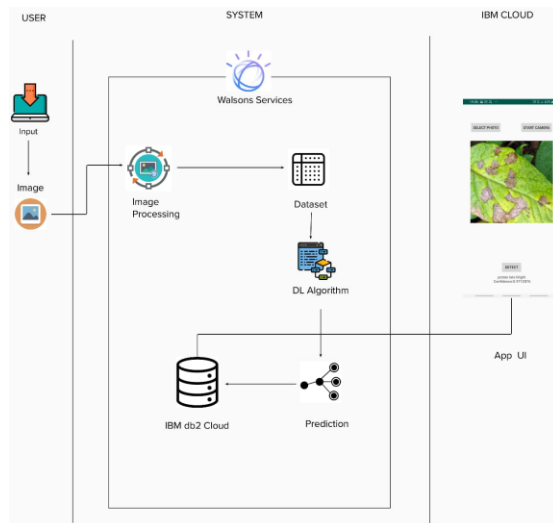


Project Design Phase-II Technology Stack (Architecture & Stack)

Date	03 October 2022
Team ID	PNT2022TMID10907
Project Name	Project - Fertilizers Recommendation System for Disease Prediction
Maximum Marks	4 Marks

Technical Architecture:



Guidelines:

1. Include all the processes (Technology Block)
2. Provide infrastructural demarcation (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	User Registration	Python
3.	Application Logic-2	Queries interaction by farmer	IBM Watson STT service
4.	Application Logic-3	Logic for a process in the application	IBM Watson Assistant
5.	Database	Data Type, Configurations etc.	MySQL
6.	Cloud Database	Database Service on Cloud	IBM DB2
7.	File Storage	File storage requirements	IBM Block Storage or Local Filesystem
8.	External API-1	To validate user	Aadhar API, etc.
9.	External API-2	-	-
10.	Machine Learning Model	To predict the plant disease	Object Recognition Model, Neural network model
11.	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	List the open-source frameworks used Flask Tensor flow React JS	Technology of Open source framework Python Javascript
2.	Security Implementations	List all the security / access controls implemented, use of firewalls etc. Encryptions and SHA-256 to protect user details	e.g. SHA-256, Encryptions, etc.,
3.	Scalable Architecture	Justify the scalability of architecture (3 – tier, Micro-services)	Presentation layer – HTML , CSS , JS Application layer – Flask(python) Data layer - IBM DB2
4.	Availability	Justify the availability of application (e.g. use of load balancers, distributed servers etc.)	-
5.	Performance	Design consideration for the performance of the application (number of requests per sec, use of Cache, use of CDN's) etc.	-