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

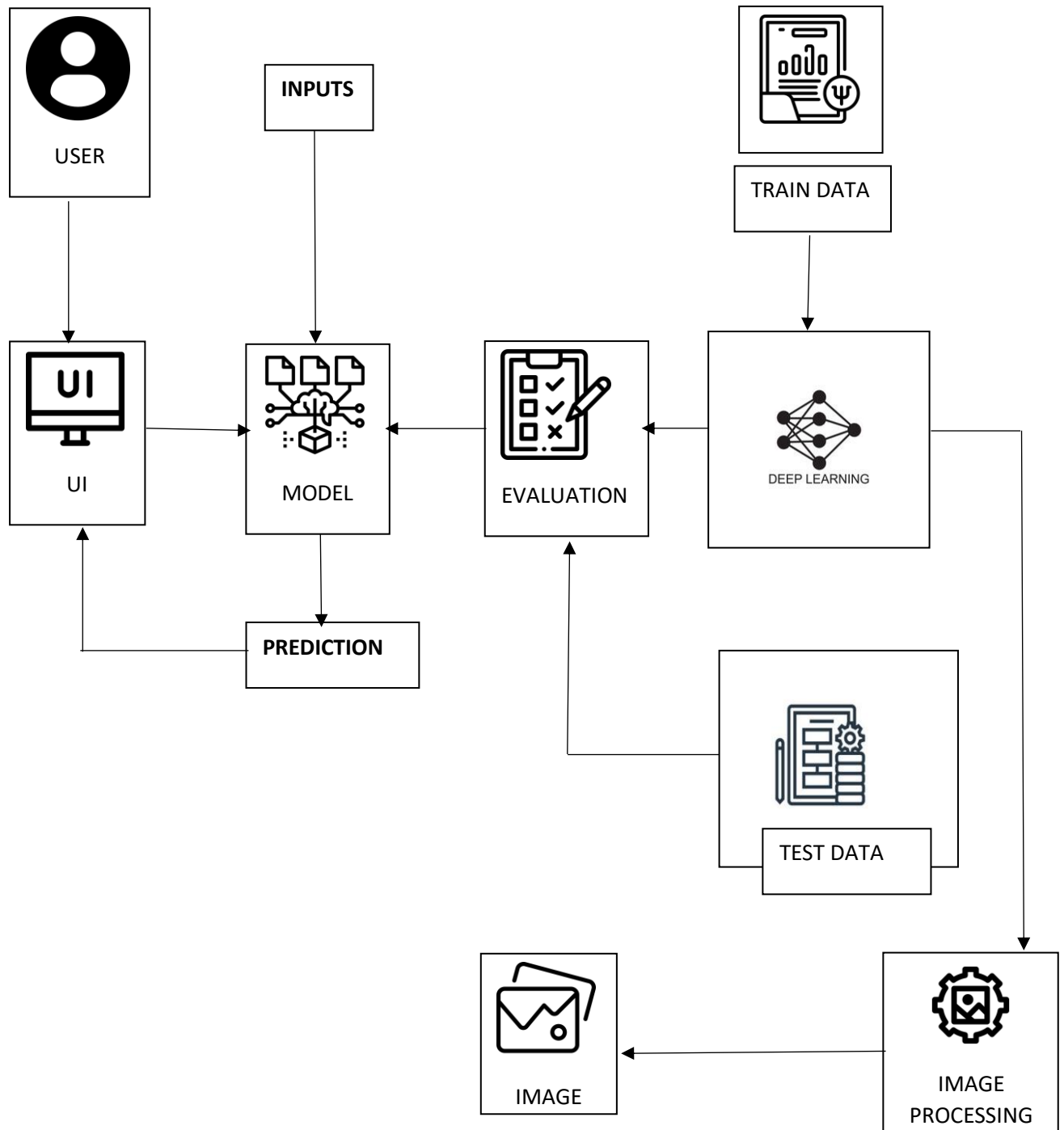| Date	14 November 2022
Team ID	PNT2022TMID09623
Project Name	Fertilizer Recommendation System for Plant Disease Prediction
Maximum Marks	4 Marks

Technical Architecture:

Table-1: Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	How user interacts with application	HTML, CSS, JavaScript
2.	Image pre-processing	Image of the disease affected leaves are captured and uploaded and then pre-processed using algorithms	Python
3.	Machine Learning Model	It is the of the system and it makes predictions and recommendations based on the inputs using algorithms	Python
4.	Database	Captured images and datasets are stored	Local File system
5.	Cloud Database	Database Service on Cloud	IBM DB2, IBM Cloudant etc.
6.	File Storage	Trained and Tested datasets are stored	Other Storage Service or Local Filesystem
7.	Algorithm	Machine learning algorithm will make use of inputs and make predictions	CNN, dense layers
8.	Predictions	Application will produce the results and display it to the user.	Python

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Jupyter Notebook, Python Flask	Python, Local storage
2.	Scalable Architecture	Two tier architecture will be used. Client and Server	Python
3.	Availability	It is a user-friendly application and all the users can make use of it irrespective of time.	IBM Cloud
4.	Performance	The system will work efficiently for the large number of inputs and user scale size.	IBM Cloud