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

Date	03 October 2022
Team ID	PNT2022TMID33620
Project Name	AI based discourse for banking industry
Maximum Marks	4 Marks

Technical Architecture:
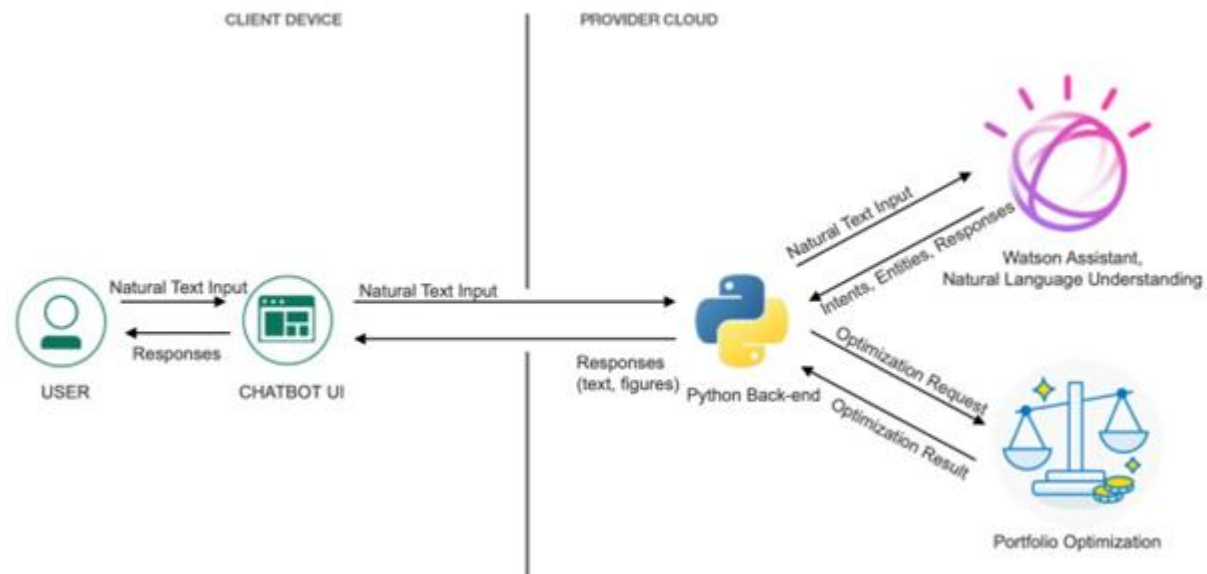
Table-1: Components & Technologies:

S. No	Component	Description	Technology
1.	User Interface	Chatbot	HTML, CSS, JavaScript / Angular JS / React JS etc.
2.	Application Logic-1	Customer Query	Java / Python
3.	Application Logic-2	Using Dataset Database	IBM Watson STT service
4.	Application Logic-3	Deep Learning Model for customer query	IBM Watson Assistant
5.	Database	Data Type –Dialog, Intent etc. Configurations done using small integration Code snippets such as JavaScript, SQL and can also be done using Watson APIs.	MySQL, NoSQL, etc.
6.	Cloud Database	Database Service on Cloud	IBM DB2, IBM Cloudant etc.
7.	File Storage	File storage requirements	IBM Block Storage or Other Storage Service or Local Filesystem
8.	External API-1	To incorporate conversation, language and advanced text analytics into chatbot	IBM Weather API, etc.
9.	External API-2	Banking API –Data transfer between two systems and data accessibility	Aadhar API, etc.
10.	Machine Learning Model	This model operates without human bias or time constraints, computing every data combination to understand the data holistically.	Object Recognition Model, etc.
11.	Infrastructure (Server / Cloud)	Application Deployment on Local System / Cloud Local Server Configuration: IBM HTTP administration server by providing User ID. Cloud Server Configuration: Accessing IBM Cloud Virtual private cloud using User ID, Password, Namespace Id, Cognos analytics URL	Local, Cloud Foundry, Kubernetes, etc.

Table-2: Application Characteristics:

S. No	Characteristics	Description	Technology
1.	Open-Source Frameworks	IBM Watson	IBM Cognos platform
2.	Security Implementations	Security access Manager	IBM security service
3.	Scalable Architecture	Chatbot architecture consist of four pillars. They are intents, entities, data flow, scripts (3 – tier architecture –presentation tier, application tier, data tier and Micro-services architecture)	IBM Informix
4.	Availability	Secondary server shares the disks with primary servers instead of remote stand-alone secondary server	IBM Watson Assistant
5.	Performance	Creating server groups for advanced dispatcher routing and Balancing Dispatcher with load balancing property and also with maximum no of processors which increases performance.	IBM Watson Assistant