

# **Personal Expense Tracker Application**

*(Category:Cloud App Development)*

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# Abstract

Modern life offers many options of services and goods for consumers. As a result people's expenses have gone up dramatically.eg: Compared to a decade ago and the cost of living has been increasing day by day. Thus it become essential to keep check on expenses in order to live a good life with a proper budget setup.

The Personal Expense Tracker Application was developed with the aim of allowing user to track their income, expenses and determine whether they are spending as per their set budget. This app allows user to add their income and expense manually and also allow user to set their own limit for amount to be used monthly. It limit exceeded it will be notified to user via email alert. It also shows the income-expenses in the graphical forms like pie-charts and bar graphs. The user data are stored using the cloud storage. It also have educational blog which helps user to know more about finance. It also have option to track off next payment date of bills, subscriptions, policies, loans etc.

This application would eliminate messy sticky notes, spreadsheets confusion and data handling inconsistency problems while offering the best overview of your expenses. This application is a full detailed expense tracker that will not only help user to check on their expenses, but also cut down the unrequired expense and thus will help provide a responsible lifestyle.

# Literature Survey

*Almost all of us have a fixed income source like salary or pocket money and we get it on time. Also everyone has a strict budget of their expenses. Some of the expenses are non-negligible like educational expenses, health regarding expenses etc. Generally the expenses vary according to the categories like food, sports, entertainment, transport, clothing, etc. However the expenses are limited to our income. That's why it is necessary to track all our money to avoid financial blunders.*

## **Expense Manager Application**

**(Velmurugan, J. Albert Mayan, P Niranjana, Richard Francis)**

In this paper, they develop a mobile application developed for the android platform that keeps record of user personal expenses, his/her contribution in group expenditures, top investment options, view of the current stock market, read authenticated financial news and grab the best ongoing offers in the market in popular categories. The proposed application would eliminate messy sticky notes, spreadsheets confusion and data handling inconsistency problems while offering the best overview of your expenses. With this application user can manage their expenses and decide on their budget more effectively.

## **Student Expense Tracker Application**

**(Saumya Dubey, Pragya Dubey, Rigved Rishabh Kumar, Aaisha Khatoon)**

This application keeps track of money spent and the earnings both of the student on day-to-day basis. This application helps the user to easily calculate his/her expenses on daily basis and he/she has not to write down every transaction on paper and do the hectic calculation, it simply makes the task easier. It also has the feature that it gives warning messages if user are exceeding on our expenses and hence, we can limit our expenses and avoid overspending. If user spend less money than the daily expense allowed amount, the money left after spending is added into user's savings. The amount of money saved can be used for celebrating birthday, festivals.

## **An Expense Tracking Application using Image Processing**

**(Nupur Sawarkar, Pranay Yenagandula, Devang Shetye, Prof. Shruti Agrawal )**

They present an intelligent expense tracker to efficiently manage the monthly expenses. This system will help everyone who are planning to know their expenses and save from it. The user will be given the facility to set a monthly limit and if the user crosses that limit our app will notify the user about the same. The user can give receipts as an input, using AI our app will sort it into different categories. Here user can also define their own categories like food, clothing, rent and bills and the user can also set limits for a particular category. User will be provided with visual statistics of expenses by transaction date or by category. This project is

not indented for a particular user or age group but anyone and everyone who wants to track their expense can use this app. So, the general idea of this Project is to help people view and study their overall expenditure pattern by developing a mobile application to analyse all the purchases made by the user by simply scanning the receipts.

### ***Mint: Expense Tracker Application***

User have to sign up and connect their primary account to their Mint account. The Mint account can connect to almost any US financial institution and can help users to create and manage budgets within their dashboard.

When user connect bank accounts, the app will extract all the transactions and data history he/she made in the last months.

The Mint dashboard is broken down by overview, transactions, bills, budgets, goals, trends (reports), investments, and Ways to Save tab. From there user can view all the account balances, next bills, activity warnings, bill alerts, budget details, financing objectives, credit score, and more.. With the budget tab, user can set spending limits for certain transaction categories, Mint will send user an alert when you get close or are over your limit. To promote saving and encourage better personal finance, Mint recommends a variety of credit card deals, insurance, investment options, and other financial instruments reading the user transaction history and spending trends. Mint also supports its users in managing their 401(k) or IRA and even proposes brokerages.

## Existing System

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 personas 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.

There can be many disadvantages of using a manual accounting system. Accounting, for any business, can be a complex undertaking. A manual accounting system requires you to understand the accounting process in a way that may be unnecessary with a computerized accounting system. This can be an advantage or a disadvantage, depending on the person doing the bookkeeping; often, a specially trained professional is needed to ensure that accounting is done properly. Unraveling the complexity of your financial records by hand may be time consuming. Since it takes time to generate reports.

# Proposed System

Build a personal expense tracker application with cloud backup in which users can add expenses income and visualize it. User can set budget for particular month. If user exceeded the limit, he should be notified and if he spends less than a budget it will be added to savings. He should be also notified daily to enter daily expenses / income. The application can generate graphs which can be visualised from dashboard. Educational blog should be added. Reward system also added to keep user motivated.

The application is designed as per customer expectation.

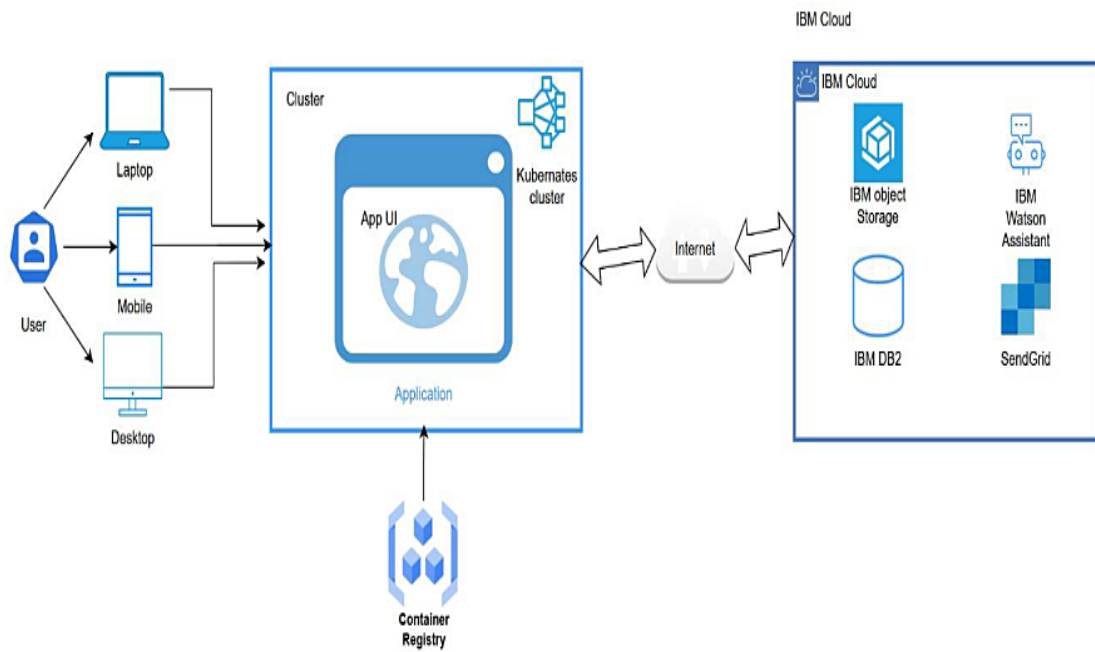
## **Keep benefits of this application is:**

- \*No fear of data loss*
- \*Faster and simpler processes.*
- \*Increased Visibility*
- \*Increased operational efficiency*
- \*Increased user's knowledge on finance*
- \*Features that motivates user in finance managing*

This application aims to show the right way for people who lead healthy financial life.

This application is freemium which provides basic features for free and advanced features for premium. The free version has ads. App developers can earn through advertisements (CPM, CPC, CPV, CPA), through subscription and sponsorship

# Technology Architecture



# Software Requirements

- HTML5
- CSS3
- JAVASCRIPT
- BOOTSTRAP 5
- PYTHON 3.10
- FLASK
- SQL
- IBM CLOUD
- IBM DB2
- IBM CLOUD OBJECT STORAGE
- KUBERNATES
- DOCKER
- IBM CONTAINER REGISTRY
- SENDGRID
- IBM WATSON ASSISTANT



# Results and Discussions

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Password:

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## Login

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Password:

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## Welcome to Dashboard

Manage All Your Details Here...

Total Income  
**15000.00**

Total expenses  
**5900.00**

Monthly Budget  
**10000.00**

Balance Amount  
**4100.00**

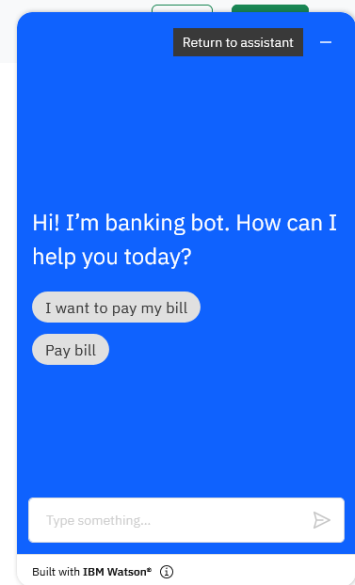


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## Conclusion

The new system has overcome most of the limitations of the existing system and works according to the design specification given. The project what we have developed is work more efficient than the other income and expense tracker. The project successfully avoids the manual calculation for avoiding calculating the income and expense per month. The modules are developed with efficient and also in an attractive manner. The developed systems dispense the problem and meet the needs of by providing reliable and comprehensive information. All the requirements projected by the user have been met by the system. The newly developed system consumes less processing time and all the details are updated and processed immediately. Since the screen provides online help messages and is very userfriendly, any user will get familiarized with its usage.