**­­­­­­**

Title of the project

**Expense Tracking**

Submitted by:

Sajith Thomas

USN:4VP21MC038

Geethanjali

USN:4VP21MC014

**Proposed Topic:**

A daily expense tracking is a one kind of digital dairy that helps to keep an eye on all of our money related expenditure and also provide all financial activities report daily, weekly, monthly and yearly. User can easily track the expense by viewing in charts.

**Abstract**:

This project is based on an expense tracking system. This project aims to create an easy, faster and smooth tracking system for the expense by the user. Most of the people can’t track their expense so they face a many crisis in this expense tracker can help people track expenses day to day and making life tension free. User can search and track for particular expenses.

Expenses tracker helps the user to avoid the unexpected expenditure. This project will save time and provide responsible life style.

**Motivation:**

The motivation to work in this project is actually our real-life experience. As user, we have faced many difficulties in our daily life. In our daily life money is the most important portion and without it we cannot last one day on earth but if we keep on track all financial data then we can overcome this problem. Most of the people cannot track their expenses one way they face the money crisis and depression.

This situation motivates us to track all financial activities. Using the Daily Expense Tracker user can be tracking expenses day to day and making life tension free.

**Literature Review:**

* Expense Tracker helps to maintain the record of daily expenses and monthly income of an users from anywhere and also generates a monthly report of the expenses in pdf format. The Expense Tracker app tracks all the expenses and helps the user to manage his/her expenses so that the user is the path of financial stability. The Tracking of expenses is categorised by week, month and year, it helps to see the more expenses made. To use the Expense Tracker the user has to sign up into such as name, phone no., address, email address, username, password and confirm password of the user. The user can get enlisted just a single time, per user can just one record. The remainder is set if the type future expense. The whole subtleties of the income or expense can be seen or refreshed or can be erased by long pressing the specific rundown thing. The things in

the rundown can be separated by month, year and date. When the month’s end is arrived at the complete pay, all out past expense and all-out future expense are determined and shown for the user.

The “Expense Tracker” is developed by Angular 8 for front end and SQLlitefor back end [1].

* Since the beginning of human civilization, people have exchanged their destiny for one another to buy or sell goods. Since then, it has become an important and irreplaceable part of our daily lives. Most of us have a fixed income and we get it on time (i.e., daily, monthly, annual, etc.). In addition, everyone follows a strict budget of spending. Generally, the budget is assembled according to category. Categories vary, for example, food, entertainment, transportation, education, health, clothing, and so on. However, spending is limited to budget revenue. For this reason, we need to keep track of our expenses so that they do not exceed our budget. In the old days, people would track their expenses manually, which meant that using a pen and paper system would be very laborious and time consuming. These days the availability of electronic devices. Like smartphones and computers has made our lives much easier and faster. We can use computers to track your daily expenses using the available online and offline software. There are some apps that can track daily expenses. These apps use a manual input system from the keyboard, which is laborious and time consuming. To meet the challenge of avoiding manual input, we propose the best way to do the same things in an automated and efficient way that takes less time. Under the proposed approach, users can spend, fill and monitor data. The main future of this app is that you can track by day and category. You can use it according to your category.

A Smart Approach to Track Everyday Expense” developed by using Java (Apache Netbins 11.3) and MySQL Workbench 8.0 CE [2].

* The Daily Expense Tracker System is meant to keep track of a user's income and expenses on a daily basis. The income is divided according to daily costs in this system. If you go over your daily expense limit, the system will deduct it from your earnings and provide you a new daily expense allowance. If the expense for that day is less, the system will save it. At the end of the month, the daily spending tracking system will provide a report that shows the income-expenditure curve. It will allow you to enter the amount of money you have set aside for special occasions such as birthdays or anniversaries. Daily Expense Tracker System is a system that keeps track of a user's income and expenses on a day-to-day basis. This system takes the user's income and divides it into daily expense allowances. If you exceed that day's expense, it will be deducted from your income and replaced with a new daily expense allowance. If the amount is smaller, it will be saved. At the end of the month, the daily spending tracking system will provide a report that shows the income expenditure curve. It will allow you

to enter the amount of money you have set aside for special occasions such as birthdays or anniversaries.

Expense Tracker will be a mobile application that can be used at any time. The first is the database layer, which will hold all of the data and financial information. Second, the programme will be supported by the user interface. The suggested system should allow users to communicate with the system as well as save information. Users should be able to choose from a variety of categories and enter the amount and mode of payment. This system should be capable of analysing data. provide information on the categories the user spent the most money in. The suggested system should have a user interface that allows users to save and track their previous expenses. Track money is an android application which is developed with a concept in mind to help users to easily manage all their income and expenses and keep track of all credits and debits of transaction according to different categories, also users can have a pictorial representation of all the transactions of different categories and can also download excel reports of transaction. App also receives customised tips in the form of push notifications which helps users to manage expenses.[3]

* Expense tracker is a web application used to track user expenses and generates periodical reports about the savings and expenditure. In this project, we propose an application known as "Expense Tracker," which is helpful to manage our income and expense daily or periodically or else whenever we want to remind. It also acts as an indicator or reminder example in the fastest world in which we cannot remember what the things we have to do for the end of the month are and the payments we have to pay for the particular month. Due to some conflict or other stress, we sometimes forget what the income is, where the money has to come from, or the payments we have to pay. If we are a businessman with a multi-business, we do not know from which part of the business income has come and how much income has come for us, but with the help of this application, we can divide and store all of the income and set a reminder for a specific date to remain so that we can manage and finalize the income for us**.**

In proposed system user has a greater number of added features to the existing features like

* Weekly Budget Planner
* Automated message Alert
* UPI linkup
* Weekly and Monthly Analysis
* App Authentication
* Wish list
* Rewards

Weekly Budget Planner to track their expenses. Automated message Alert is generated when they cross their budget. UPI linkup to track their online transactions. Weekly and Monthly Analysis are generated in the form of pie chart. App Authentication for security of the user. Income, Expenses, and Wish List are the three data entry choices available to the user. [4]

* With the launch and increase in sales of smartphones over the last few years, people are using mobile applications to get their work done, which makes their lives easier. Mobile applications comprise various different categories such as Entertainment, Sports, Lifestyle, Education, Games, Food and Drink, Health and Fitness, Finance, etc. This Expense Tracker application falls in the Finance Category and serves the important purpose of managing finances which is a very important part of one’s life. The software product went through the design, development, and the testing phase as a part of the Software Development Lifecycle. The application’s interface is designed using custom art elements, the functionality is implemented using iOS SDK, and the phase of testing the product was accomplished successfully. The application is not much user intensive but just comprises of having them enter the expense amount, date, category, merchant and other optional attributes (taking picture of the receipts, entering notes about the expense, adding subcategories to the categories). With this entered information, the user is able to see the expense details daily, weekly, monthly, and yearly in figures, graphs, PDF format, and can print them as well if a printer is detected or scanned nearby. The aim of this thesis is to provide a solution for iPhone users on how to manage finances in any circumstance by keeping track of their expenses every day. Ultimately, this contributes to societal well-being.

Web applications are created by the use of HTML, CSS and JavaScript code. The development environment to build the iOS applications is XCode where we can create, test, debug our apps. The apps are written in Objective C Programming language. [5]

* Tracking regular expense is a key factor to maintain a budget. People often track expense using pen and paper method or take notes in a mobile phone or a computer. These processes of storing expense require further computations and processing for these data to be used as a trackable record. In this work, they have proposed an automated system named as expense to store and calculate these data. Expense is an application that runs on Android smartphones. By using this application, users can save their expense by simply scanning the bills or receipt copies. This application extracts the textual information from the receipts and saves the amount and description for further processing. It also monitors user's income by tracking the received SMS's from the user's saving accounts. By calculating income and expense it produces the user's balance in monthly and yearly basis. Overall, this is a smart automated solution for tracking expense [6]
* Income and Expense Tracker will maintain data of daily, weekly, monthly, yearly expenses, Manages your expenses and earnings in a simple and intuitive way. User can select category of expense, enter other information like user can capture photo, add location, select amount of expense etc. And this will save to the local database. User can view and sort expense as per weekly, monthly, yearly. By using this, we can reduce the manual calculations for their expenses and keep the track of the expenditure. In this, user can provide his income to calculate his total expenses per day and these results will stored for unique user. People when usually go for trips or movies with friends they can use this tracker to maintain their expense. It will be easy for them to share the bill in this tracker. This will display graph as per selected view. And user can enter his monthly income or limit of monthly expense. This tracker system provides an integrated set of features to help you to manage your expenses and cash flow.[7]
* Spending Tracker is a daily expense management system designed to track day-to-day expenses easily and efficiently. It helps the user to track the daily expenses of unpaid and paid transaction through a computerized system which eliminates the need for hardcopy output. It systematically maintains the record of transactions done and easily helps the user to access data stored. User need to insert paid and unpaid expenses. The data is analysed properly, so that user can track expenses easily.

The languages which they use to develop this system are Java (Apache NetBeans 11.3) a MySQL Workbench. This application is a GUI (Graphics User Interface) based application.

**Conclusion:**

In the above literature review

**Problem Formulation:**

**Introduction:**

Many organizations have their own system to record their expenses. It is a good habit for a person to record daily expenses. People are using traditional noting method to record their expenses but it is very hard to keep track of all expenses and also it is almost impossible to analyses the expenses of months and years. If the user wants the total expenses then he should sum all the expenses and it is time consuming process.

**Objectives:**

Our goal is to create an expense tracking system where user can be tracking all the expenses. Also, user can analysis the expenses and generate the report.

* User can easily view total expenses of the day, month and year.
* User can search for particular type of expense and keep track of that.
* User can view the ups and downs of the expenses though line chart.
* User can also check for the highest and also lowest type of expense.
* User can check which expense has rapidly increased compared to past expenditure.

**Methodology:**

* **Python:** Python is a [high-level](https://en.wikipedia.org/wiki/High-level_programming_language), [general-purpose programming language](https://en.wikipedia.org/wiki/General-purpose_programming_language). Its design philosophy emphasizes [code readability](https://en.wikipedia.org/wiki/Code_readability) with the use of indentation. Python is [dynamically-typed](https://en.wikipedia.org/wiki/Type_system#DYNAMIC) and [garbage-collected](https://en.wikipedia.org/wiki/Garbage_collection_(computer_science)). It supports multiple [object-oriented](https://en.wikipedia.org/wiki/Object-oriented_programming) and [functional programming](https://en.wikipedia.org/wiki/Functional_programming). It is often described as a "batteries included" language due to its comprehensive [standard library](https://en.wikipedia.org/wiki/Standard_library).
* **Pandas:** Pandas is a [Python](https://www.python.org/) package providing fast, flexible, and expressive data structures designed to make working with “relational” or “labelled” data both easy and intuitive. It aims to be the fundamental high-level building block for doing practical, **real-world** data analysis in Python.
* **PyMongo:** **PyMongo** is a Python distribution containing tools for working with [MongoDB](http://www.mongodb.org/), and is the recommended way to work with MongoDB from Python.
* **Matplotlib:** Matplotlib is a comprehensive library for creating static, animated, and interactive visualizations in Python. Matplotlib makes easy things easy and hard things possible.

**Reference:**

1. KAZI, ATIYA, et al. "Expense Tracker." (2021).
2. Gupta, Hrithik, et al. Expense Tracker: A Smart Approach to Track Everyday Expense. No. 4809. Easy Chair, 2020.
3. Jadhav, Nidhi Jitendra, et al. "EXPENSE TRACKER." 04/April-2022
4. Geetha, V., G. Nikhitha, and H. Sri Lasya3 Dr CK Gomathy. "EXPENDITURE MANAGEMENT SYSTEM."
5. Manchanda, Angad. Expense Tracker Mobile Application. Diss. San Diego State University, 2012.
6. Sabab, Shahed Anzarus, et al. "eExpense: a smart approach to track everyday expense." 2018 4th International Conference on Electrical Engineering and Information & Communication Technology (iCEEiCT). IEEE, 2018.
7. Chandini, S., et al. "Online Income and Expense Tracker." International Research Journal of Engineering and Technology (IRJET) 6.3 (2019): 2395-0056.
8. Singh, Uday Pratap. "Spending Tracker: A Smart Approach to Track Daily Expense." Turkish Journal of Computer and Mathematics Education (TURCOMAT) 12.6 (2021): 5095-5103.