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

Date	03 October 2022
Team ID	PNT2022TMID02337
Project Name	Personal Expense Tracker
Maximum Marks	4 Marks

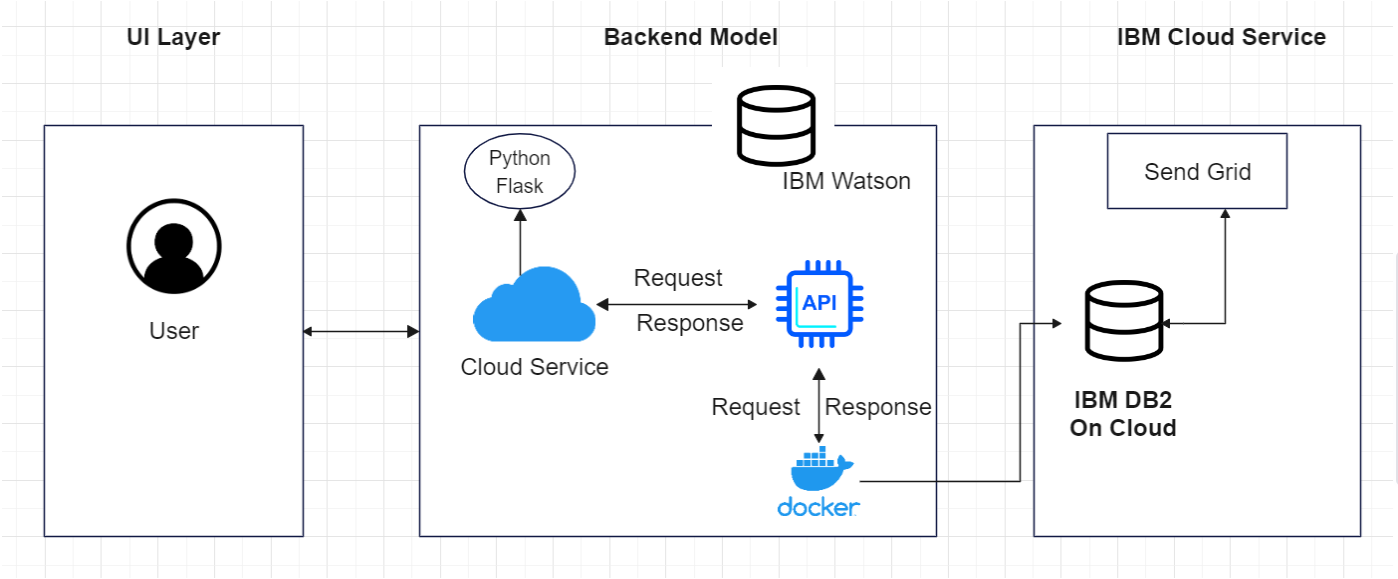
Technical Architecture:

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

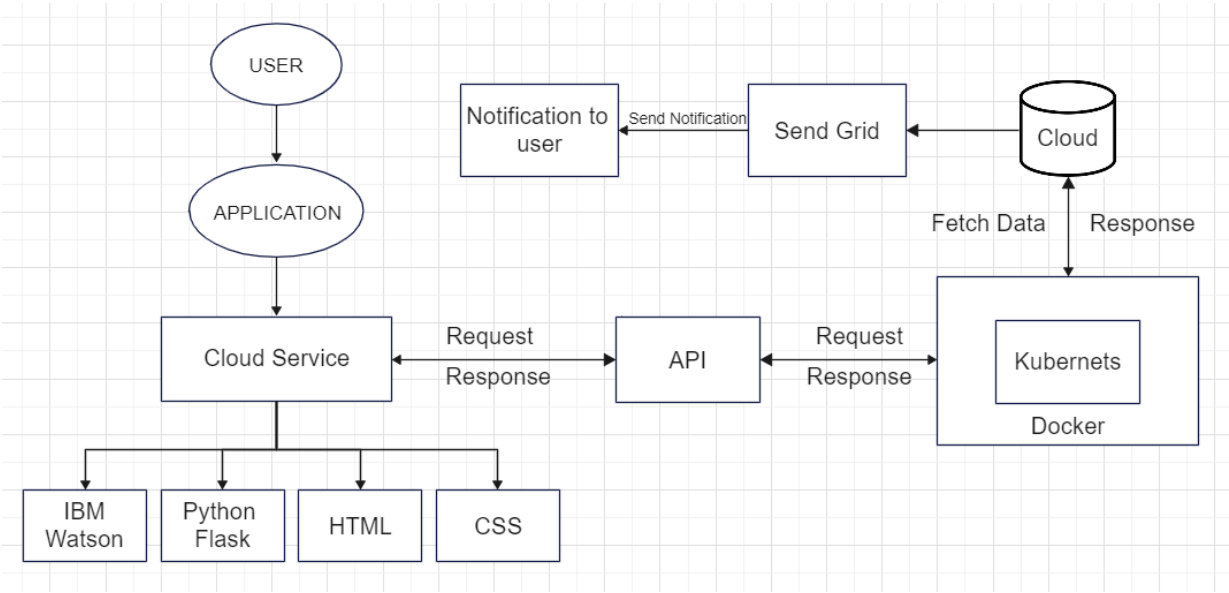
Example: Order processing during pandemics for offline mode

Reference: https://developer.ibm.com/patterns/ai-powered-backend-system-for-order-processing-during-pandemics/

Architecture Diagram



Block Diagram



Guidelines:

1. Include all the processes (As an application logic / Technology Block)
2. Provide infrastructural demarcation (Local / Cloud)
3. Indicate external interfaces (third party API's etc.)
4. Indicate Data Storage components / services
5. Indicate interface to machine learning models (if applicable)

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	Web UI (Registration, Dashboard).	HTML, CSS, JavaScript
2.	Data Maintenance	Store, Maintain, Retrieve user data.	MYSQL
3.	Chatbot	Clarify queries posed by users.	IBM Watson Assistant
4.	Database	Store Personal Details of the users.	MySQL
5.	Cloud Database	Database to store user's expense details.	IBM DB2
6.	File Storage	File storage requirements	IBM Block Storage or Other Storage Service or Local Filesystem
7.	External API	Currency Exchange	Google Finance API
8.	Infrastructure (Server / Cloud)	Application Deployment on Local System	Kubernetes

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Python Flask frameworks	Python Flask
2.	Security Implementations	Mandatory Control(MAC) and kubernetes	SHA-256, Encryptions, IAM Controls, OWASP etc.
3.	Scalable Architecture	3-Tier Architecture	Web server-HTML,CSS Application Server- Python Flask Database Server-IBM DB2
4.	Availability	Load Balancer to distribute network traffic across Servers	IBM Load Balancer
5.	Performance	Elegant User Experience Faster Communication	IBM Content Delivery Network

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