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

Date	16 October 2022
Team ID	PNT2022TMID42737
Project Name	Project – IoT-enabled Smart Farmer application
Maximum Marks	4 Marks

Technical Architecture:

IoT- Enabled Smart Farmer Application

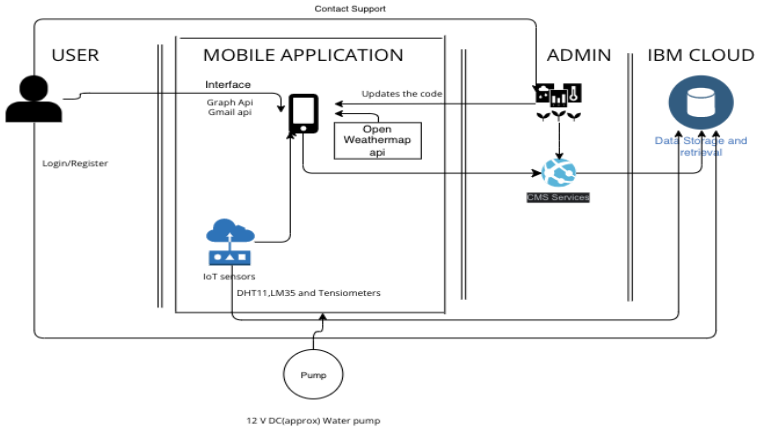

Table-1 : Components & Technologies:

S. No	Component	Description	Technology
1.	User Interface	How user interacts with application e.g. Web UI, Mobile App, Chatbot etc.	The view is an interactive UI component (or widget or control), such as a button and text field, View Group.
2.	Application Logic-1	Logic for a process in the application	Java
3.	Application Logic-2	Logic for a process in the application	Email or Gmail
4.	Application Logic-3	Logic for a process in the application	3rd party application login (facebook)
5.	Database	Data Type, Configurations etc.	IBM cloud
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.	External API-2	Purpose of External API used in the application	Gmail API, Graph API, 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	List the open-source frameworks used	Flutter Framework, Apache Cordova
2.	Security Implementations	List all the security / access controls implemented, use of firewalls etc.	e.g. SHA-256, Encryptions, E2EE encryptions.
3.	Scalable Architecture	Justify the scalability of architecture (3 – tier, Micro-services)	Linux Kernel
4.	Availability	Justify the availability of application (e.g. use of load balancers, distributed servers etc.)	IBM Cloud Services and Wi-Fi module of ESP8266 is self-contained SOC.
5.	Performance	Design consideration for the performance of the application (number of requests per sec, use of Cache, use of CDN's) etc.	Microbenchmark and JankStats