

# Expense Tracker and Bill Splitter

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## Abstract

We propose an expense tracker and bill splitter web application which can help you keep track of a range of expenses. Here user can define their own categories for expense type like food, clothing, rent and bills. User enter incoming and outgoing money and the app can help you store and track that information. Set budgets that are easy to stick to, based on your own spending habits. It can help them to track their budget, track their investments, use graphs and charts to show your progress, and keep their business and personal expenses separate. In short painless budgeting. Expense tracker app can also track user's spending habits and give them helpful insights to better help them understand where they are spending and how they can cut back. The application can also be used to quickly and efficiently split your portion of a bill and add it to your monthly expenditure.

Users can review their monthly expenditure in graph format to see what type of expenses are taking up most of their budget.

**Key Words:** Bill, Splitter, Expense, Track, Expenditure, Budget

## INTRODUCTION

Expense tracker bill splitter is a web application which will help track daily expenses. It also allows users to manage their monthly expenditure and not overshoot their budget. Some of the expense features like food expenses billing expenses like phone, electricity, taxation, etc. In this fast-moving world, this application will be useful for people with a limited monthly budget and especially useful for businessmen. The main aim of the application is to automate tracking of daily expenses,

and allowing the user to manage their financial habits. Users will be able to view their monthly expenditure with graphs representing the categories of their expense's ex (Food, Clothing and etc.) Expense Tracker is designed to efficiently satisfy to the needs of users by eliminating split costs and lay vows to friends. The application encourages corresponding users to help in keeping track of what we owe to each other. The aim is to use better approaches to help users and their companions to share expenses easily. This new application will let users and their companions have a detailed view of their individual bills and payments.

## Objectives of the Study

- To keep track of expenses manually is a very complex and burdensome process.
- Meanwhile other expense tracking apps will often have their most useful features gated behind paywalls.
- Aims: To create a free of cost platform for users to efficiently keep track of their expenses. Create a user friendly, simple and easily accessible application that users from all age group can use.

Objectives: Free of cost User Friendly, Accessible on any device, Limited Bandwidth friendly.

## Problem Statement

To keep track of monthly expenses manually is a very complex and burdensome process. To create a free of cost platform for users to efficiently keep track of their expenses. Create a user friendly, simple and easily accessible application that users from all age group can use. If the user uses less money than the daily budget then the saved amount will be added to savings.

## Literature Review

**Title:** Online income and expense tracker web application.

**Author:** S. Chandini et al.

**Published in:** Department of Computer Science Engineering, Mother Theresa Institute of Engineering Technology, Palamaner, Andhra Pradesh

**Year:** (2019)

An Online income and expense tracker web application written in PHP where users can enter their monthly income into the system. Their monthly income will then be divided into a daily expense budget where users can enter their expenses that it will be subtracted from their daily budget. If the user has exceeded their daily budget, then the system will cut the exceeded amount from the monthly income and adjust the value of daily budget. If the user uses less money than the daily budget then the saved amount will be added to savings.

**Title:** Family expense manager application in android.

**Author:** M N Rajaprabha.

**Year:** (2017)

In this the user can keep track of their equated monthly installments (EMI) in a diary format for themselves and family members. The user is able to set their monthly EMI's and select how much is deducted from their monthly budget. When the EMI amount is fulfilled the user is able to tick the EMI as completed. Then proposed step of this application is to integrate it with the user's credit/debit card and payment plans can be automatically tracked.

**Title:** Expense managing assistant application.

**Author:** M.Phil et al.

**Year:** (2017)

The unique aspect of this application is that it can analyze the user's monthly expenses using data mining techniques and provide an estimate of what the user may spend in the coming months. It will also take into consideration holidays and other spending occasions that come up during the year where the user might overspend. The expenses and estimated expenses can be viewed by the user in various charts and graph formats.

**Title:** Survey on classification engine for monetary transactions.

**Author:** Ms. K. B. Satpute, Abhiraj Kale

**Year:** (2019)

Expense management is a necessary task and our system provides the users with a comfortable way of completing the task. We use a publicly available data set which does not contain any personal information to train the system. The user can also manually feed the expense onto the system. The input is sent to the classification engine which then uses the custom search API to search for the listed expense. We use a supervised machine learning algorithm which needs a labeled data set to work efficiently. The output is a clean, arranged and classified data in terms of predefined tags.

## Software Used

### Framework: Bootstrap 4.0

Bootstrap 4.0: For client-side scripting framework Bootstrap is a free and opensource CSS framework directed at responsive, mobile-first fronted web development. It contains CSS- and JavaScript-based design templates for typography, forms, buttons, navigation, and other interface components. Bootstrap 4.0 is the newest version of Bootstrap; with new components, faster style sheet and more responsiveness. It supports the latest, stable releases of all major browsers and platforms.

### HTML5

The term HTML5 is essentially a buzzword that refers to a set of modern web technologies. This includes the HTML Living Standard, along with JavaScript APIs to enhance storage, multimedia, and hardware access. HTML5 was designed to do virtually anything you want to do online without having to download browser plugins or other software. HTML5 allows you to build offline applications. Browsers that support HTML5 offline applications (which is most) will download the HTML, CSS, JavaScript, images, and other resources that make up the application and cache them locally.

### CSS

CSS is the language we use to style an HTML document. CSS describes how HTML elements should

be displayed. This tutorial will teach you CSS from basic to advanced. CSS is designed to enable the separation of content and presentation, including layout, colors, and fonts. This separation can improve content accessibility; provide more flexibility and control in the specification of presentation characteristics; enable multiple web pages to share formatting by specifying the relevant CSS in a separate .css file, which reduces complexity and repetition in the structural content; and enable the .css file to be cached to improve the page load speed between the pages that share the file and its formatting.

### JavaScript

JavaScript is a high-level, often just-in-time compiled language that conforms to the ECMAScript standard. It has dynamic typing, prototype-based object orientation, and first-class functions. It is multi-paradigm, supporting event driven, functional, and imperative programming styles. It has application programming interfaces (APIs) for working with text, dates, regular expressions, standard data structures, and the Document Object Model (DOM).

### PHP

PHP is an open-source server-side scripting language that many devs use for web development. It is also a general-purpose language that you can use to make lots of projects, including Graphical User Interfaces (GUIs).

### MySQL

MySQL, the most popular Opensource SQL database management system, is developed, distributed, and supported by Oracle Corporation. MySQL is one of many RDBMS software options. RDBMS and MySQL are often thought to be the same because of MySQL's popularity. A few big web applications like Facebook, Twitter, YouTube, Google, and Yahoo! all use MySQL for data storage purposes.

Even though it was initially created for limited usage, it is now compatible with many important computing platforms like Linux, mac OS, Microsoft Windows, and Ubuntu.

### Existing System

Existing system does not use the smart concept which are used now a days. In existing, we need to maintain the Excel sheets, CSV etc. files for the user daily and monthly expenses. In existing, there is no as such complete solution to keep a track of its daily expenditure easily. To do so a person as to keep a log in a diary or in a computer, also all the calculations needs to be done by the user which may sometimes results in errors leading to losses.

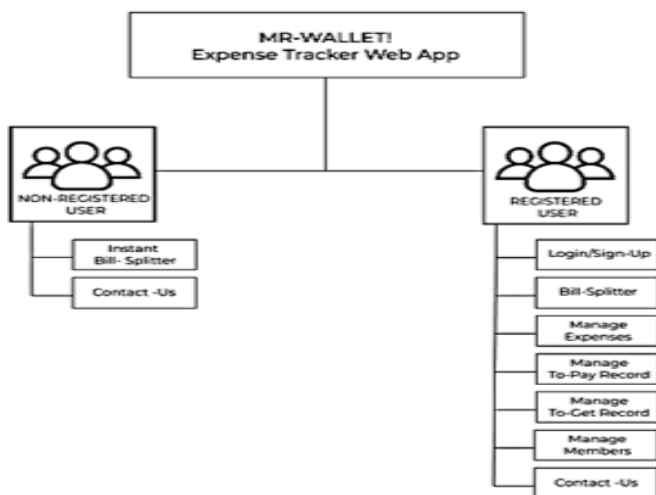
### Disadvantages of Existing System:

- 1.The existing system is not user friendly because data is not maintained efficiently.
- 2.But it does not have any reminder to remain a person in a specific date, so that is the only drawback in which the remainder is not present.
- 3.It is an unpopulated data because it has some disadvantages by not alerting a person for each and every month. But it can used to perform calculation on income and expenses to overcome this problem we propose the new project.

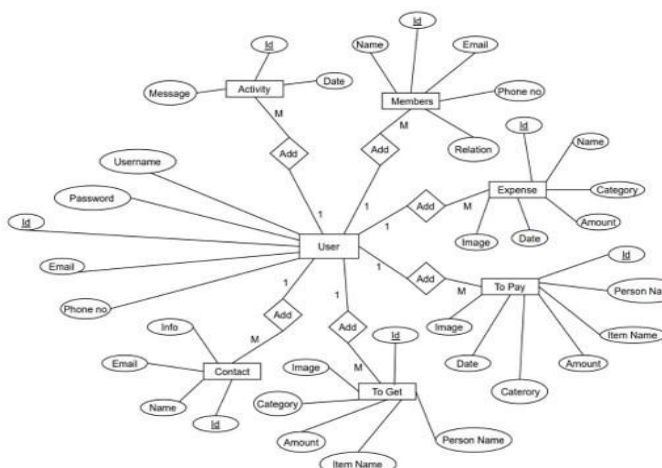
### Proposed System

We propose a full stack project and provide the user with different functionalities such as account creation, email verification, and contact support. There will be four sections that the user will be able to access, the expense manager, the bill splitter section, the To-Pay and To-Get manager and the member's section. In the expense section the user will be able to add an expense that will be deducted from their monthly budget, the expenses can be grouped into different categories as per the user. In the bill splitter section, the user will be able to split a bill and the user's portion of the bill will be deducted from their monthly budget. In the To-Pay and To-Get manager the user will be able to set how much money he owes someone or is owed. In the members section the user is able to add members to the application which he can then select in the To-Pay and To-Get manage.

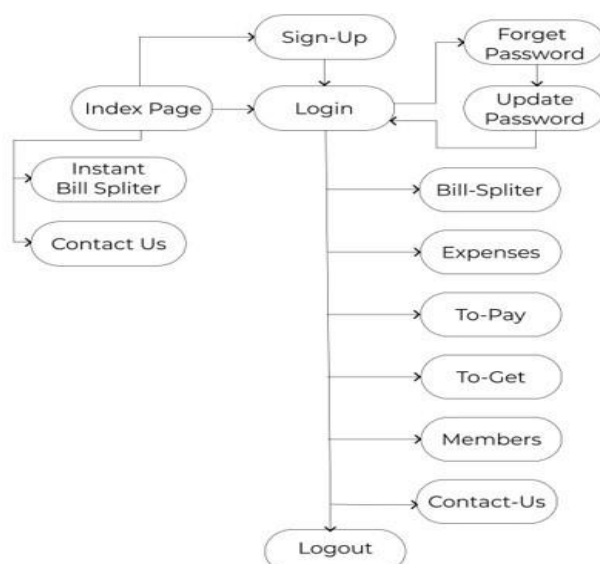
## Architecture Diagram



## ER Diagram



## User Flowchart Diagram



## Software Requirements:

- Operating System: Windows 10 (64 bit)
- Software:
- Framework: Bootstrap 4.0
- Client-side scripting: HTML5, CSS, JavaScript
- Server-side scripting: PHP
- Database: MySQL
- Web Server: Apache
- UI Design: Figma
- Responsive Design: Bootstrap 4
- Adobe Photoshop, Adobe Illustration
- Development Tools like Ide editor: Brackets

## Hardware Requirements:

- Hard Disk: 1 TB
- RAM: 4GB and Above
- Processor: I3 and Above

## Conclusion

This application can facilitate its users to manage the value of their daily expenditure. It will help raise awareness about trivial daily expenses that can considerably cut down your expenditure and support the people who are frustrated with their day-to-day budget management. This application can facilitate its users to overcome the dissipation of money. The application will eliminate a sticky note spreadsheet and a ledger that causes confusions in data inconsistency problems while recording and splitting expenses. With our application, user can manage their costs more effectively. Tracking your expenses daily can help stick to your budget, but it can also help you set financial goals for the future. If you know precisely where your amount is going every month, you can easily see where you can reduce and adjust.

## Future Scope

- 1.This project is for the creation of an Expense Tracker Web Application.
- 2.It will include multiple features for users to use to track their expenses.
- 3.To show the users expenses in a simple format for ease of viewing. It will also include features for the user to track who they owe money to and who owes them money.
- 4.To provide a free of cost platform to manage your expenses.

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