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

Date	**09 November 2022**
Team ID	**PNT2022TMID04270**
Project Name	**AI BASED DISCOURSE FOR BANKING INDUSTRY**
Maximum Marks	**4 Marks**

Technical Architecture Steps:

1. Watson Assistant is the main tool for creating an efficient Chatbot.
2. Customer ask their queries on the chatbot.
3. Chatbot will receive the customer queries .
4. Then the queries will be processed into Natural Language Processing.
5. The queries will be compared with related queries stored in the database.
6. Then the required solution will be processed to the Chatbot.
7. Finally the Chatbot will display the solution for the Customer queries.

Technology Architecture :

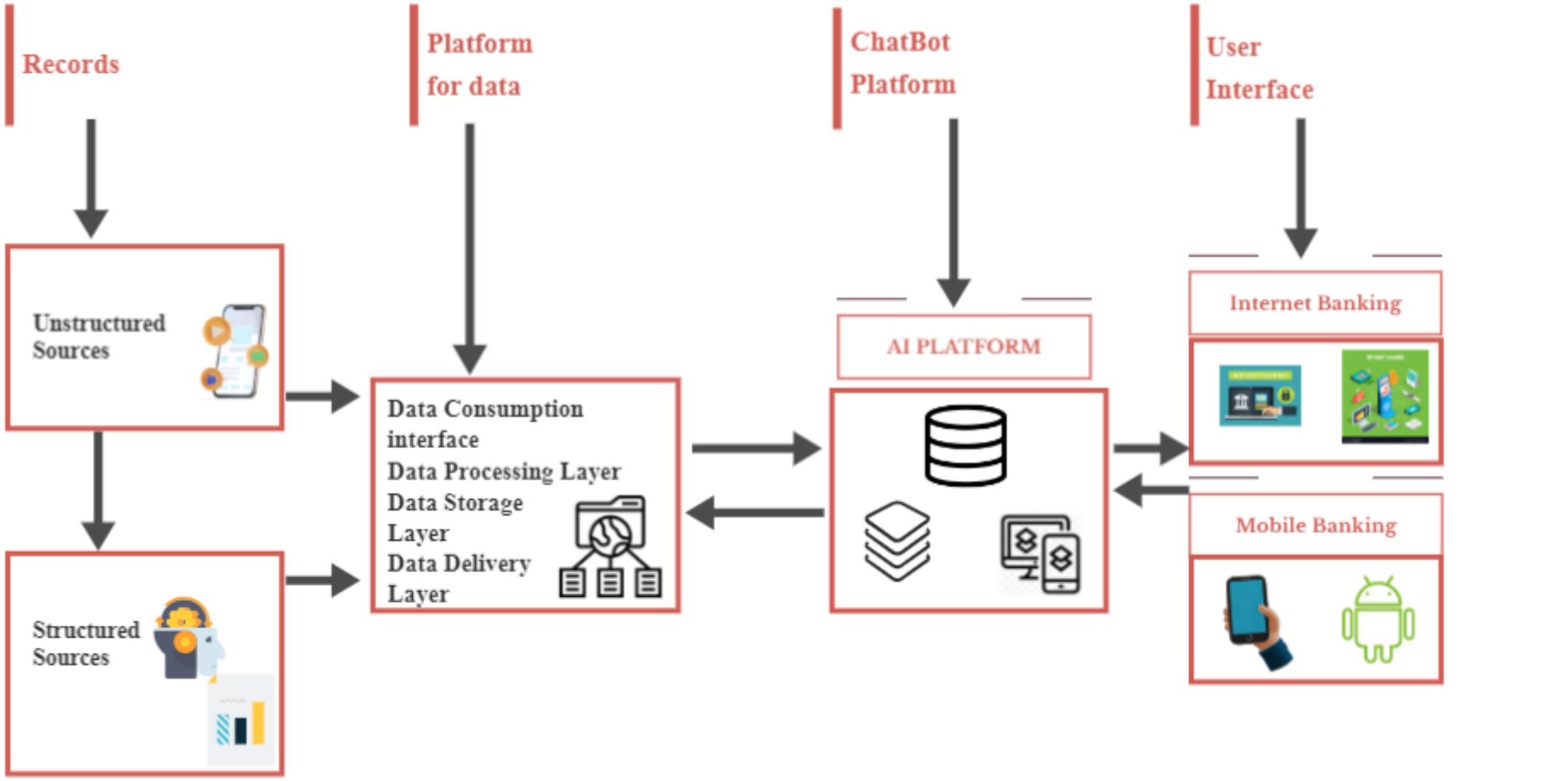

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	Bot Preview	Simple queries will be displayed to the customer	HTML, CSS, JavaScript
2.	Application Logic-1	Customer can enter their queries in the chatbot	Java / Python
3.	Application Logic-2	General queries will be processed in the Chatbot	IBM Watson STT service
4.	Application Logic-3	Queries will be processed and the required response will be sent to the customer	IBM Watson Assistant
5.	Cloud Database	In the cloud database questions & answers will be stored and can be used whenever a query is mentioned	IBM Cloudant DB
6.	External API-1	It is an interface between the cloud and the application to send the query from the application to the cloud.	Watson Assistant v2 API
7.	External API-2	It is a cloud based API that supports several cloud based operations and applications	IBM Cloud API
8.	Deep Learning Model	Several queries will be trained and this can be used to provide relevant responses to the queries	Deep Learning
9.	Infrastructure (Server / Cloud)	Application Deployment on Local System / Cloud Local Server Configuration: Flask Application Cloud Server Configuration: IBM Cloud	Python Flask, IBM Cloud

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Open-source frameworks will be listed	Python Flask, CSS Frameworks
2.	Security Implementations	IBM Cloud access control and security features are present.	IBM Watson Assistant, IBM Cloudant DB
3.	Scalable Architecture	The client side, the web server and the cloud server are the architecture. Each of these can be scaled as per requirements.	Client Side: Flask (Python) Web Server: IBM Watson Assistant Cloud Server: IBM Cloud
4.	Availability	The chatbot is available on most of the devices that supports the internet browser and will be available at any time.	IBM Cloud, Flask (Python)
5.	Performance	Responds to several queries at the same time and almost gives an accurate solutions to the queries.	IBM Load Balancer, IBM Cloud