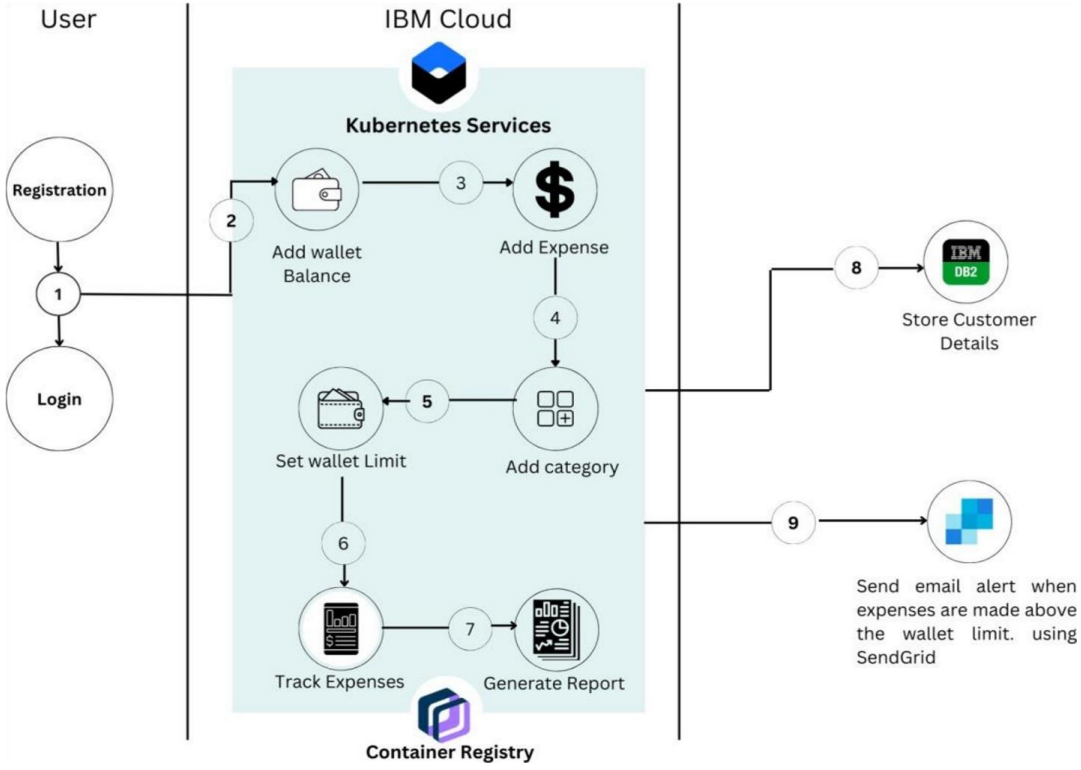
Project Design Phase-II
Technology Stack (Architecture & Stack)

Date	13 October 2022
Team ID	PNT2022TMID01338
Project Name	Project - Personal Expense Tracker Application
Maximum Marks	4 Marks

Technical Architecture:

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

Table-1 : Components & Technologies:



S.No	Component	Description	Technology
1.	User Interface	The user/customer interacts with application eg: through website, app and chatbot	HTML, CSS, JavaScript
2.	Registration and Login	To interact with the application the user must create account and do registration using email and set password then it automatically redirected to login page	Python, Docker
3.	Application Logic-1	The application contains the sign-in/sign-up where the user can login to their account .	Java/Python
4.	Wallet Dashboard	IBM Cloud Kubernetes Service provides secure access and easy to use.This tool is used to check their balance.	IBM Cloud Kubernetes Services.
5.	Tracking of Expenses.	IBM Container Registry enables us to provides a multi-tenant private image registry that you can use to store and share your container images with users in your IBM Cloud account.	IBM Cloud Container Registry
6.	Database	The income and expense data are stored in the MySQL database.	MySQL
7.	Cloud Database	With use of Database Service on Cloud ,the user data are stored in a well secured manner.	IBM DB2, IBm Cloudant etc.

8.	File Storage	IBM Block storage used to store the financial data of the user.	IBM Block Storage or Other Storage Service or Local Filesystem
9.	External API-1	email alerts or notification sends when the expenses are made above the wallet limit.	SendGrid

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Flask is an open source framework written in Python to implement this application.	Python-Flask
2.	Security Implementations	The user accounts are configured to only allow access from users with specific privileges. This application provides high security to the user financial data.It can be done by using the container registry in IBM cloud database.	IBM DB2
3.	Scalable Architecture	Three-tier architecture- user server, application server and cloud servThis Application is anytime accessible .Kubernetes services, the crudest form of load balanciner.	Python, IBM Cloud Services

4.	Availability	g traffic. The most basic type of load balancing is load distribution.The Docker load balancer runs on every node and can load balance requests across any of the containers on any of the hosts in the cluster.	Kubernetes and Docker
5.	Performance	The performance will be high. Because there will be no network traffics in the application.	IBM Container Registry.