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

Date	03 October 2022
Team ID	PNT2022TMID46374
Project Name	Project – Personal Expense Tracker Application
Maximum Marks	4 Marks

Technical Architecture:

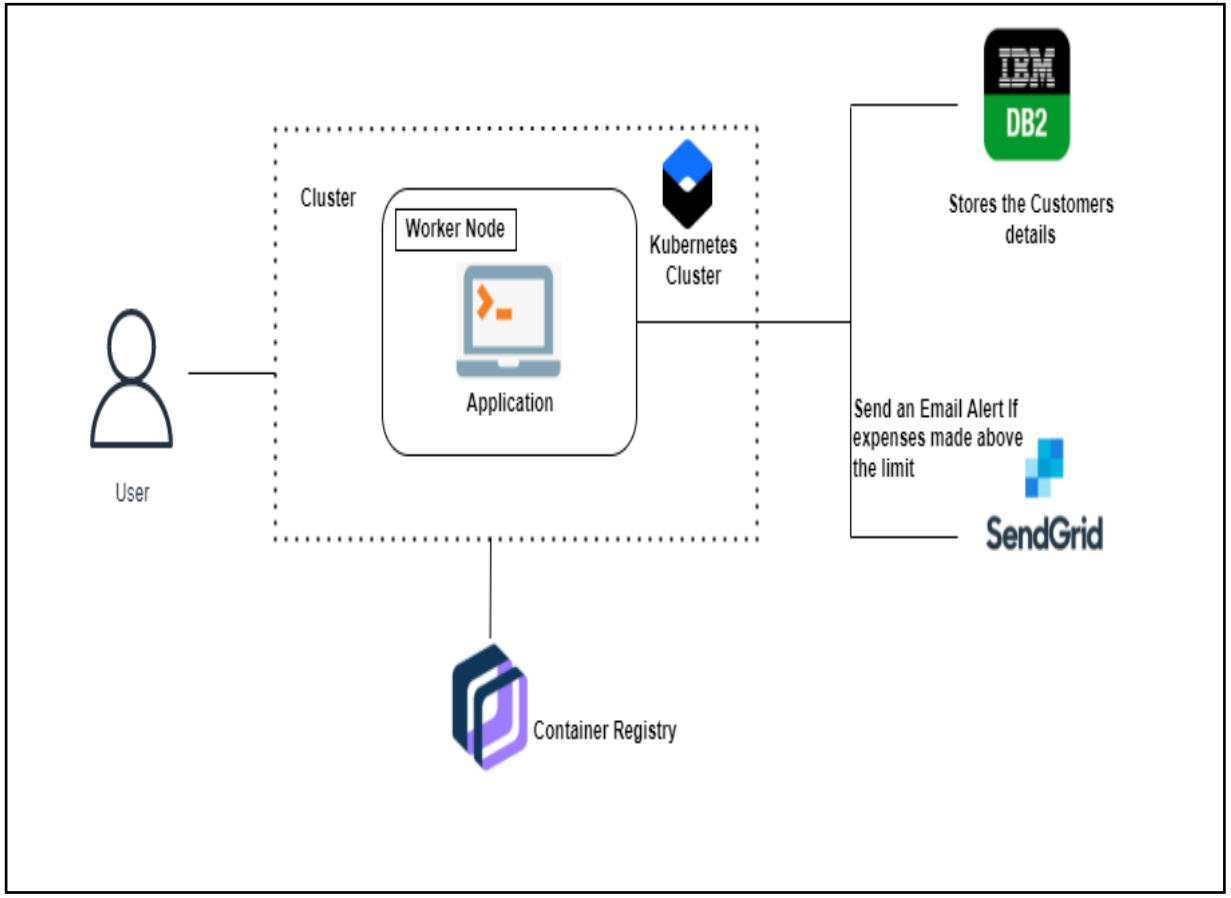

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	The user interacts with application e.g. Web UI, Mobile App, Chatbot etc.	HTML, CSS, JavaScript, Flask, Python
2.	Creating account	The user can able to create an account. The user details are stored in IBM DB2 securely.	Flask app using Kubernetes cluster, IBM DB2
3.	Login to account	The user interacts with the website to login into account. The user details are verified by comparing it with details stored in IBM DB2.	Flask app using Kubernetes cluster, IBM DB2
4.	Add Expenses	The user interacts with the website to add expense. The user can choose a certain category and enters the amount spent.	
5.	Wallet Dashboard	IBM Cloud Kubernetes Service provides a native Kubernetes experience that is secure and easy to use. This tool is used to load-balance, scale, and monitor the containers.	IBM Cloud Kubernetes Services
6.	Tracking of Expenses.	IBM Container Registry enables to store and distribute Docker images in a managed, private registry.	IBM Cloud Container Registry
7.	Setting budget limit	The user can be able to set the limit based on which notifications are created.	IBM DB2
8.	Cloud Database	Database Service on Cloud	IBM DB2

9.	File Storage	File storage requirements	IBM Block Storage or Other Storage Service or Local Filesystem
10.	External API-1	To send email alerts 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. Similarly, Docker is also used	Flask, Docker
2.	Security Implementations	Only registered users who have specific privileges has access to the website.	IBM DB2
3.	Scalable Architecture	Three-tier architecture- Presentation tier, Application tier, Data tier	Python, IBM Cloud Services
4.	Availability	The application can be available for user at any time.	Kubernetes and Docker
5.	Performance	The application can handle multiple requests per second.	Kubernetes cluster, IBM Container Registry