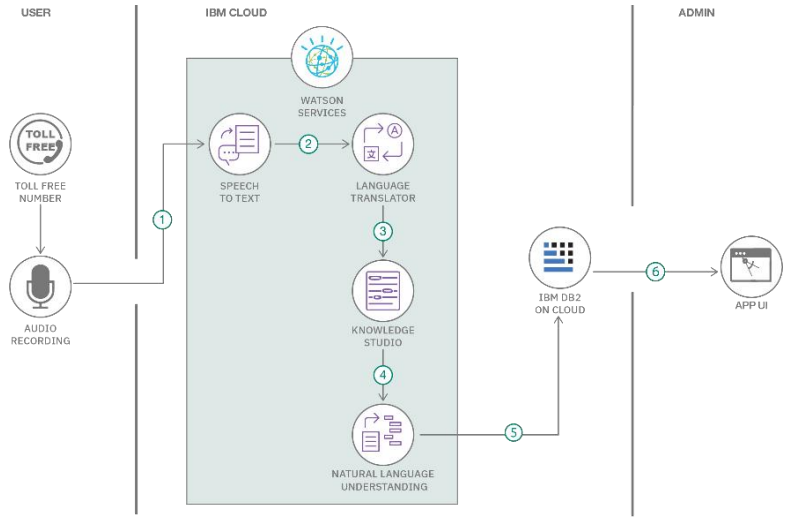
Project Design Phase-II
Technology Stack (Architecture & Stack)

Date	03 October 2022
Team ID	PNT2022TM-592021
Project Name	Project - ECOMMERCE SHIPPING PREDICTION USING MACHINE LEARNING
Maximum Marks	4 Marks

Technical Architecture:

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



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	How user interacts with application e.g. Web UI, Mobile App, Chatbot etc.	HTML, CSS, JavaScript
2.	Application Logic-1	Logic for a process in the application	Python
3.	Application Logic-3	Logic for a process in the application	IBM Watson Assistant
4.	Database	Data Type, Configurations etc.	MySQL
5.	File Storage	File storage requirements	Local Filesystem
6.	External API-1	Purpose of External API used in the application	Shipping APIs,USPS API,Google Maps Geocoding API
7 .	Machine Learning Model	Purpose of Machine Learning Model	Random Forest
8 .	Infrastructure (Server / Cloud)	Application Deployment on Local System / Cloud Local Server Configuration: Cloud Server Configuration :	Local

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	List the open-source frameworks used	CSS, JavaScript, HTML-Frontend FlaskAPI - Backend
2.	Security Implementations	List all the security / access controls implemented, use of firewalls etc.	Data Encryption,Authentication and Authorization ,Input Data Validation
3.	Scalable Architecture	Justify the scalability of architecture (3 – tier, Micro-services)	Microservices Architecture,Containerization and Orchestration:

S.No	Characteristics	Description	Technology
4.	Availability	Justify the availability of application (e.g. use of load balancers, distributed servers etc.)	Technology used
5.	Performance	Design consideration for the performance of the application (number of requests per sec, use of Cache, use of CDN's) etc.	**Data Quality and Feature Engineering,Continuous Monitoring and Updating,Optimize for Speed**