PROJECT OBJECTIVES

Date	17 November 2022
Team ID	PNT2022TMID43224
Project Name	Iot based smart crop protection for agriculture

By the end of this project we will:

@.Gain knowledge of Watson Iot Platform
@.ConnectingIot devices to the Watson Iot Plateform and exchange the sensor data.
@.Gain knowledge on Cloudant DB.
@.Gain knowledge on using the Clarifai service.
@.Gain knowledge of storing images in IBM object storage and retrieving images.
@.Creating a web application thrugh which the user interacts ith the devices.

Project flow:

@.The device will detect the animals and birdsusing the Clarifai service.
@.If any animal or bird is detected the image will be captured and stored in the IBM cloud object service.
@.It also generates an alarm and avoid animals and birds from desroying the crop.
@.The image URL will be stored in the IBM Cloudant DB service.
@.The device will also moniter the soil moisture level, temperature, and humidity values and send them to the IBM IOT platform.
@.The image will be retrieved from object storage and displayed in the web application.
@.A web application is developed to visualize the soil moisture,temperatur, and humidity values.
@.Userscan also control the mniters through web applications.

TO accompolish this, we have to complete all thr activities andtasks listed below,

@.Create and configure IBM cloud services
create IBM Waston iot platform.
create a device & configure the IBM platform.
create Node-RED service.
create a database in Cloudant DB to store location data.

create a cloud object storage service and create a bucket to store the images.

@.Develop a python script to publish the sensor parameters like Temperature Humidity, and Soil moisture to the IBM Iot platform and detect he animals and birds in the video streaming using Clarifai.

@.Develop a web application using Node=RED service,

Display the image in the Node-RED web UI and also display the temperature humidity and soil moisture levels.Integrate the buttons in the UI to control the motors.