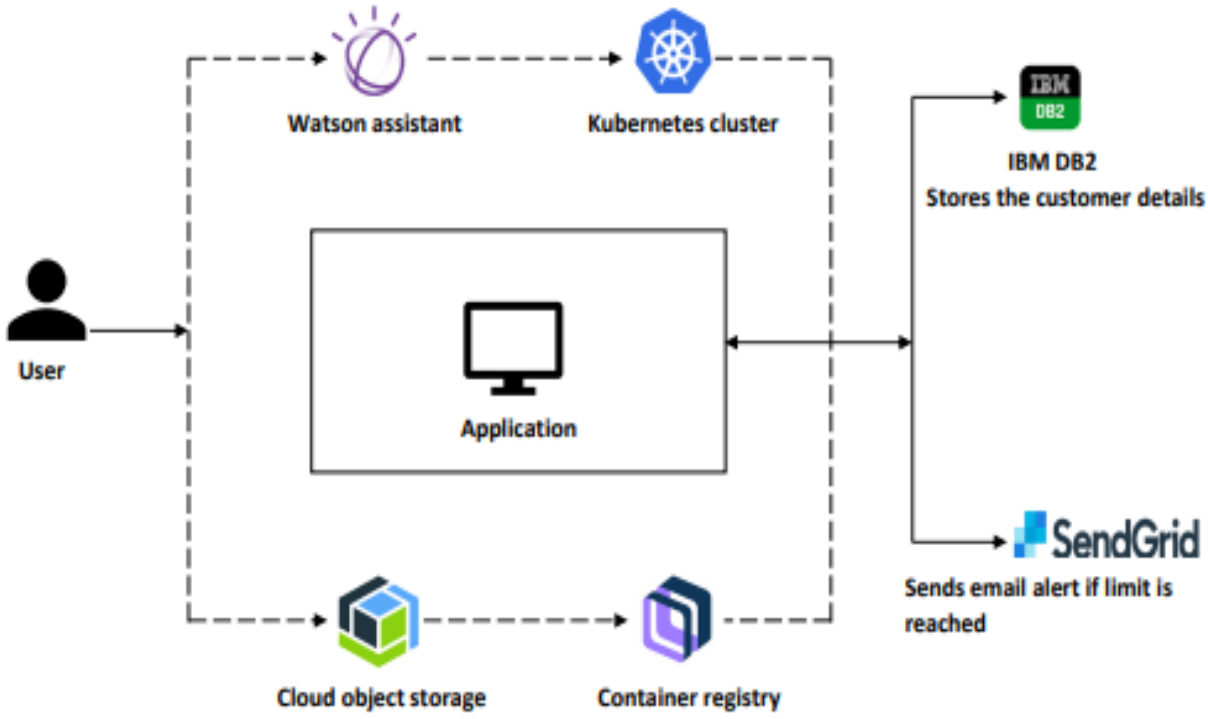
Project Design Phase-II
Technology Stack (Architecture & Stack)

Date	03 October 2022
Team ID	PNT2022TMID45361
Project Name	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



Architecture and data flow of the personal expense tracker application

Table -1: Components & Technologies:

S. No	Component	Description	Technology
1.	User Interface	The Interacts with application	HTML, CSS, JavaScript.
2.	User login	Login and password that allows access to the Service.	React, Angular JS
3.	Watson Assistant	Assistant lets you build conversational interfaces into any application, device, or channel.	AI-powered virtual agent that provides customers with fast, consistent and accurate answers.
4.	Database	Data Type, Configurations etc.	MySQL, NoSQL, etc.
5.	Cloud Database	Database Service on Cloud.	IBM DB2.
6.	File Storage	File storage requirements.	IBM Cloud Object Storage or Other Storage Service or Local Filesystem.
7.	Kubernetes Cluster	A set of nodes that run containerized applications.	Open-source system for automating deployment, scaling, and management of containerized applications.
8.	SendCrid	Cloud-based SMTP provider that allows you to send email without having to maintain email servers.	Tower Data is a data technology company that powers People-Based Marketing with real-time.
9.	Infrastructure (Server / Cloud)	Application Deployment on Local System.	Cloud Foundry, Kubernetes, etc.

Table-2: Application Characteristics:

S. No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Flask is a micro web framework written in Python.	Flask
2.	Security Implementations	It should be encrypted with a customer-managed key. Audit Container Registries that do not have encryption enabled with customer-managed keys.	Watson Assistant, Container registry, Kubernetes
3.	Scalable Architecture	Application is made possible through virtualization. Unlike physical machines whose resources and performance are relatively set, virtual machines virtual machines (VMs) are highly flexible and can be easily scaled up or down	IBM cloud Services
4.	Availability	High-Availability is about setting up, along with its supporting components	Cloud object storage, Container registry
5.	Performance	It is elastic, flexible and it can more easily scale into multiple petabytes to support unlimited data growth.	Cloud object storage