

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

Date	02 November 2022
Team ID	PNT2022TMID26085
Project Name	Project - Smart farmer-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

Architectural Diagram

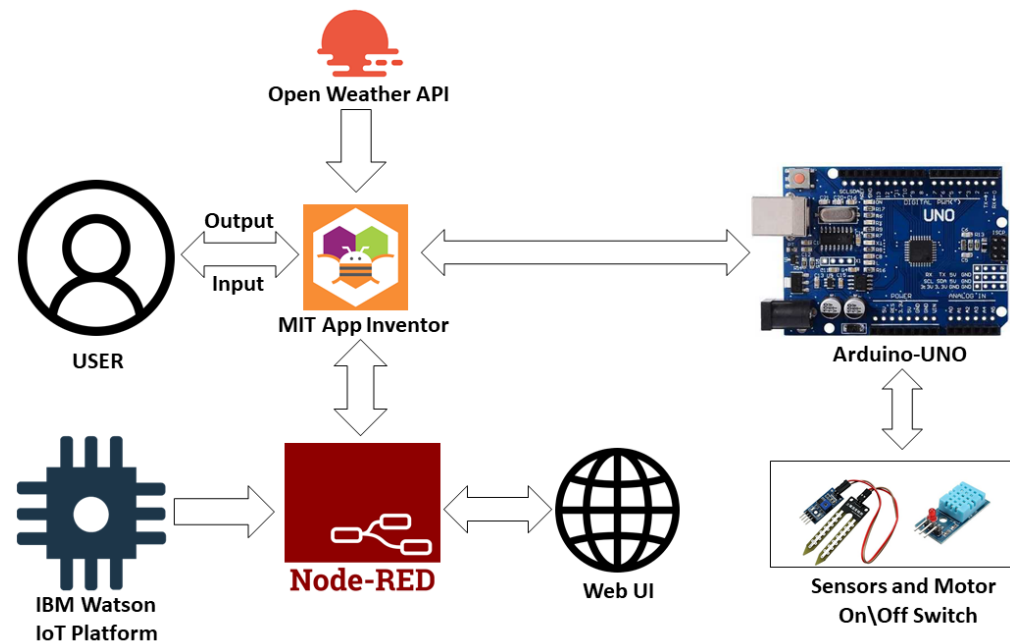


Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	The app which is used to access the sensors and motor might act as a user interface.	MIT App Inventor.
2.	Arduino-UNO	This is the processing unit of the system.	Python.
3.	External API	To monitor the weather conditions.	Open weather API.
4.	DHT-11	To monitor the temperature and humidity of the field.	Sensing.
5.	Soil Moisture Sensor	To monitor the moisture content in the soil.	Sensing.
6.	Cloud Database	Database Service on Cloud	IBM Cloud.
7.	Relay	Used as the interface between the motor and other electrical component to the Arduino.	Switching.
8.	GSM Module	Used to send the SMS	Open and Digital cellular.

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Arduino is an open-source platform based on easy-to-use hardware and software. MIT App Inventor is a web development software. Node RED is a programming tool for wiring the hardware and the API's.	Software.
2.	Scalable Architecture	This architecture is scalable. In future more sensors and devices can be concatenated.	
3.	Availability	The MIT application is available round-the-clock	MIT App Inventor.
4.	Performance	The productivity will be high and the performance is in top level.	