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

Date	03 October 2022
Team ID	PNT2022TMID35580
Project Name	Project - Personal Expense Tracker Application
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 (UI) Store in Database
FR-2	User Login	Login portal Verification of username and password Error Message Display
FR-3	Adding Expenses	Expenses updated through form (in dashboard)
FR-4	Updating Expense Wallet	Incrementing/Decrementing balance in wallet
FR-5	Graphical representation of expenses	Generating charts based on historical expense data
FR-6	Email Notification	Checking of Budget exceeding limit Sending mail to user
FR-7	Chatbot Services	Training IBM Watson Query processing and accessing database Appropriate response generation

Non-functional Requirements:

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

FR No.	Non-Functional Requirement	Description
NFR-1	**Usability**	This product must be user-friendly by incorporating various features in the UI like navigation views, error messages being displayed if information entered is incorrect, tooltip texts provided for ease of use and accessibility features.
NFR-2	**Security**	This product ensures data is being secured, stored in IBM DB2 with user access control features, authentication involved during registration and login, users can only access their own expense data.
NFR-3	**Reliability**	Users can access their expense data and modify them 99 percent of the time without failure. This application is reliable as transactions and updating the expense wallet function supports atomicity and checks for irregularity or malfunction periodically.

NFR-4	**Performance**	This application consists of pages which must open within 2 seconds, the load time is reduced. This system responds back with accurate messages and error notifications under different load conditions. Rendering of data from the database must be faster including the concept of indexing in the database, thus keeping less response time.
NFR-5	**Availability**	This application is expected to have low down time as it is hosted on Kubernetes, being a distributed system. It should be made available 99.9 percent of time for users to access expense data and wallets
NFR-6	**Scalability**	This application can be scaled using horizontal scaling where more machines are added to the pool of servers to support more number of users at a particular instance of time.