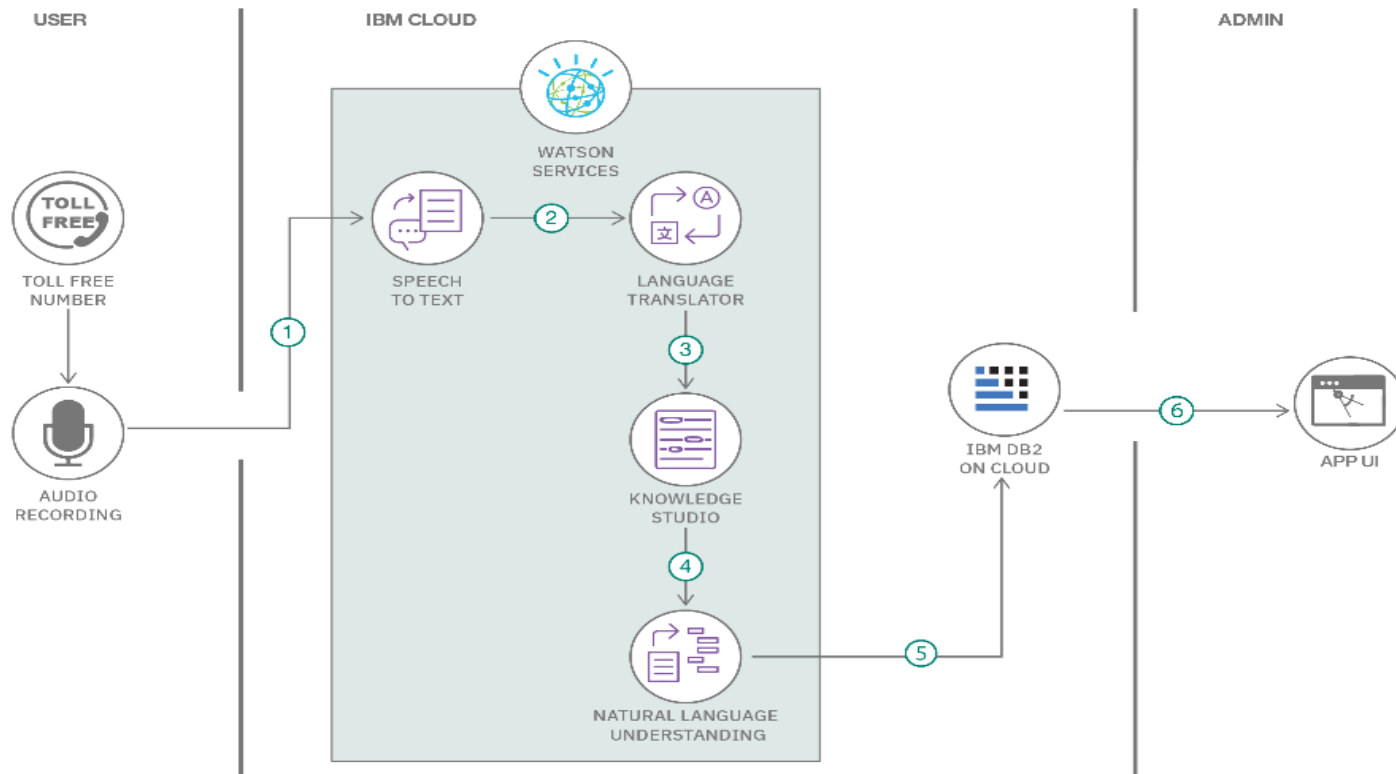


Project Design Phase-II Technology Stack (Architecture & Stack)

Date	03 October 2022
Team ID	PNT2022TMID10141
Project Name	Project – Smart Waste Management System For Metropolitan Cities
Maximum Marks	4 Marks

Technical Architecture:

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



**Table-1:
Components &
Technologies:**

S.No	Component	Description	Technology
1.	User Interface	It was designed to measure a specific force and ignores and other force being applied.	MQTT protocol
2.	Application Logic	The bin waste devices collect and store data on fill levels by using sensors.	Python
3.	Mechanisms	To measure and store the weight data from the waste containers by using this technology.	Garbage truck Weighing
4.	Application logic 2	The alerting message will send to the workers for disposing the wastes by this data.	IBM Watson Assistant
5.	Databases	It is based on processing and other open source software and used in Arduino board.	Java
6.	Cloud Database	It updates the real time status from the garbage bins and continuously view the status on web application and also push notification in mobile application.	IBM DB2,IBM cloud
7.	File storage	It used to store data and backup files for keeping it safe and quick recovery of the datas.	IBM Block Storage
8.	Machine Learning Model	When and Where the garbage bin should be collected first and last.It will guided the path taken.	Python IDLE

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Monitoring,Transportation,Removing wastage which involves in guideline of recycling and management.	Python
2.	Security Implementations	The Data Security that allows to access the whole information databases and resources.	Chrome
3.	Scalable Architecture	It helps people to access easily in monitoring, cost will be reduced, portable, keep environment clean and hygiene.	Technology Used

S.No	Characteristics	Description	Technology
4.	Availability	By exploring hardware and software helps to manage the smarter bins everywhere.	RFID,IOT
5.	Performance	The Smart Sensors use ultrasound technology to measure the fill levels (along with other data) in bins several times a day. The sensors send the data to Sensor's Smart Waste Management Software System, a powerful cloud-based platform, for data-driven daily operations, available also as a waste management app.	GPRS,IOT