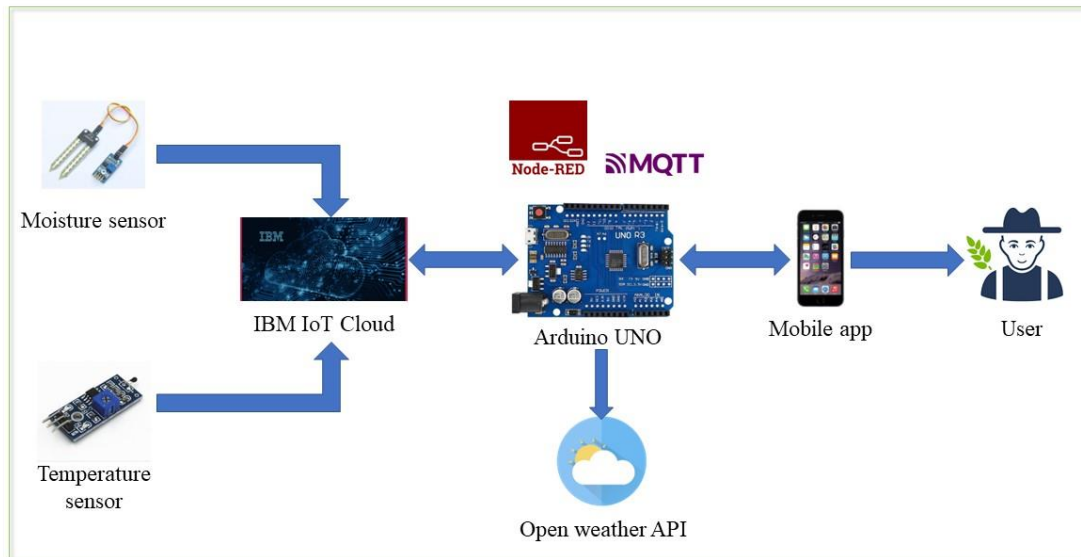


SOLUTION ARCHITECTURE

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.