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

Date	15 October 2022
Team ID	PNT2022TMID30918
Project Name	Smart Farmer - IoT Enabled Smart Farming Application.
Maximum Marks	4 Marks

Technical Architecture:

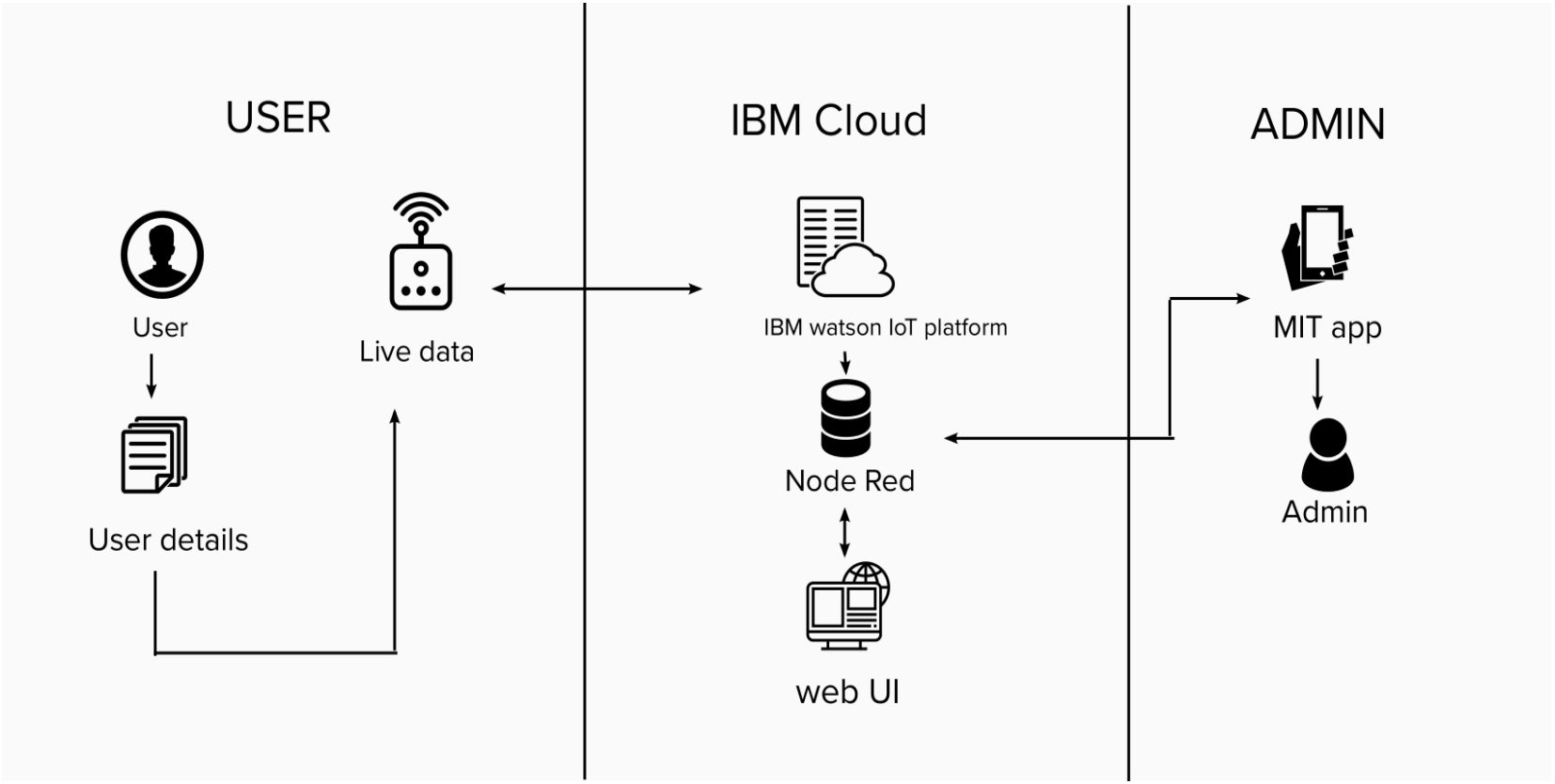

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	User interacts with application using Web UI.	HTML, CSS, JavaScript, Angular Js / React Js etc.
2.	Application Logic-1	Logic for a process in the application	Python
3.	Application Logic-2	Logic for a process in the application	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, NoSQL, etc.
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	Purpose of External API used in the application	IBM Weather API, etc.
9.	Infrastructure (Server / Cloud)	Application Deployment on Local System / Cloud Local Server Configuration	Local, Cloud Foundry, Kubernetes, etc.

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Open-source frameworks used	Python Flask, Python
2.	Security Implementations	OTP verification	Encryptions
3.	Scalable Architecture	Scalability in smart farming refers to the adaptability of a system to increase the capacity of yield	Web server-HTML, CSS, Application server-Python Flask-Database server-IBM Cloud
4.	Availability	Can be accessed at anytime from anywhere with feasible internet facility.	MIT app
5.	Performance	Improving yield compare to manual monitoring.	IoT , web UI