



Monex-Expense Management System Application

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ABSTRACT

The objective of implementing an Expense Management System is to streamline and automate the manual system through the use of computerized equipment and comprehensive software. This will enable efficient data/information storage for extended periods, with easy accessibility and manipulation. The required software and hardware are readily available and user-friendly. By employing an Expense Management System, organizations can achieve an error-free, secure, reliable, and efficient management system. This system allows users to focus on other activities instead of spending time on record keeping. Consequently, the organization can optimize resource utilization, maintain accurate computerized records without redundant entries, and access relevant information without distraction.

Keywords: Expense Management, Expense Manager, Expenditure Management System, Expense Tracker, Firebase, Finance, AI Assistance

1. Introduction

Our project is designed to support staff in capturing their effort spent on respective areas, while generating valuable information for effective money management. The system will be expandable, with a user-friendly interface that facilitates easy usage. The project will also generate comprehensive reports on expenses, categories, payments, and more, providing valuable insights for efficient financial management. People do not have track on their monthly expenses and receivables, and they do not have any control over what they spend.

Developing an application which will be able to keep track of expenses and receivables can solve this problem. To manage our monthly expenses, we designed a mobile application. Whatever we spend monthly or daily will be recorded in this application. And it is used to manage our monthly expenses. Users can enter their limited budget of the entire month in this mobile application where when the user exceeds their given budget in the respective month will be notified through Expenses Management System Application. And also, some mathematical calculations are done to calculate the expenditure on what items users spend a lot and users will be notified that they are spending a lot of amounts on the respective item so that they can reduce their expenditure on that item in future and Chabot is also included Called as Financial AI Assistance

1.1 User Module

New User Onboarding and Splash Screen Android Splash Screen is the first screen visible to the user when the application's launched. Splash screen is a Special Issue Published in Int. Jnl. Advanced Networking & Applications (IJANA) is one of the most vital screens in the application since it's the user's first experience with the application. Call it when you want-to know the additional features of the app new user onboarding is implemented.

The user module also plays a crucial role in enhancing the security of the application. It allows for features such as password hashing and encryption, account verification, and two-factor authentication, which help in safeguarding user data and preventing unauthorized access. First point for the preprints and the Proceedings. Leave a line clear between paragraphs. All the required style templates are provided in the file "MS Word Template" with the appropriate name supplied, e.g. choose 1. Els1st-order-head for your first order heading text, els-abstract-text for the abstract text etc.

1.2 Budget Organiser Module

Budget tracking module in a project management system provides functionalities for planning, tracking, analyzing, and reporting on project budget data, allowing for effective financial management, course correction, and data visualization to support decision-making.

1.3 Categorization Module

Proper categorization of expenses can help individuals and businesses gain a better understanding of their spending patterns, identify areas where cost savings can be made, and make informed financial decisions. By accurately categorizing expenses, it becomes easier to track and analyze spending, create realistic budgets, and manage overall financial health effectively.

1.4 Financial AI Assistance Module

To integrate ChatGPT into a project or system, we can follow these general steps: Sign up for an OpenAI account and obtain an API key. Choose the appropriate API endpoint, such as the "davinci-codex" model. Make API requests using your API key and preferred programming language. Format input and output as messages with roles ("system", "user", or "assistant") and content. Parse API responses to extract generated text. Handle API rate limits to avoid rate limit errors. Test and iterate to fine-tune conversation flow and input format. Review and follow OpenAI's usage policies and guidelines for ethical AI practices. By following these steps, you can integrate ChatGPT into your project and leverage its capabilities for conversational interactions with users or other applications..

2. Illustrations

The diagram below illustrates a software system consisting of four modules: the user module, the budget organizer module, the categorization module, and the financial AI module. The user module is responsible for handling user authentication and user-specific functionality. The budget organizer module is designed to help users manage their finances by creating budgets, tracking expenses, and generating reports. The categorization module provides automated categorization of expenses based on the type of transaction, making it easier for users to analyze their spending patterns. Finally, the financial AI module uses machine learning algorithms to provide personalized financial advice based on the user's spending habits, income, and financial goals.

Each module is labeled for easy identification, with the user module labeled as "a," the budget organizer module labeled as "b," the categorization module labeled as "c," and the financial AI module labeled as "d." This diagram helps to visualize how these different modules work together to provide a comprehensive financial management solution for users.

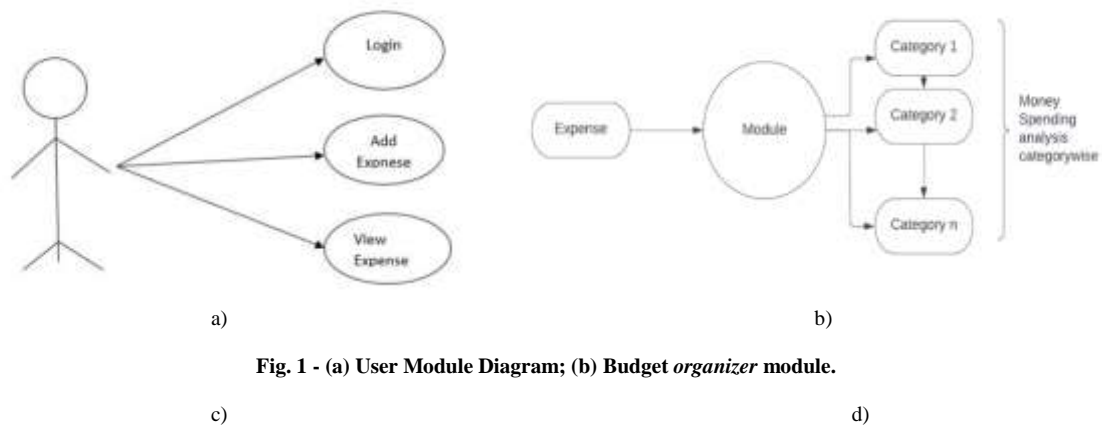


Fig. 1 - (a) User Module Diagram; (b) Budget organizer module.

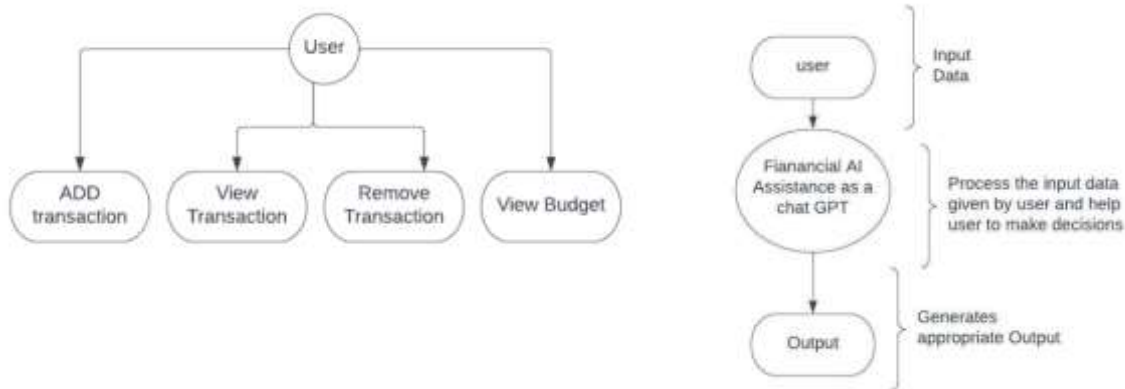


Fig. 2 - (a) Categorization module; (b) Financial AI Assistance module

Acknowledgements

First and the foremost I, express my deep sense of gratitude, sincere thanks and deep sense of Appreciation to project Guide Prof. Ms. Poonam R. Dholi and seminar coordinate Prof. Swati Bhavsar Department of Computer Engineering, Matoshri College of Engineering and Research Center, Nashik. Your Availability at any time throughout the Semester, valuable guidance, view, comments, critics, encouragement and support tremendously boosted this research work. Again, load and loads of thank to head Computer Engineering Department Dr. Varsha H. Patil for providing me the support I ever had. Your opinion, view, Comments and thoughts have been really helped me to improve my writing. I like to express my sincere gratitude to Dr. G.K.

Kharate, Principal, Matoshri College of Engineering and Research Center, Nashik for providing the great platform to complete this within the schedule time. I am also thankful to all the faculty members, Computer Engineering Department, Matoshri College of Engineering and Research Center, Nashik for giving comments for the improvement of work, encouragement and help during completion of the thesis. Last but not least; I should say thanks from my bottom of heart to my family and friends for their never-ending love, help and support in so many ways through all this time. Thank you so much. Finally, I am thanking to MIGHTY GOD, who gave me the courage and confidence to not only this Dissertation work but also in a bad difficult situation.

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