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Plutus Money Management Application for Smartphone

D. Sharath[1*], R. Raghavendra[2]
[1]*Student, School of CS and IT, Jain (Deemed to be University), Bangalore, India*
[2]*Professor, School of CS and IT, Jain (Deemed to be University), Bangalore, India*

***Abstract*: Money management in the current world has become a highly stressful profession, and the introduction of online payments such as UPIs, Net Banking, and other similar services has made the task of keeping track of the money we save even more difficult. We reviewed the various approaches for constructing a more secure and efficient mobile application that collects and calculates inputs faster with a shorter reaction time than typical apps in this study.**

***Keywords*: Mobile application; money manager; application development; manage expenses; user interface development; gamification.**

1. Introduction

Technological advancements have accelerated in the modern era, particularly in mobile technologies: As a result, as the number of mobile users grows, so does the number of mobile applications available to them. There are many software developers who wish to create a new mobile app to meet the needs of customers, and these apps are currently in great demand in the technology industry. A mobile application is a piece of software designed to run on mobile phones and tablets. [1]. The developed smartphone application will assist ordinary people in managing their finances and learning how to conserve money. The application's implementation includes a money manager that customers may use to save money and assist them in managing their finances. It became easier for consumers to track money on a monthly or daily basis as a result of this. Inability to comprehend financial ideas can exacerbate a person's financial situation and lead to poor financial decisions. Gamification has a function to play in student engagement and learning. According to Zainuddin, Shujahat, Haruna, and Chu [2], gamification is capable of promoting motivation and engagement, improving user participation and instructional interactivity, and leading to knowledge acquisition [3]. Students can provide motivation to save money and learn to manage their finances. The primary goal of this project is to create a smart mobile money manager for regular people. The other goal is to see how effective a money management app is in teaching students how to handle their money.

2. Literature Review

There are three current systems that are nearly identical to the proposed system in terms of attributes.

1) Money Manager Mobile Application:

This Money Manager aids the user in keeping track of their money activities. It allows the user to enter income and expenses from a variety of sources, including salary, awards, grants, sales, food, bills, and more. The application will figure out how much money you make and how much money you spend. The income balance for the current month will then be displayed. The user can see the current month's cost and income graph. The user may also see the graph for each of the parameters they selected in the program. This mobile application, on the other hand, does not have a user-defined saving objective.

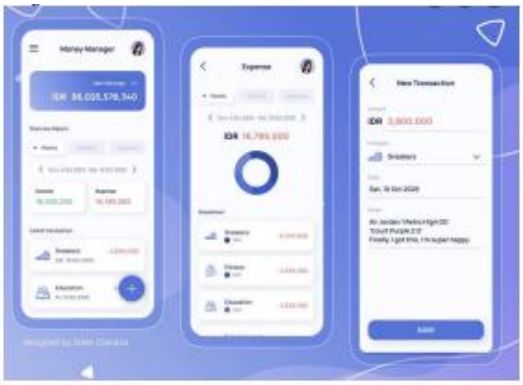

Fig. 1. Money Manager Architecture 1.1

2) Spending Tracker Mobile Application:

Spending Tracker mobile application One of the solutions that shares characteristics with the proposed system is the Spending Tracker smartphone application. This program helps users keep track of their spending, stay to a budget, and save money. The user can choose to display the spending chart weekly, monthly, or annually. Furthermore, the chart colour can be customised based on the user's preferences, and it can be designated as their favourite colour. This application allows users to have more fun and be more colourful when using it. Aside from that, adopting mobile money applications as a money management platform can help users develop a savings

*Corresponding author: sharathsha47@gmail.com

culture and encourage discipline [4]. The user experiences that result from interactions between users and the mobile application's interface are extremely essential.

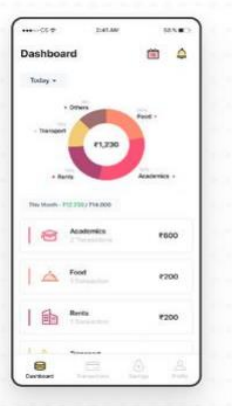

Fig. 2. User Interface of Spending Tracker 1.2

3) My Tabung Application:

My Tabung is already an existing mobile application that is comparable to the suggested approach. The application is created by Bank Negara Malaysia. With Bank Negara Malaysia's My Tabung, this software will assist users in budgeting and tracking expenses. By utilising the My Tabung program, the user can analyse personal or household spending trends and learn about their financial situation.As a result, it offers financial counselling and ideas on how to manage money wisely/ Language options, such as Bahasa Melay and English, are also available to the user. This app allows the user to set the budget for each category. There are a number of similarities between these three existing systems. Easy to enter amounts in income and expenses, money tracker, and portrait display orientation are all similar features.

Fig. 3. Tabung Application User Interface 1.3

The literature on the topic establishes criteria for evaluating the quality of financial applications (mobile and online). The most crucial aspects are dependability, usability, and functionality. The availability of a function that can be measured using stated requirements, the ability to communicate with other systems, the maintenance of security standards, and the correctness of the results achieved are all examples of functionality. The capacity of a website or program to perform efficiently under particular conditions is referred to as reliability. This is defined, among other things, by error tolerance, the site's capacity to return to regular operation, and the frequency of failures.

Applications on the global marketplaces that assist in the management of personal finances are aimed primarily at the adolescent and young adult generations. They are distinguished by a contemporary approach to graphics, functionality, and availability for smartphones of various generations. It should be emphasised that developers of currently available applications compete with one another in terms of the utility and functionality of their products.

They are unquestionably linked by a practical dimension, which is particularly relevant in the context of finance. The financial sector is undergoing changes as a result of technological advancements (Omarini 2018). The banking industry has a potential to increase profitability and client relations by using modern IT systems, business events, and data collection and processing. Collaboration between the realms of business and science on the usage of PFM is also critical, as evidenced by previous studies in this field (Table 1). Since 2012, both in the realm of cognitive consumer behavior and the instruments used to support the process of personal finance management, research efforts have increased. Usability, on the other hand, is defined as the precision with which a user interface is built, which is based on efficiency, contentment, remembering, error resistance, and learning speed (Nielsen 2012).

3. Figures

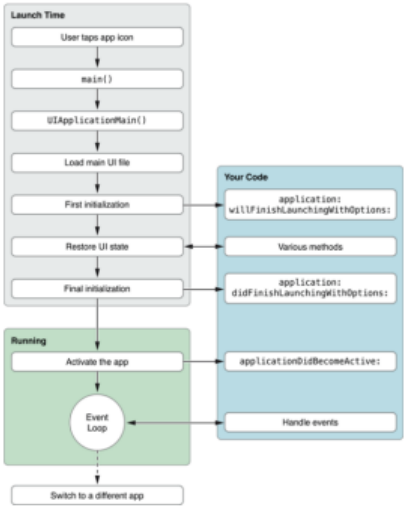

Fig. 4. Life Cycle of the Application.

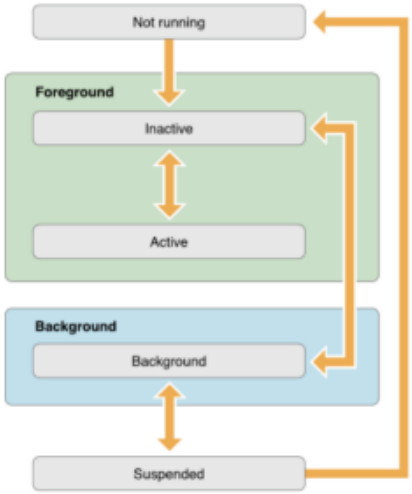

Fig. 5. State Changes in IOS/Android

4. Conclusion

To summaries, Plutus is an endeavor to improve people's ability to manage and track costs. The system will include a money management application that will teach people how to manage their finances. They can also manage their money only through the app. In future projects, the system's interface should be more appealing to the user. Aside from that, gamification should be used to reward users who have met their savings targets.

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