PROJECT DESIGN PHASE-II

TECHNOLOGY STACK (ARCHITECTURE & STACK)

Date	21 October 2022
Team ID	PNT2022TMID31628
Project Name	AI BASED DISCOURSE FOR BANKING INDUSTRY
Maximum Marks	4 Marks

Technical Architecture Steps:

- User questions sent to the chatbot
- Bot examines the question
- Watson Assistant is contacted to handle the query
- The question is comprehended using Natural Processing Language.
- The query is sent by Watson Assistant.
- Watson searches a cloud database for the most pertinent response.
- Cloud databases hold queries and responses (sent and received).
- The bank receives all inquiries and pertinent data for improvement.

TECHNICAL ARCHITECTURE:

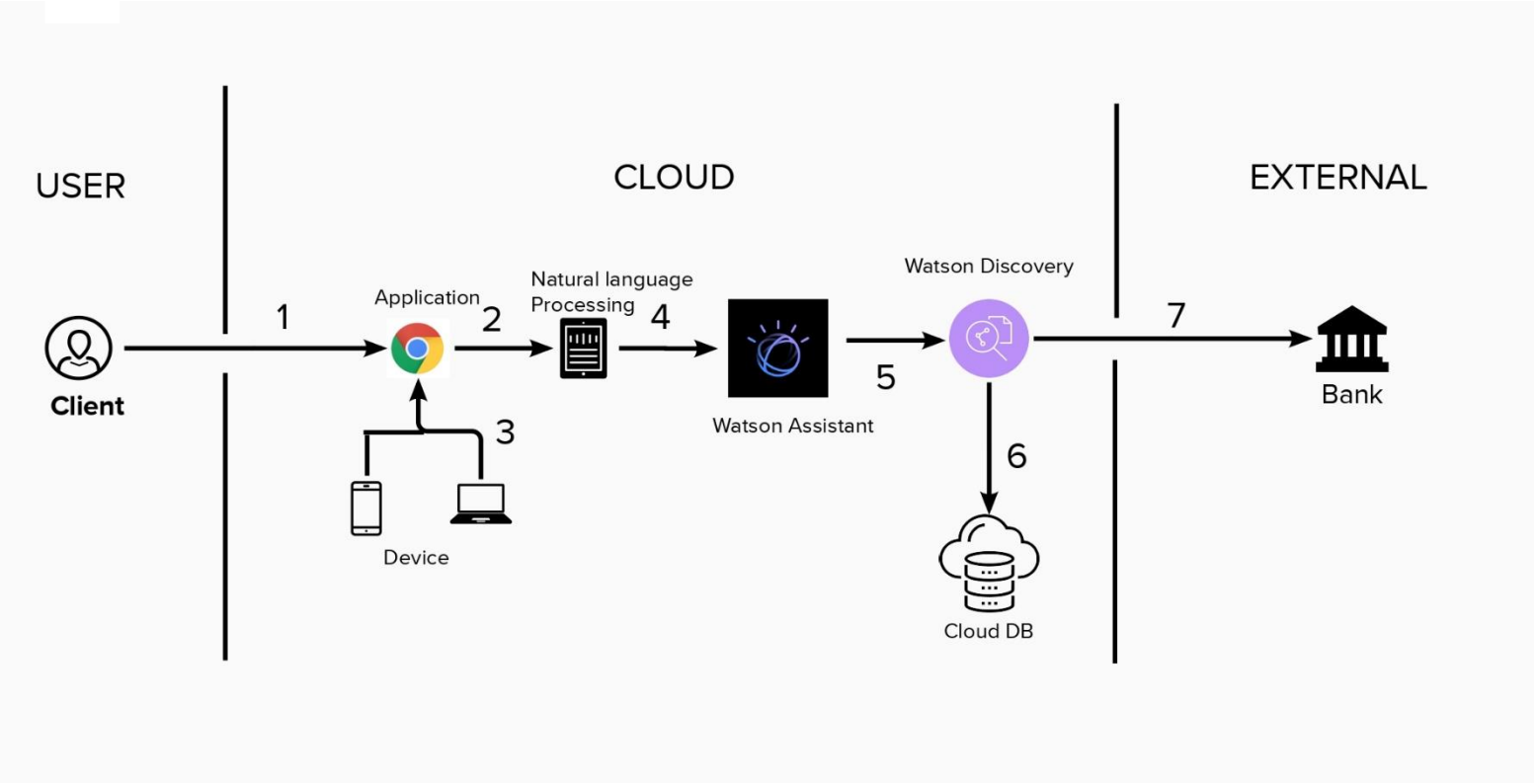

TABLE-1: COMPONENTS & TECHNOLOGIES:

S No	Component	Description	Technology
1	Bot Preview	A simple page is presented to the user with a chat layout that has an input box field available to get user queries and preset options are presented for the user to select.	HTML, CSS, JavaScript
2	Application Logic	An input bar is provided that enables the user to type queries. Regularly asked queries or options are presented tothe user. Processes responses to custom queries and display a relevant response.	IBM Watson service, IBM Watson Assistant, Python.
3	Cloud Database	Queries and answers to queries are stored in thecloud and are accessed whenever a query is asked.	IBM Cloud DB
4	External API-1	It provides an interface between the applicationand the cloud to send the query from the application to the cloud.	Watson Assistant v2 API
5	Deep Learning Model	It is trained with several queries and uses thatknowledge to provide relevant responses to queries with a good enough accuracy.	Deep Learning
6	Infrastructure (Server / Cloud)	Application Deployment on Local System / CloudLocal 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	List the open-source frameworks used	Python Flask, CSS Frameworks
2.	Security Implementations	General access control and the built-in securityfeatures of IBM Cloud are present.	IBM Watson Assistant, IBM Cloud DB
3.	Scalable Architecture	The architecture consists of three tiers, the client side, the web server and the cloud server. Each ofthese can be scaled as per requirements.	Client Side: Flask (Python) Web Server: IBM Watson AssistantCloud Server: IBM Cloud
4.	Availability	The chatbot is available 24/7 on almost all devices that support an internet browser.	IBM Cloud, Flask (Python)
5.	Performance	Responds to several thousands of queries at thesame time.	IBM Load Balancer, IBM Cloud