Project Design
Phase-II Technology Stack
(Architecture & Stack)

Date	03 October 2022
Team ID	PNT2022TMID15737
Project Name	Personal Expense Tracker
Maximum Marks	4 Marks

Technical Architecture:

The Deliverable shall include the architectural diagram as below and the information as per the table1 & table 2

Personal Expense Tracker Technology Architecture

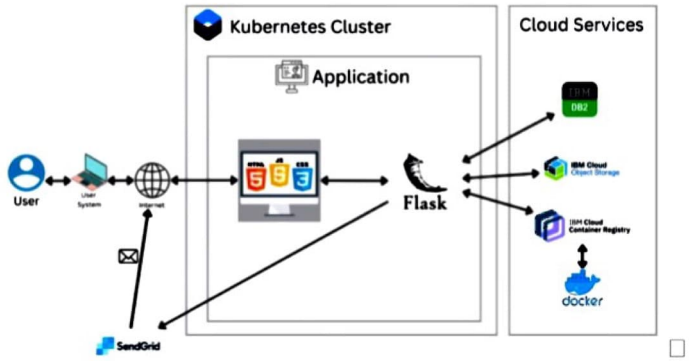

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	Consists of Sign up, Login, Dashboard, Expense Tracker, Remainders, Savings Tracker	HTML, CSS, JavaScript
2.	Backend	Data transfer and retireval	Python
3.	Watson ChatBot	Navigates user to necessary pages	IBM Watson Assistant
4.	Database	Sqlite database is used as it is lightweight and user friendly.	SQLite
5.	Cloud Database	Database Service on Cloud	IBM DB2
6.	File Storage	File storage requirements	IBM Cloud Object Storage
7.	External API-1	To alert users about various user set remainders and recurring payment criteria.	SendGrid
8.	Infrastructure (Server / Cloud)	Application Deployment Cloud	IBM Kubernetes Container and Docker Container Image

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Using flask to implement backend and connect with external services and database.	Flask
2.	Security Implementations	Encrypting user data and password with strong encryption algorithm and using inbuilt ibm security services.	SHA-256 Encryption, IBM DB2
3.	Scalable Architecture	Using **Microservices Architecture** to provide scalable application	HTML, CSS, JavaScript, Flask framework

S.No	Characteristics	Description	Technology
4.	Availability	Kubernetes services. Deploying the application with Kubernetes cluster to make application available across the globe on the internet.	Kubernetes Cluster, IBM DB2, IBM Cloud Object Storage
5.	Performance	Can handle required amount of requests per second	IBM container registery