A project proposal on

Expense Tracker

Submitted in Partial Fulfillment of the Requirements for

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Abstract:

The proposal of this project is to create an desktop based application where you can record and track the spending of individual. This project will encompass the development of an expense tracker application on a desktop using VB.NET. This solution is proposed to make the individual's experience easy, comprehensive, and satisfactory with regard to expense control. The application will include a friendly user interface to ensure easy navigation , covering entry, categorization, budget management, reporting, and analytics in the most efficient way.

In this project, a literature review will be conducted to identify existing related online services platforms and their features. The proposed methodology for the project will include the use of VB.NET as the programming language. The performance of the platform will be analyzed using various metrics such as response time, scalability, and user satisfaction

The proposed deliverables of this project include a functional expense tracker and a comprehensive support on the development process and performance analysis. The project tasks and time schedule will be divided into various stages, including planning, design, development, testing, and deployment.

Introduction

The Expense Tracker project is a stand-alone program made especially to help people manage their money by keeping a close eye on their expenditures. This easy-to-use program gives customers a clear view of where their money is going by allowing them to enter their daily expenses in an organized way. The tool divides expenses into predetermined categories, such entertainment, food, travel, and more, and then provides thorough summaries that show the overall amount spent in each category.

The application creates detailed reports that include an overview of the user's financial actions over predetermined periods in addition to recording and classifying expenses. These reports provide a visual depiction of spending trends using a variety of presentation types, including pie charts, bar charts, and graphs. Users can more easily understand their financial status, recognize patterns, and identify areas where they could be overpaying with the use of this visual tool.

All things considered, the Expense Tracker app is a complete financial management tool that helps users monitor their spending while also providing them with the knowledge and resources they need to handle their money wisely, which eventually improves their stability and financial health.

Problem statement

- Manually tracking daily costs can be time-consuming and error-prone. Users frequently find it difficult to keep consistent records of their expenses, resulting in erroneous financial tracking.
- Individuals are unable to make informed financial decisions due to a lack of categorized expenses, which can result in poor budget management and financial stress.
- There aren't enough visual representations, such as graphs and charts, to help people understand complex financial data.
- Detailed monthly financial reports are essential for customers to assess their total spending and make strategic budget modifications.
  Without them, consumers lack a clear picture of their financial situation, making it impossible to plan and manage their money properly.

Features of expense tracker

Features of expense tracker are listed below:

- User can easily log in or create an account.
- Categorization of expenses (e.g., food, transportation, utilities, entertainment).
- Ability to add details, update details, delete details and description for each expense.
- Functionality to set monthly or weekly budgets for different expense categories of expenses against set budgets.
- Graphs and charts to visualize spending trends over time. For data visualization

Scope and limitations of expense tracker

- Monitors users' everyday spending to ensure accurate transaction recording.
- Breaks down costs into predefined categories such as entertainment, food, travel, and more.
- Provides a clear sense of users' spending habits.
- Each entry is well-organized, making updates simple.
- Financial activity is visible right away.
- Limited to desktop use.
- Lacks sophisticated budgeting capabilities like real-time report generating and budget forecasting.
- Measures everyday costs and categorizes them into sections like entertainment or meals.
- Allows viewing of spending in real-time.
- Provides monthly reports with graphs for better understanding of spending.
- Simplifies fund management without the need for complicated budgeting software.

Significance of study

The proposed expense tracker project is being developed using VB.NET programming language and has the potential to provide numerous advantages to individuals.

This project is important since it addresses the common problems people have when they try to manage their money well. By offering a comprehensive tracking and analysis tool for spending patterns, users will obtain priceless knowledge about their financial habits. Their increased knowledge enables individuals to make wise financial decisions, which improves their financial security. Users can discover areas where adjustments are needed, make realistic goals, and eventually work towards achieving financial security by recognizing trends and patterns in their spends.

Literature review

Expense tracker systems are essential tools for managing personal and organizational money, helping to monitor expenditure, create budgets, and analyze financial trends. These systems often contain transaction recording, categorization, budgeting, and financial reporting capabilities, with more advanced versions incorporating bank accounts and AI for predictive analytics (Matej and Roblek 2019).

Using expense trackers improves financial awareness, budget control, and savings. Users report more conscious spending, greater budget adherence, and larger savings (Perez and Brown 2018).

Adoption is slowed by setup difficulty, data entry requirements, and privacy concerns (Johnson and Smith 2021). Long-term user engagement is also a concern, with many users abandoning the platform owing to manual labour and a lack of quick rewards (Nguyen and Nguyen 2020).

AI and machine learning can improve predictive skills and tailored financial advice, while blockchain technology can boost security and transparency (Wilson and Martin 2021).

While expense tracker systems provide considerable benefits for financial management, user adoption and privacy concerns must be addressed. Technological improvements promise to improve both effectiveness and user experience.

Proposed methodology

Here in this project we will be using prototype methodology for developing Expense tracker application where it involves creating early version of a project/product to test and validate ideas before diving into full scale production. This methodology helps to identify the issues, gather feedbacks and make improvements in iterative way.

Over view of prototype methodology used in Expense tracker application:

Requirement gathering and analysis

Objective: to understand the core functionality and user needs.

Activities:

- conducting a key discussion with in team.
- Identifying features of application such as expense entry categorization, Report generation and offline functionality.
- Target the user (e.g individuals)

Concept and Design

Objective: to create visual representation of the application's interface.

- Creating user interface and workflow diagrams (e.g data flow diagram, ER diagram etc.)
- Tools : canva, draw.io

Use case diagram

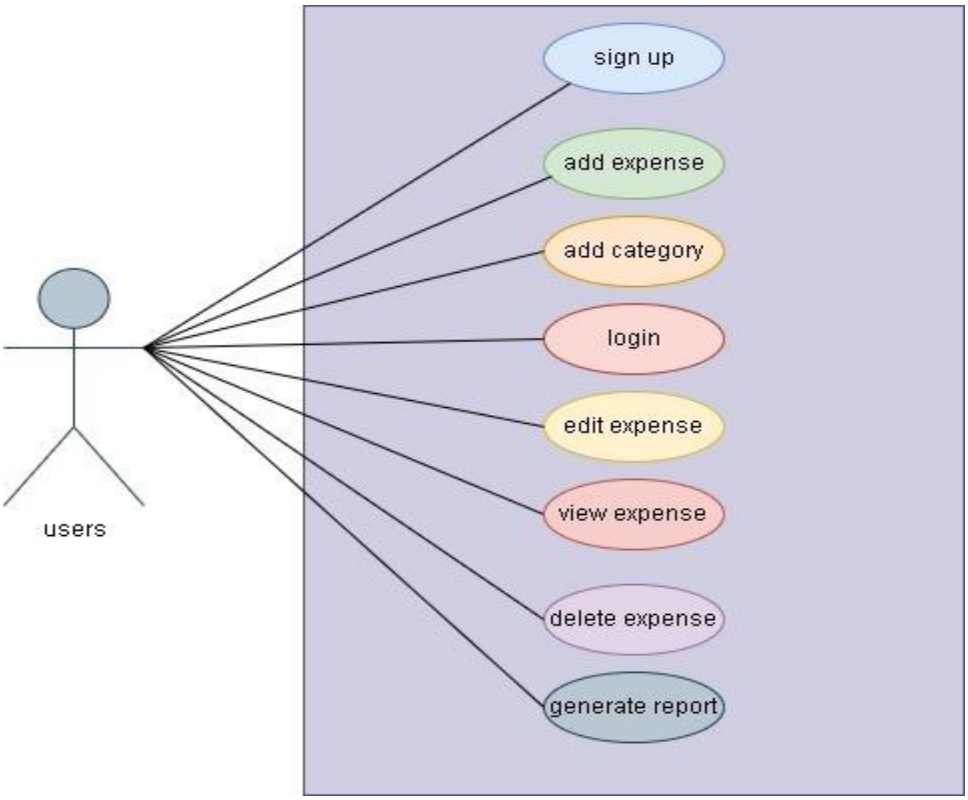

Figure 1 use case diagram

DFD level 0

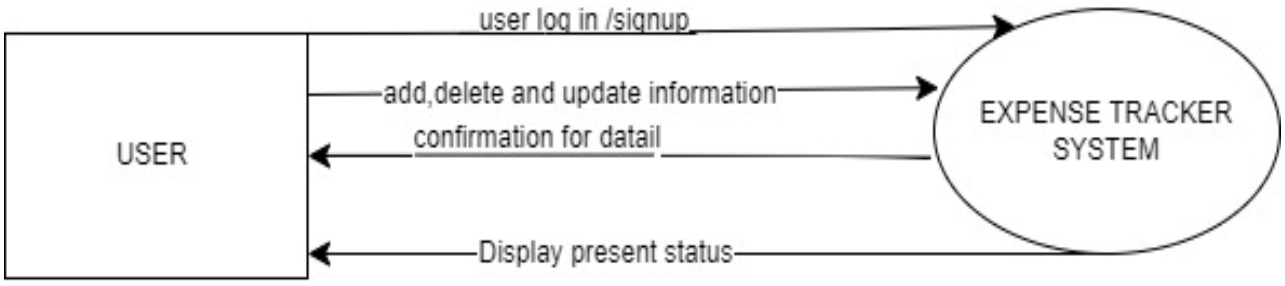

Figure 2 context level data flow diagram

DFD level 1

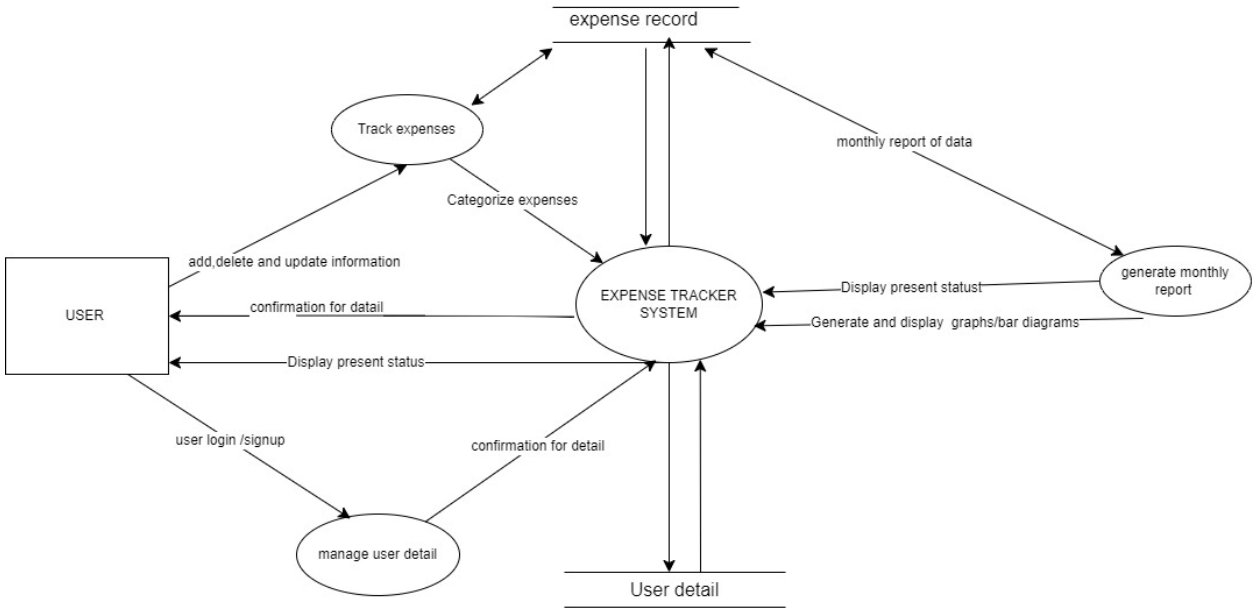

Figure 3 1-level data flow diagram

Er diagram

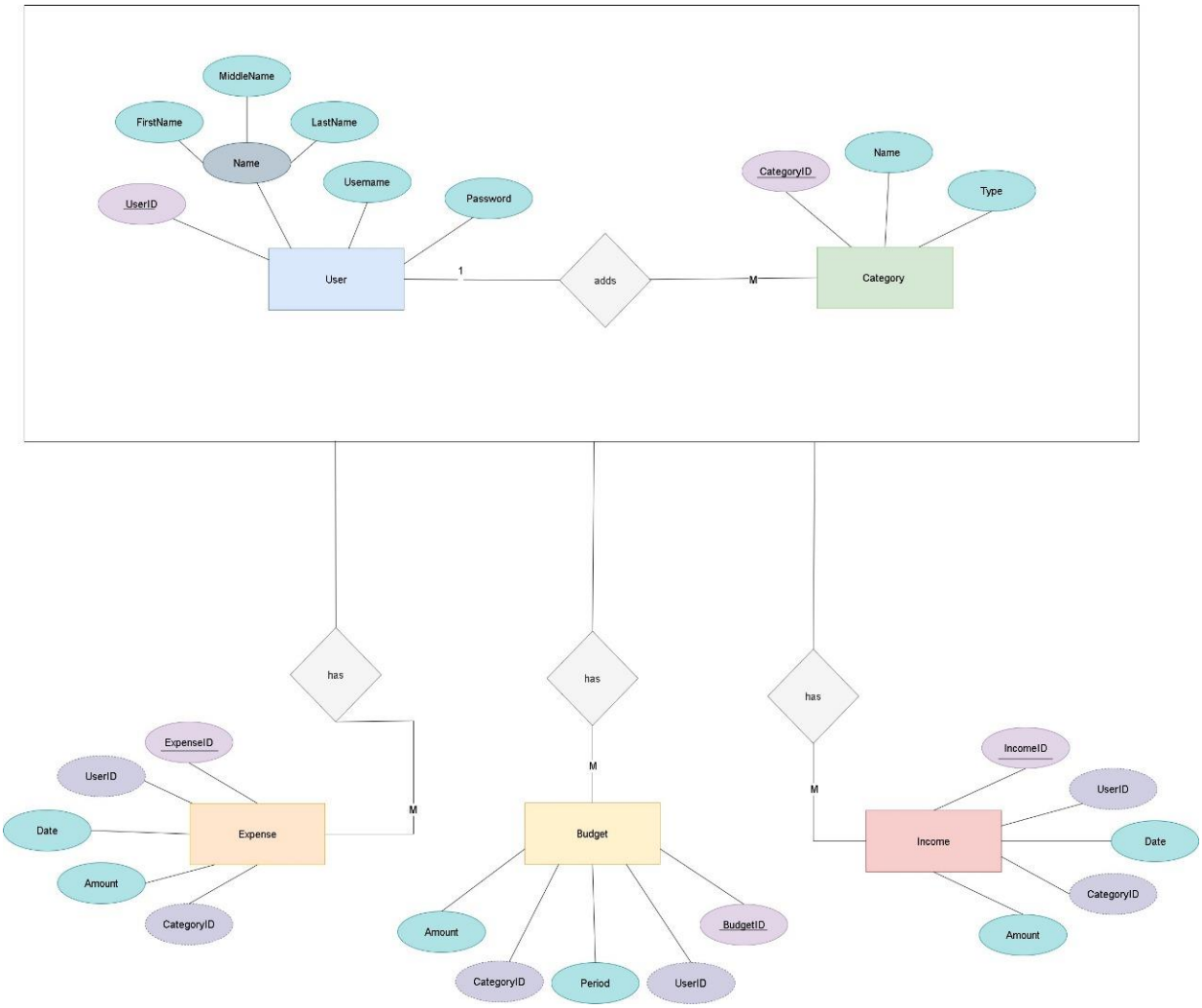

Figure 4 Entity Relation diagram

Prototype development

Objective: build a prototype model of the application.

Activities:

- Low fidelity prototypes: developing a paper prototype to visualize the main screen
- High fidelity prototypes: developing a detailed digital prototype using tools like canva, figma etc.
- Including core functions like adding, editing deleting expenses, viewing reports and adding different categories.

Testing and feedback

Objective: to check whether the prototype is valid and gather feed backs

Activities:

- Conducting a test sessions with in team / group.
- Collecting feed back on ease of use, functionality and design.

Iteration and re-improvement

Objective: Improve the prototype on the basis of feed back.

Activities:

- Analyzing the feedback to identify issues and areas to be improvesd.
- Repeating the testing process until it meets certain user expectations

Finalization

Objective: developing the prototype for final development.

Activities:

- Finalizing the design and functionality of application.
- Ensuring that the prototyping includes all the features and functionality.

Documentation and presentation

Objective : Document the development process and present the finalized prototype.
Activities:

- Documenting the requirements, design and feedback collected.
- Preparing a presentation to deliver the process used in prototype.
- Tools: Microsoft word, power point.

Validation scheme

Testing schema

The program will be subjected to routine reviews, black box testing, and white box testing to make sure it satisfies requirements and operates as intended.

Feasibility study

Technical feasibility:

The project will use readily available development tools and technologies. Using proven platforms streamlines development processes and makes support more easily available. This approach lowers potential technological issues and shortens the development period.

Economic feasibility:

By using open-source tools, the project will be cost-effective. This technique not only reduces expenses, but also allows for more adaptability and speed in development. As a result, financial risk is greatly decreased, ensuring the project's economic viability.

Operational Feasibility:

The program is designed to efficiently meet the expectations of users in terms of spending monitoring and reporting. By prioritising ease of use , the program provides a seamless financial management experience. This congruence with user requirements ensures high utilization and satisfaction rates.

Schedule Feasibility:

The project timeline is practical and doable, with specific milestones and deadlines. The development team may ensure consistent progress by breaking the project down into manageable phases, each with its own set of goals. Adequate time has been allotted to testing and quality assurance, as demonstrated in the GANT chart below, to reach the launch date without compromising quality.

Proposal deliverable/ output

A desktop version of the Expense Tracker program with functionality for expense logging, classification, and report generation will be delivered as part of the project. A thorough user manual and user documentation will be included in the final release.

Project task and time schedule

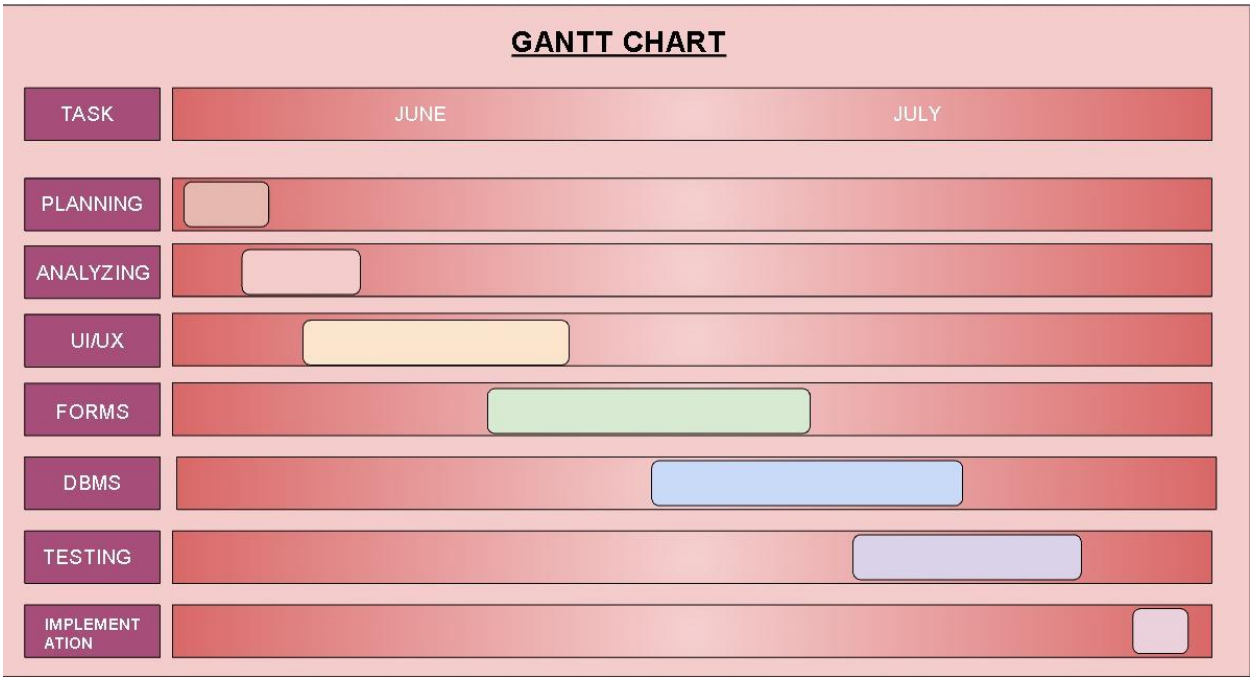

Figure 5 gantt chart

WEEKS	KRITI	SUSHANT	SUPID
1	PROPASAL MAKING	REQUIREMENT FINDING AND ANALYAIS	REQUIREMENT FINDING AND ANALYAIS
2	UI DESIGN	UI/UX DESIGN	FORM PROTOTYPING
3	UI/UX DESIGN	SYSTEM PROTOTYPING	SYSTEM PROTOTYPING
4	UNIT TESTING	IMPLEMENTATION (USER AUTHENTICATION)	IMPLEMENTATION (EXPENSE CATAGORIZATION)
5		IMPLEMENTATION (REPORT GENERATION)	DATA BASE INTERGATION
6		DATA BASE INTERGATION	IMPLEMENTATION (MODULE INTEGRATION)
7	TESTING AND DEPLOYMENT	TESTING AND DEPLOYMENT	TESTING AND DEPLOYMENT
8	DOCUMENTATION		

Figure 6 task and time schedule

Reference

- Computer programming concepts and visual basics, David I. Schneider
- https://github.com/priyanavi/Personal-expense-tracker-application