



Spending Tracker : A Desktop Application

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KEYWORD

a review of the relevant literature, the formulation of the implementation problem, the tools used, the features of the proposed system, the architectural design of the utility method, the specifics of the project module, the implementation strategy, and references.

ABSTRACT

A spending tracker application is a piece of software created to assist people or organizations in keeping track of their expenditure and improving their financial management. Users can often manually enter their spending into this tool, categorize their expenses, and develop budgets or financial goals. We made an attempt to create the window programme so that the user would not have to exert much effort to use it. Users using Windows-based computers can use this programme. We utilize SQLyog Workbench and Java as the language databases to create this system. A GUI (Graphics User Interface) is used in this programme. You can download the application and utilise it if you use a Windows computer. Anyone can use this approach to manage their income and expenses, from daily necessities to annual expenses, also to monitor their spending. This programme is multilingual and very simple to use. This app's key feature is the ability to track by day and category. You might employ it in line with your category.

1. Introduction

Since the dawn of human civilization, individuals have traded their futures in order to buy or sell items. Since then, it has evolved into a crucial and indispensable component of our daily life. The majority of us receive our fixed income on schedule, whether it is daily, monthly, annually, etc. Additionally, everyone adheres to a rigid spending plan. The budget is often put together by category. There are many different categories, including those for food, entertainment, travel, education, health, apparel, and so forth. Spending is nevertheless constrained to budgetary income. We must monitor our spending in order to prevent going over our allotted amount. In the past, people manually kept track of their costs using pen and paper. It takes a long time and is quite inaccurate. Because of the quick development of electrical devices as smartphones and computers, which have greatly improved the comfort and dependability of our lives.

The user of a spending tracker programme can keep a digital journal. A programme for tracking spending that will record a user's daily expenditures. This tool not only keeps track of your spending but also breaks them down by category for you. This programme allows users to keep track of their daily, weekly, and monthly spending. Because you are aware of your expenses, this programme also offers a feature that will assist you in sticking to your spending plan.

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At the end of the month, the spending tracker programme will provide a report detailing spending. We have also included a unique tool that will divide your spending into user-friendly categories. Additionally, a cost history will be included in the application.

You may assign funds to different objectives using a daily cost manager, which will also enable you to reduce wasteful spending. As a consequence, you'll be able to save money and avoid worrying. Using a daily budgeting tool will help you spend your money sensibly.

2. Literature Review

Daily expense tracking is not very modern. To track costs and budget performance, numerous conventional and technology methods have been developed. To calculate harvest or savings, we still enter our money into the register now like we did in the past. Additionally, numerous desktop and mobile programmes have been created specifically for this. The first desktop software were Quicken and Microsoft Money, both of which were created many years ago but have yet to become well-known online. Spending data can be displayed on maps or graphs with an integrated calendar using Personal Capital and the Dollar Bird app. The limited business owner used QuickBook as a tool to organise their combined business. The most recent programmes that use YNAB and Penny AI can be imported automatically. However, mint is trusted and used frequently.

YNAB, one of the newest applications created in this category, is a sum tracker that automatically keeps track of our expenditures using either our bank account or credit card. We can also specify future prices and applications. Stay out of trouble. The app is responsive to mobile devices and has been available since 2013. AI is integrated into this software to define and manage our everyday costs.

Although our window application receives text-based information regarding external charges, this app does not offer any in-depth details about them.

3. Proposed Architecture

I have created the tools needed to operate without an internet connection. To use this system, we require a database, desktop, programme, and user.

3.1. System Design

The process of defining a system's architecture, modules, interfaces, and data to meet specified requirements is known as system design. System design can be thought of as a product development application of systems theory.

3.2. Database Schema

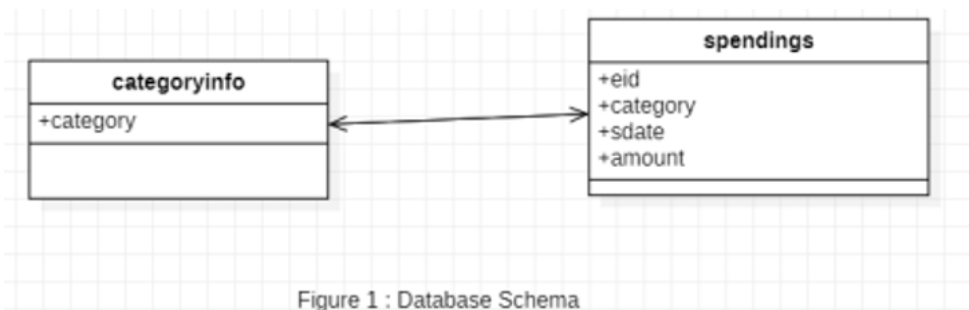


Figure 1 : Database Schema

Our application database contains two tables with the names Category and Cost. All the variables stated in the database table are present in the tables in the aforementioned diagram.

3.3. Data Dictionary

A data dictionary, often referred to as a metadata repository, is a centralised database that contains details on the meaning, relationship to other data, source, usage, and format of a given piece of information.

S.N	Entity	Attribute	Data type	Constraints
1	spendings	eid	INT	Primary
		category	VARCHAR(50)	
		sdate	DATE	
		amount	INT	
2	categoryinfo	category	VARCHAR(50)	PRIMARY

Figure 2 : Data Dictionary

4. Flow of Architecture

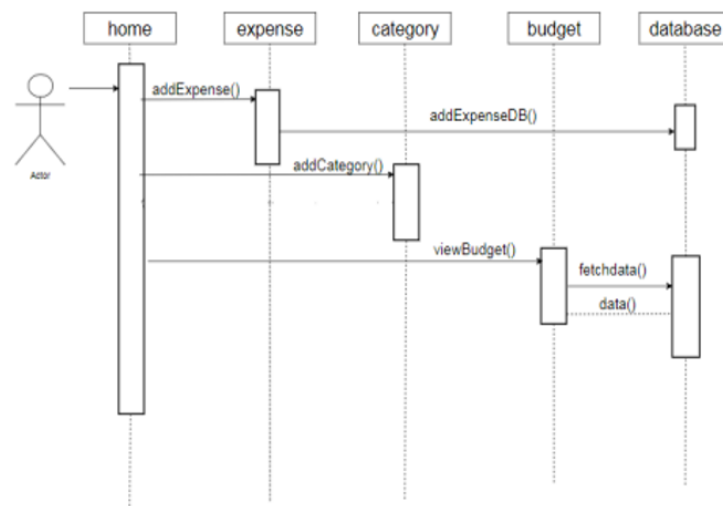


Figure 3 : Flow of Architecture

5. Features of the Applications

1. Main Window

On the first page, a Starting page with a window for adding expenses appears.

2. Add Category

The system will enable users to add categories of their choosing.

3. Category Combo Box

All of the categories that the user added are included in this combo box.

4. Remove Button

This button removes any entries from the previous 30 days spending displaying in the home page of the application.

5. Add Category Window

This window makes it simple for the user to interact with the categories; he or she can add and remove them as he or she pleases.

6. Calendar

Users will be able to add the date to their expenses using the system.

7. View Expense Day wise/Category wise Window

The user can interact with the expense according to day and category using this window.

8. Menu option

By just selecting a menu item, users can interact with other pages.

9. Search button

By pressing the search button, users are given the option to search their expenses by category and date.

10. Refresh button

This button must be clicked for the user to update the category.

6. Application Modules and Implementation

A. Implementation Overview

1. Process Model Used :-

The waterfall model is a sequential method in which each key action in a process is represented as a distinct phase and is organised in a linear fashion. In the waterfall paradigm, all actions must be planned and scheduled before beginning (plan-driven process).

Since this project does not include clients, the requirements are completely explicit, allowing for advance planning of how to complete each stage of development. This is why the waterfall model is chosen for the project.

2. Module Description :-

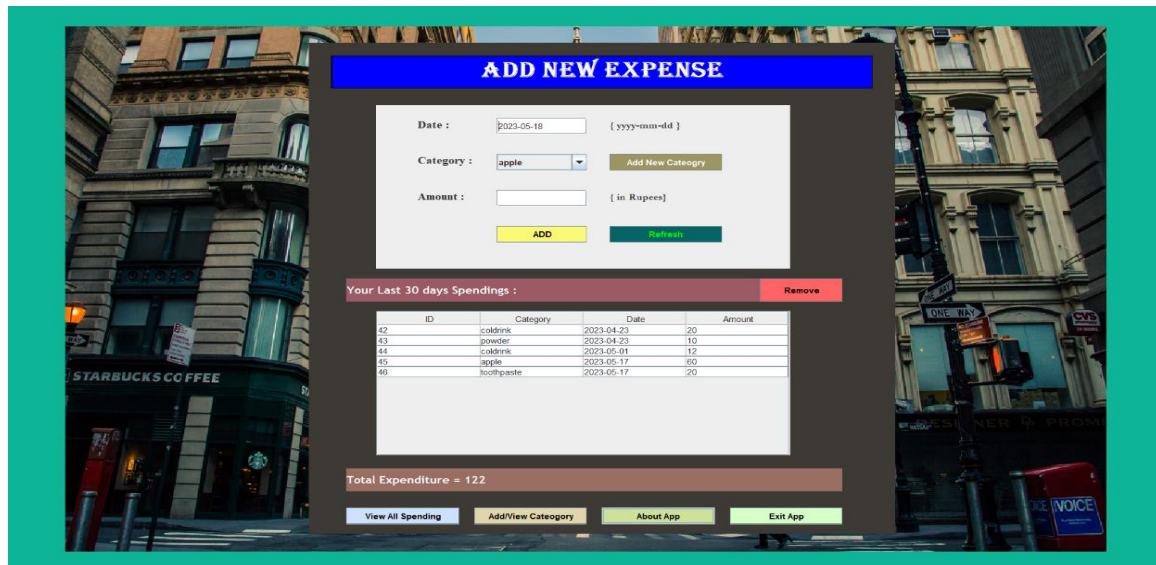
A modularization comprises of clearly defined, controllable units with clearly established interfaces.

The modular system's desired characteristics include

- Every module is a distinct sub-system.
- Each module has only one clear purpose.
- Modules may be independently assembled and maintained in a library.
- Modules may utilise various components.
- Modules ought to be simpler to utilise than to construct.
- Modules need to be easier from the outside than from the inside.

3. SNAPSHOTS/ IMPLEMENTATION PROCESS

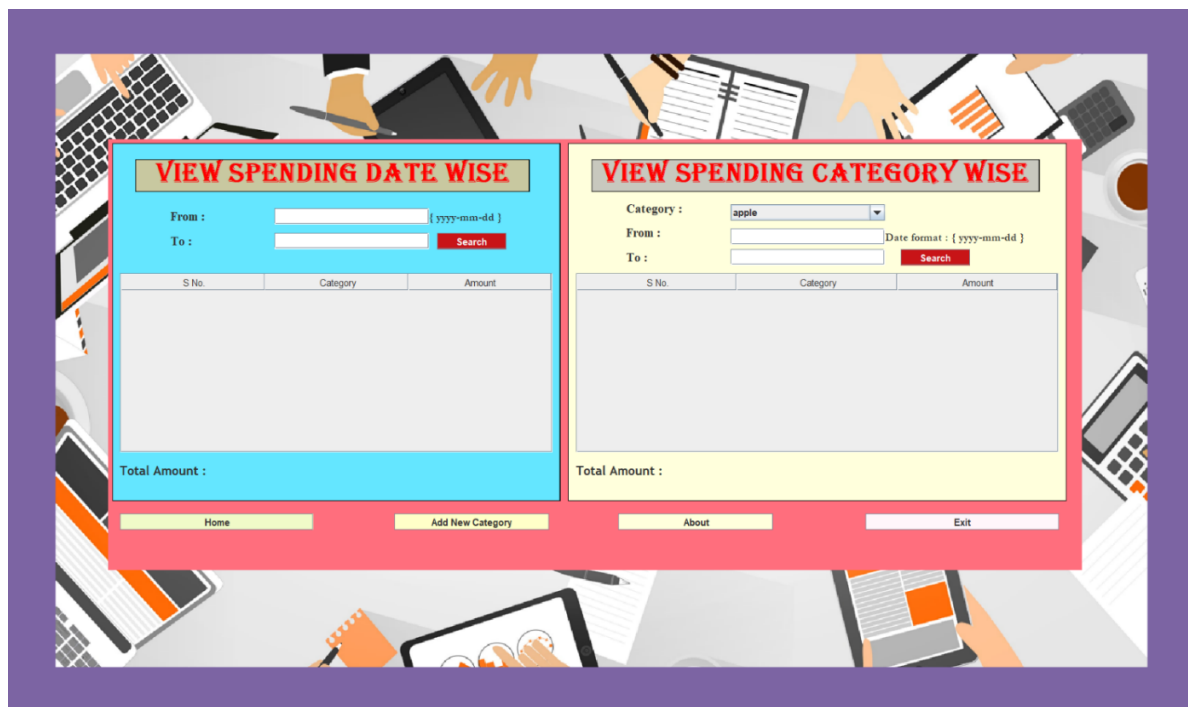
- (i) I designed a window where the user may enter expenses according to their preferences. This window has a category button where the user can enter expenses according to the categories they like. The category can also be updated and deleted by the user as desired. Additionally, if a user want to erase prior records, they can do so.



- (ii) As it depends on the user, the user can add the category to this window as per his or her preference. The category can also be deleted, if user wants. A user may eliminate a category.



- (iii) The user can view their expenses in this window both by category and by day.



B. Recommendation

Anyone who wants to manage their spending and wants to save for future investments can use the Spending Tracker app. This app is completely non-restrictive in terms of range, occupation, or gender, so anyone can use it.

C. Future Scope

Mails and a payment option will be integrated with the app in the coming days. Additionally, the database will keep track of backup information.

7. Conclusion

In this piece of work, I ensure that, after developing the programme, it would assist users in budgeting their daily expenses. Users will be guided by it, and it will update them of their daily spending. It will be beneficial for those who are upset with managing their daily budgets, annoyed by the sheer volume of expenses, and who wish to manage their finances and keep track of their daily costs in case they need to alter their spending habits. In essence, this programme will assist users in reducing financial wastage.

8. References

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