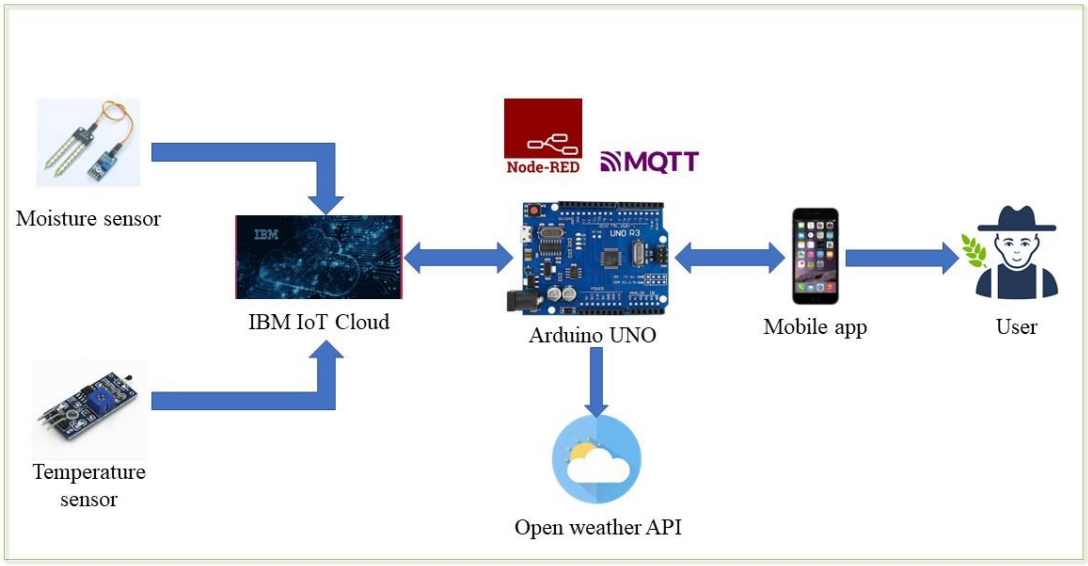
Project Design Phase-I
Solution Architecture

Date	19 September 2022
Team ID	PNT2022TMID19113
Project Name	SmartFarmer - IoT Enabled Smart Farming Application
Maximum Marks	4 Marks

Project title: SmartFarmer - IoT Enabled Smart Farming Application



- The characteristics of the soil like moisture, temperature and humidity will be measured using the moisture sensor and temperature sensor respectively.
- The measured parameter's results will be saved in the IBM cloud.
- The processing unit, Arduino UNO uses the input data from sensors as well as from Open Weather API for its process.
- The software, hardware and the APIs are connected to each other by the help of Node-red as a programming tool.
- For the communication processes, MQTT protocol is used.
- By using the MIT App Inventor, a smartphone application is created and is used to collect these data and as a remote control.
- Depending on the result of the data, the user may take decisions whether to irrigate the crop or not, to sprinkle insecticides or not, to spray weedicides or not.
- By this they can control the motor switch also even from the long distance using the smartphone application.