

**Project Design Phase-II**  
**Solution Requirements (Functional & Non-functional)**

Date	03 October 2022
Team ID	PNT2022TMID53191
Project Name	Project - Personal Expense Tracker
Maximum Marks	4 Marks

**Functional Requirements**

Following are the functional requirements of the proposed solution.

FR No.	Functional Requirement (Epic)	Sub Requirement (Story / Sub-Task)
FR-1	User Registration	Registration through Form Registration through Gmail Registration through LinkedIn
FR-2	User Confirmation	Confirmation via Email Confirmation via OTP
FR-3	Delete Account	Confirmation via Email Confirmation via Password
FR-4	Transaction summary	Weekly Transactions Monthly Transactions
FR-5	Budget Carryover	Option to move the leftover budget to next month.
FR-6	Summary/Report	Based on categories and priorities. Inputs/Feedback based on spends.
FR-7	Mitigate Manual Errors	Using API's make note of online transactions and classify them.
FR-8	Prevent Data Loss	Replication Sharding
FR-9	Visualisation of expenses	Using visualisation tools to display the expense split

## Non-functional Requirements

Following are the non-functional requirements of the proposed solution.

FR No.	Non-Functional Requirement	Description
NFR-1	<b>Usability</b>	The system shall be user-friendly and can be used easily by the masses.
NFR-2	<b>Security</b>	The system shall only permit authorized users to access the system. The system shall prevent unauthorized users from entering the system.
NFR-3	<b>Reliability</b>	The system shall be in the operational mode for at least 320 days in a year. In case of failure, the system shall be able to recover in under 5 seconds.
NFR-4	<b>Performance</b>	The system shall be able to record a user's expense as input, process and display it in under 2 seconds.
NFR-5	<b>Availability</b>	The system shall be available for public use as long as it remains operational.
NFR-6	<b>Scalability</b>	The system shall be accessible to over 10,000 concurrent users without any loss of performance.

### Database Server

IBM DB2

### Flaws in the current system

- No offline data storage
- Overcrowded interface and inappropriate color schemes
- Unable to create multiple accounts
- Users get interrupted by annoying advertisements

- No privacy function
- Unable to generate PDF reports
- Unable to set budget mode (Weekly/Monthly)

## **Features of Daily Expense Tracker Android App Project**

- Create multiple account
- Delete account
- Background color
- Modify Transactions ● Offline datastore ??
- Passcode security
- Selecting budget mode(Weekly/Monthly)
- Generate reports as PDF files
- Fully customizable categories
- Cash flow (Pie/Bar/Graph)
- Expenses percentage
- Carryover
- Show transaction note
- Currency Symbol
- Divide the group expense easily
- Archived transactions

## **Modules of Daily Expense Tracker Android App Project**

The modules which are currently covered are:

## **Add income/add expense**

This module deals with adding income and expenses. The user has both options available for adding income and expense. If the user wants to delete that transaction then the user has to long click the transaction available in the spending tab then that transaction will be deleted from both tabs.

## **Modify Transactions**

If the user wants to delete that transaction then the user has to click the transaction available in the spending tab then that transaction will be deleted from both tabs.

## **Filter Transaction view**

In the transaction tab, the user can filter the transactions. In the Spinner, users can select the day, month and year and then click the filter button and according to the day, month and year transactions will appear. If the user wants to filter the transactions only on the basis of day, for example, user-selected Monday then all transactions will appear that were made on Monday.

## **PDF Report**

In the transaction, the tab user has an option available for creating a report in PDF. Users click on the PDF button then PDF report will be generated and the user can view that report and that report will be automatically saved in the device.

## **Transactions overview as Pie/Bar/Graph**

The user has three options available for graphical representation. When the user rotates the device then the pie chart will appear on the screen and also switch is available on the screen when the user will click on the bar chart will appear on the screen and when the user clicks on graph then Graph will appear on the screen.

## **Themes**

At the top bar, the user has a setting option when the user clicks that then background option will appear user can select different background colors. After selecting the particular color background color will be changed.

## **Passcode**

The passcode is available in setting option at the top bar. When the user clicks on the passcode switch when the user switches on then the passcode screen will appear and the user can choose the password and that password will be saved in the database. After that when the user will open the application user have to enter the passcode and that passcode will be matched with passcode saved in the database. If the user entered the wrong passcode then the error message will appear.

## **Currency Symbol**

The currency symbol option is available at the top bar setting button. Users can select different currency symbols. If the user selects the dollar symbol then that symbol will appear on the spending tab.

## **Group Expense:**

There is a dedicated feature to take care of group expense. The user needs to enter the tag of expense, the amount spent and the people who were part of the group. Once the tick / continue button is clicked automatically the other members get notification of the expense. The user's expense is too automatically logged.

## **Archived transaction**

The user is given the option on how frequently the transactions are to be archived. Based on the choice, the transactions within the particular duration are archived.