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

Date	18/10/2022
Team ID	PNT2022TMID08879
Project Name	Estimate the crop yield using Data Analysis
Maximum Marks	4 Marks

Technical Architecture:

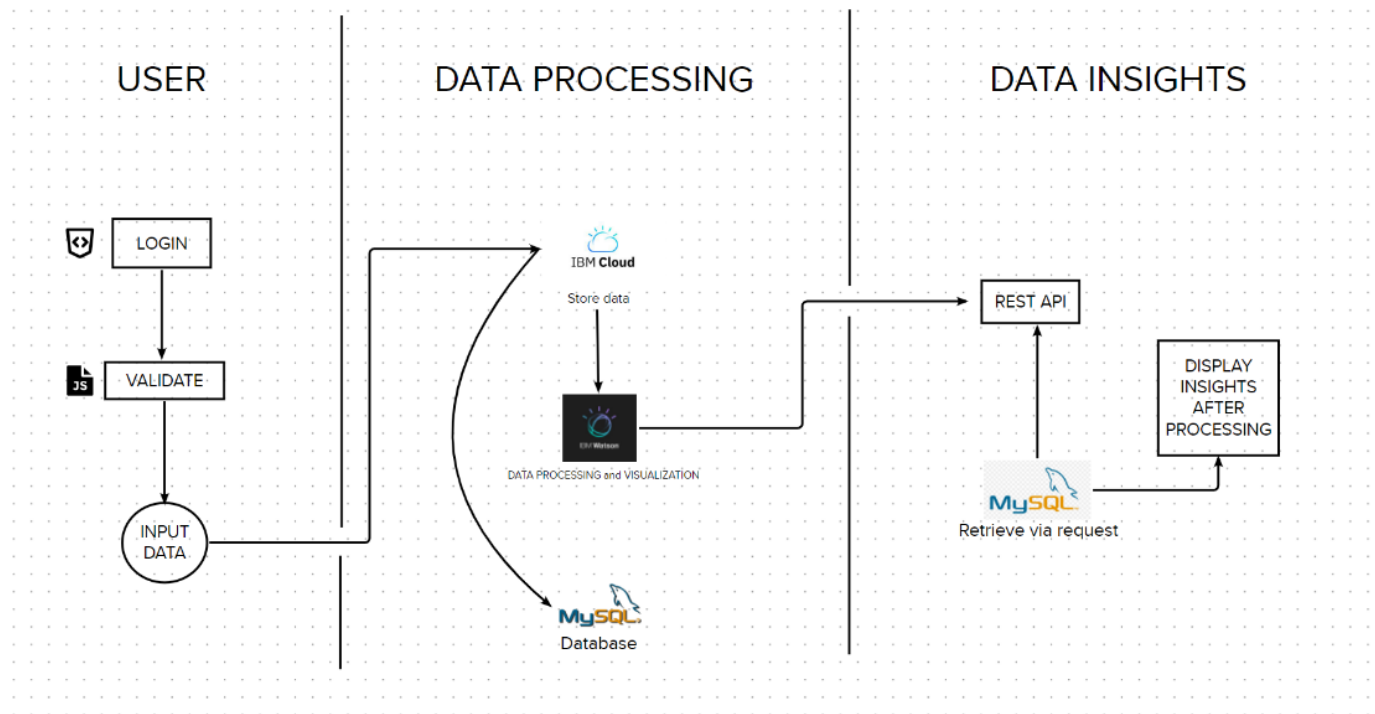The Technologies that are used in the development process of the project

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	Web UI, Responsive for Mobile and PC/Laptop	HTML, CSS, JavaScript
2.	Application Logic-1	An UI showing login and then home page with data input tab and etc	Python
3.	Application Logic-2	Data uploading and analysing for insights	IBM Watson STT service
4.	Application Logic-3	Displaying the processed data	IBM Watson Assistant
5.	Database	Storing data and the insights	MySQL, Rest API
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	For easy fetching of data from external server	IBM Weather API, etc.
9.	Machine Learning Model	For identifying the patterns	Object Recognition Model, etc.
10.	Infrastructure (Server / Cloud)	Application Deployment on Local System / Cloud Local Server Configuration: Cloud Server Configuration :	Local, Cloud Foundry, Kubernetes, etc.

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Python and mysql	Jupyter notebook and mysql bench
2.	Security Implementations	Cloud security for storing data	IBM Cloud technology
3.	Availability	Availability will be faster and load balancing will be based on server	Mysql server
4.	Performance	User can make request based on the usage of data insights	Rest API