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

Date	03 October 2022
Team ID	PNT2022TMID39322
Project Name	Fertilizer recommendation system for plant diseases prediction.
Maximum Marks	4 Marks

Technical Architecture:

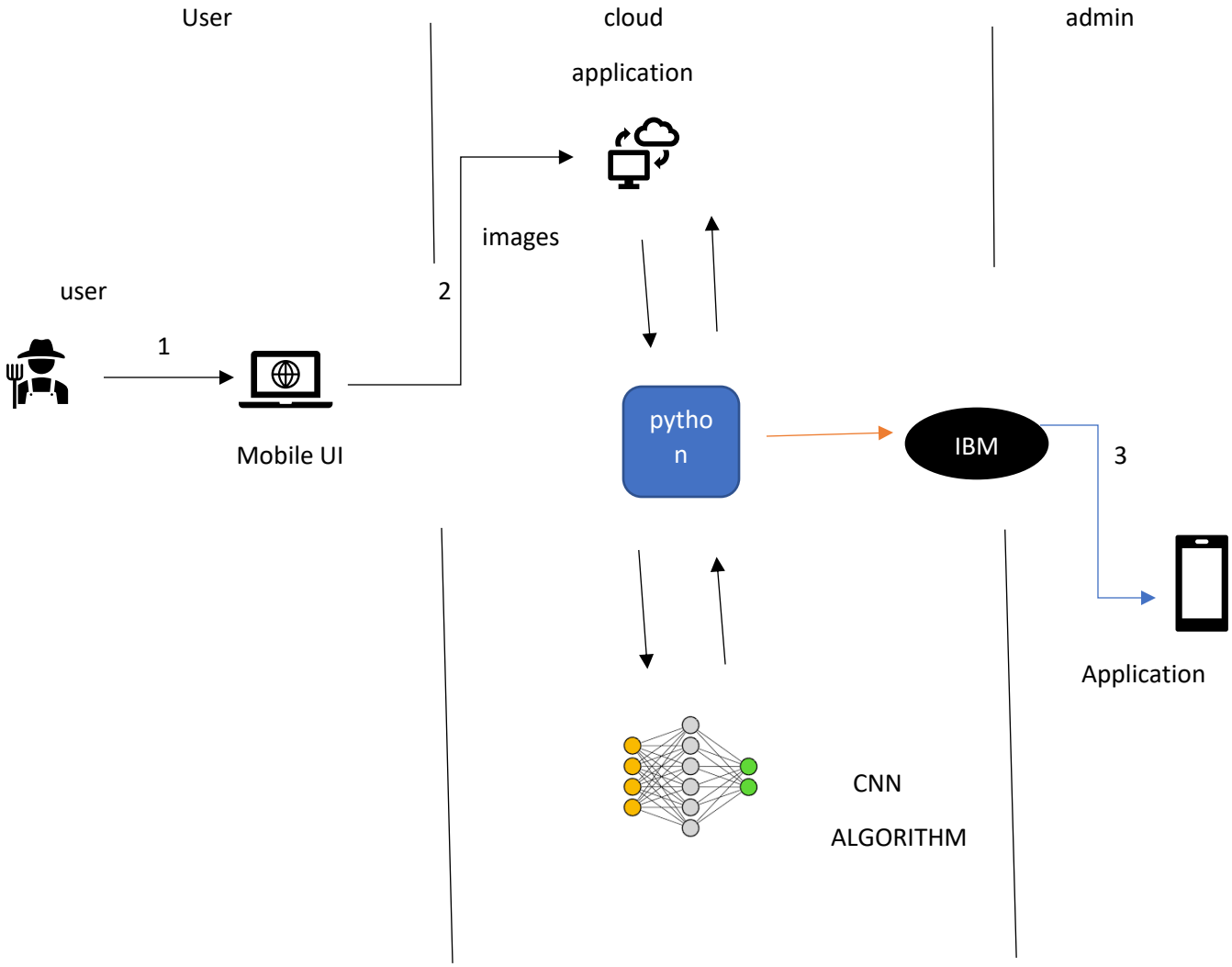

Table-1 : Components & Technologies:

SNO	COMPONENT	DESCRIPTION	TECHNOLOGY
1	Mobile phone	User interacts with mobile phone to predict the Fertilizers.	HTML, CSS, python, etc.
2	process	It process the set of images to pre processed and to be trained and tested.	Python
3	Cloud database	The IBM cloud database contains non structural data such as dataset and disease affected images.	IBM cloud_ DB(NoSQL),IBM Cloudant etc.
4	File storage	The input files to be stored as IBM cloud and after it will show the recent files.	IBM Block Storage or Other Storage Service or Local Filesystem
5	Deep learning model	The deep learning model to use of image classification and image segmentation ,prediction..	Algorithms-Support Vector Machine.
6	Infrastructure(server\cloud)	Application deployment on local mobile system.	Cloud servers and other cloud services

Table-2: Application Characteristic :

S.NO	CHARACTERISTICS	DESCRIPTION	TECHNOLOGY
1	Open-Source Framework	Backend Framework ,Frontend Framework ,RDS	Pyhton , keras , IBM cloud
2	Security Implementations	Authentication is done by the each user to use the application and User protection,Encrypt and decrypt the data	EG: I AM controls and ssh key
3	Scalable Architecture.	Support large number of images to be accessed using data framing	Numpy ,pandas
4	Availability	Availability increased by using application load balancers .It will reduce load of the application.	IBM cloud network and security.
5	Performance	The prediction goes to 1000 predicts in nano second.	IBM load balancers and deployment of server.