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

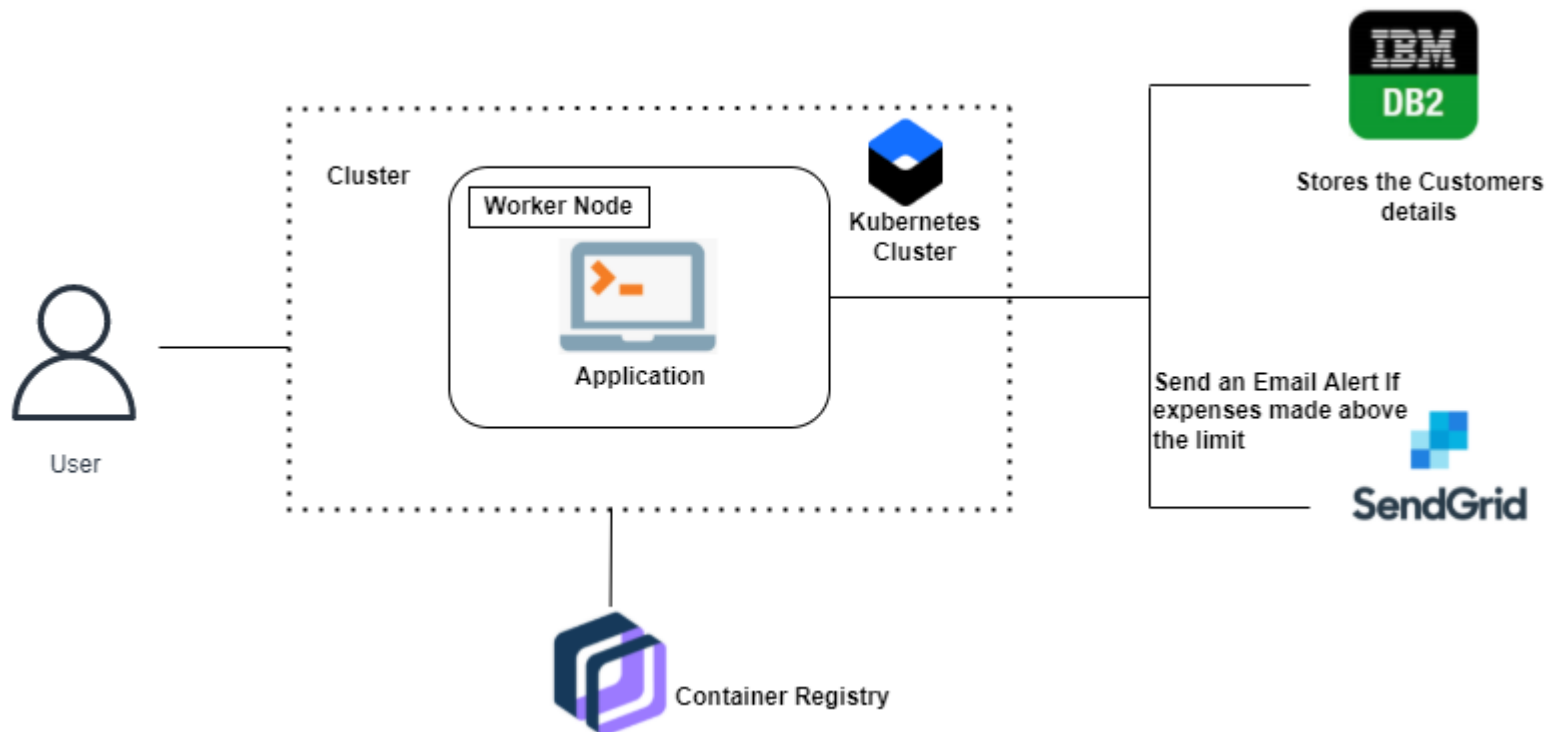| Date	16 October 2022
Team ID	PNT2022TMID21408
Project Name	Project - 22 (Expense Tracker Application)
Maximum Marks	4 Marks

Technical Architecture:

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	Web UI for users to interact.	HTML, CSS, JavaScript / Angular Js / React Js etc.
2.	Application Logic-1	Flask WSGI server where user requests are sent.	Python Flask
3.	Application Logic-2	Authentication	Flask-session
4.	Application Logic-3	Get email alerts when you make expenses that exceed limits defined by user.	Sendgrid
5.	Database	Data Type, Configurations etc.	MySQL
6.	Cloud Database	Database Service on Cloud	IBM DB2
7.	File Storage	User can upload the receipt of the expense made	IBM Block Storage or Other Storage Service or Local Filesystem
8.	Infrastructure (Server / Cloud)	Application Deployment on Local System / Cloud	Local, Cloud Foundry, Kubernetes, etc.

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	List the open-source frameworks used	Python-Flask
2.	Security Implementations	List all the security / access controls implemented, use of firewalls etc.	e.g. SHA-256, Encryptions, IAM Controls, OWASP etc.
3.	Scalable Architecture	Justify the scalability of architecture (3 – tier, Micro-services)	Kubernetes
4.	Availability	Justify the availability of applications (e.g. use of load balancers, distributed servers etc.)	Kubernets, Docker

S.No	Characteristics	Description	Technology
	Performance	Design consideration for the performance of the application (number of requests per sec, use of Cache, use of CDN's) etc.	Kubernetes

References:

https://c4model.com/

https://developer.ibm.com/patterns/online-order-processing-system-during-pandemic/

https://www.ibm.com/cloud/architecture

https://aws.amazon.com/architecture

https://medium.com/the-internal-startup/how-to-draw-useful-technical-architecture-diagrams-2d20c9fda90d