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

Date	03 November 2022
Team ID	PNT2022TMID42723
Project Name	Project - SmartFarmer – IoT Enabled Smart Farming Application
Maximum Marks	4 Marks

Technical Architecture:

The Deliverable shall include the architectural diagram as below and the information as per the table1 & table 2

Example: uses weather data or soil moisture data to determine the irrigation need of the landscape.
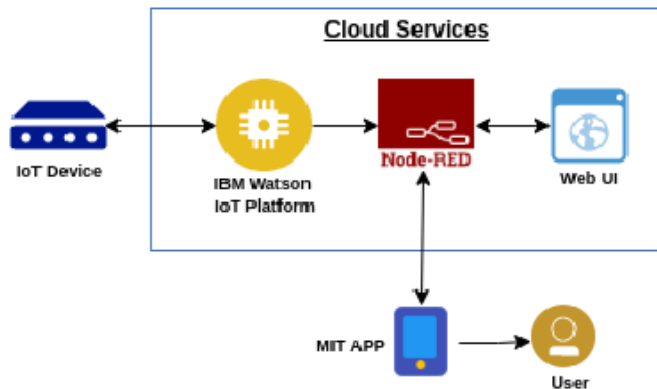

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	IOT Devices	Nonstandard computing devices that connect wirelessly to a network and have the ability to transmit data, such as the many devices on the internet of things (IoT).e.g.Motion Detection, Augmented Reality Glasses and etc.	Non-industrial IoT. Smart Buildings,Reports & Databases,Global IoT Enterprise Spending,Cellular IoT Connectivity & LPWA Market. Cellular IoT Module and Chipset Market and etc.
2.	MIT Application	To allow people to design and create apps to interact with physical	Java / Scheme/Kava

		devices.	
3.	Web UI	The user interface (UI) is the point of human-computer interaction and communication in a device	React /Angular/Flutter /Vue.js /JQuery /Emberjs / Semantic
4.	Node Red	A programming tool for wiring together hardware devices, apis and online services in new and interesting ways	JavaScript/Node.JS/JSON
5.	Cloud Database	A fully managed, cloud-hosted service that makes it simple to derive value from Internet of Things (IoT) devices.	IBM DB2, IBM Cloudant etc.
6.	Ibm Watson IOT Platform	File storage requirements	Java/C/JavaScript.

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open source	**Node Red** used for open-sources. It is open source and was originally created by the IBM Emerging Technology organisation.	It is used to wiring together hardware devices,**API**s and online services in new and interesting wavs.Is and online services in new
2.	Security Implementations	Device authentication. Device authorization. Data encryption. Strong keys or certificates management plan for all levels.	E.g. Smart Homes,Smart City,Self-driven Cars,IoT Retail Shops,Farming, Wearables,SmartGrids,Industrial Internet and etc.
3.	Scalable Architecture	**MIT app** is used for open-sources	**MIT** is a free, cloud-based service that allows you to make your own mobile apps using a blocks-based programming language.
4.	Availability	It provide a clean and simple UI where you can simply and easily add and manage your devices, control access to your **IoT** service, and monitor your usage.E.g IOT and Web UI	Watson IoT Platform is used by firms across industries including transport, retail, manufacturing, construction, mining and shipping.
5.	Performance	As part of performance testing, there is need to simulate devices from different locations (to simulate latency) with required network technolo-gies like 2G, 3G, 4G, Bluetooth, etc.	It is a collection of services and software that integrates data received from various IoT devices. It uses machine learning or **artificial intelligence (AI)** technology to analyze this data and make informed decisions.