user to save part of the money in his income or salary.
- Short term goals and long-term goals
  - From this mobile app, the user can set short term and long-term goals. Which is another way to save and manage his money.
- Track income and expenses
  - This will daily track the income and expenses and direct the user to control his spendings.

Target users

- We mainly focus on college students and people who do jobs. But this personal finance management system can be used by anyone from teenagers to adults.
- This will be useful for people who own businesses, retirees, investors, and high-income earners.
- Also, this will be beneficial for different types of organizations (profit, non-profit, educational, health, etc.).

Technical Specification

As we mentioned before, we want to track financial details of people like their income, expenses and help them to make better financial decisions. Also, we need to monitor their background information. So, we decided to use the following infrastructures to develop this system.

- Database - MongoDB
- Version Control - Git
- Project Management - Trello
- Framework - Flutter(dart)

Application features and description

Functional features

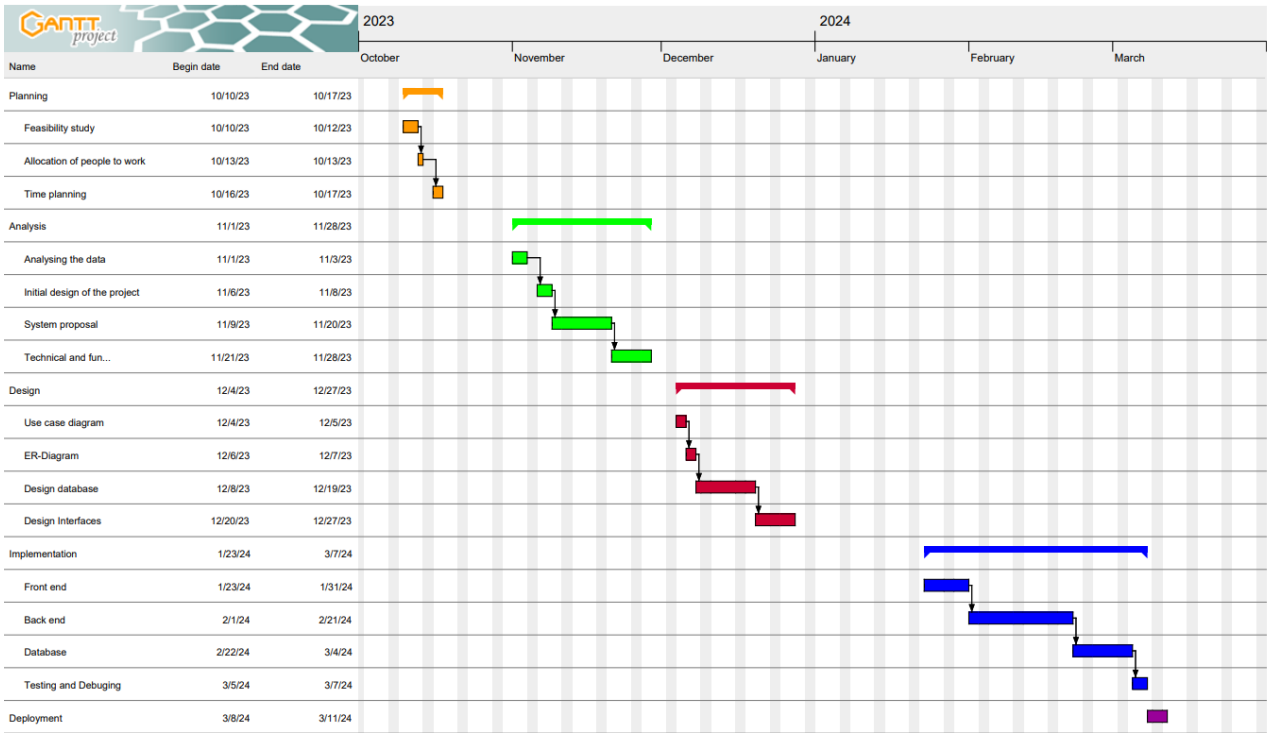
- Income tracker
  - Track and monitor user's daily/ monthly or yearly income.
- Budget tool
  - A powerful tool for managing your financial objectives in different ways.
- Expenses tracker
  - Tracking details about daily expenses and notify the average daily expenditure limit.
- Debt tracker
  - Keep track of debts like loans, car finance, credit cards.
- Finance report
  - Analyze user's weekly, monthly, and yearly financial performance and recommend ways to reduce cost.
- Visualized financed forecasting
  - Visualizing user's financial information using graphs and charts including income, expenses, and debts.
- Reminders and alerts
  - Receive alerts on expenses, payments, and incomes.
  - Set limits and receive notifications.
- In app credit score
  - Directly access user's credit balance
- Planned expenses.
  - Shows the spendable budget after subtracting expenses.

Non-functional features

- Privacy and security
  - Using biometrics
- Currency and language support
  - For the use by people from different countries who speak different languages and use different currencies.
- Data backup and recovery
  - To protect user data and recover data in case of service failure.

Time frame

Gantt chart



Name	Begin date	End date
Planning	10/10/23	10/17/23
Feasibility study	10/10/23	10/12/23
Allocation of people to work	10/13/23	10/13/23
Time planning	10/16/23	10/17/23
Analysis	11/1/23	11/28/23
Analysing the data	11/1/23	11/3/23
Initial design of the project	11/6/23	11/8/23
System proposal	11/9/23	11/20/23
Technical and fun...	11/21/23	11/28/23
Design	12/4/23	12/27/23
Use case diagram	12/4/23	12/5/23
ER-Diagram	12/6/23	12/7/23
Design database	12/8/23	12/19/23
Design Interfaces	12/20/23	12/27/23
Implementation	1/23/24	3/7/24
Front end	1/23/24	1/31/24
Back end	2/1/24	2/21/24
Database	2/22/24	3/4/24
Testing and Debuging	3/5/24	3/7/24
Deployment	3/8/24	3/11/24

Feasibility analysis

Technical feasibility

Currently we have enough skilled group members for this project, but we hope to improve our skills and knowledge more by doing some skill development courses.

And we have enough software and hardware infrastructures. We will use flutter to design interfaces, we use MongoDB as the database server, and we will develop the mobile application using JavaScript.

With our team and infrastructure, this project is technically possible.

And we have divided roles among team members.

Accordingly,

- Projecting and group leader – Jayawardana Jayawardana
- Planning leader – Diyagama Prabhani
- Technical leader – Hapuarachchige Hapuarachchi
- Programming leader – Meepe Perera
- Quality leader – Sajitha Kodithuwakku
- Testing and maintenance leader – Ranasinghe Karunathilaka

Schedule feasibility

Time feasibility is done using a graphical representation (Gantt chart). we have around 5 months to complete the whole project and we allocated the time as follows.

We set aside 6 days to plan and discuss the process.

- Feasibility study – 3 days
- Time planning – 2 days
- Determine the allocation of people & work – 1 day

We allocate 26 days to the analyzing process

- Analyzing the data – 3 days
- Initial design of the project – 3 days
- System proposal – 12 days
- Technical and functional specifications – 8 days

We allocate 24 days for the designing process

- Use-case and ER diagrams – 4 days
- Designing databases – 12 days
- Designing interface – 8 days

We set aside 58 days for the implementation.

- Front-end – 9 days
- Back-end – 21 days
- Databases – 35 days
- Testing and debugging – 3 days

Economic feasibility

As this is a university project, we target using open-source resources and tools therefore the entire development was done at a zero cost. This clearly shows that the project is economically feasible.

Operational feasibility

We have both hardware and software requirements needed for the project. We believe that our system will be implemented and operated in a user-friendly manner where user meets their needs. We ensure, our system has a high processing speed, greater memory capacity, etc….