1 Project Objectives

- Gain knowledge of Watson IoT Platform.
- Connecting IoT devices to the Watson IoT platform and exchanging the sensor data.
- Explore python client libraries of Watson IoT Platform
- Gain knowledge on IBM Cloudant DB
- Configuring APIs using Node-RED for communicating with a mobile application.
- Creating a Mobile Application through which the user interacts with the IoT device.

2 Project flow

- The parameters like temperature, humidity, and soil moisture are updated to the Watson IoT platform
- The device will subscribe to the commands from the mobile application and control the motors accordingly
- APIs are developed using Node-RED service for communicating with Mobile Application
- A mobile application is developed using the MIT App inventor to monitor the sensor parameters and control the motors.

3 Pros and cons

- Remote Management
- Soil testing and its quality
- Real time analysis of soil demand
- controlling the motor pumps from the mobile application

- Sometimes sensors can't predict the accurate sensor information
- It requires continuous internet Availability
- Farmers need to understand the usage of mobile Application
- It is little bit expensive

4 Project structure

- Collects sensors information
- We use cloudant DB database to store all the sensors information
- It collects the information of temperature from the web and checks with sensor readings
- Analyze the water level and suggests whether we have to water the field or not
- Devoloping the mobile application using MIT app inventor
- Using NODERED APIs clodant connects to the mobile application
- Through mobile application user can interact with IOT devices
- Mobile Apgsplication gives information about sensor readings

5 Customer feelings

- It helps us to monitor different parameters of the filed
- we can make the decision whether to water the crop or postpone it by monitoring the sensor parameters and controlling the motor pumps from the mobile application itself.
- We can access the information through mobile if we are not near to the field
- This Application helps us to get etter yield