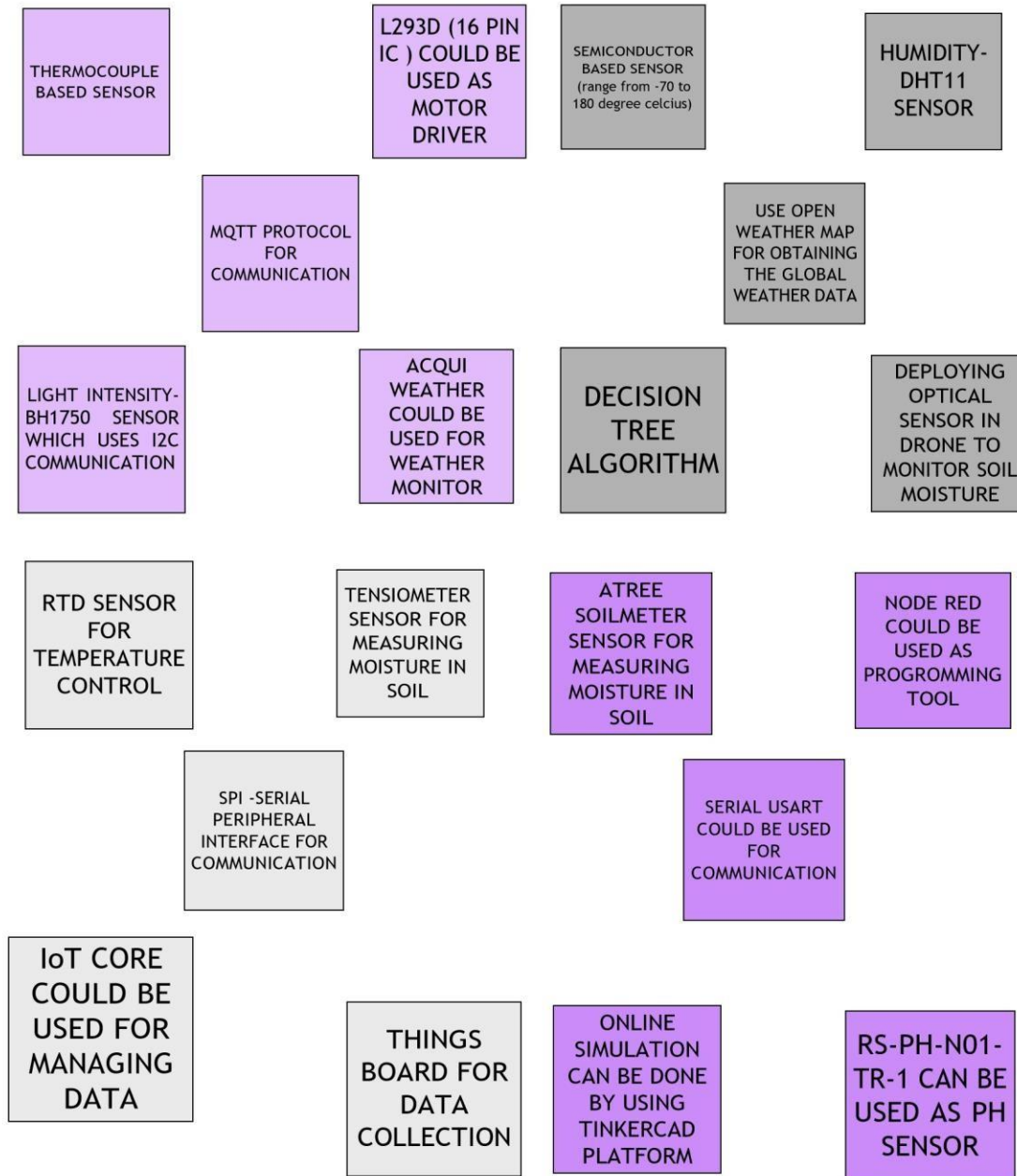| Team ID	PNT2022TMID13187
Project Name	Project –Smart Farmer- IoT Enabled Smart Farming Application.
Team members	S.JEEVANANTHAM, A.JEEVA ANAND, R.MADHANGOKUL, S.SATHISH
Team Leader	S.JEEVANANTHAM

Define your problem statement

5 minutes

DIFFERENT PARAMETERS OF THE FIELDS HAVE TO BE MONITERED AND THE DECISION HAVE TO BE TAKEN WHETHER TO WATER THE PLANTS OR NOT
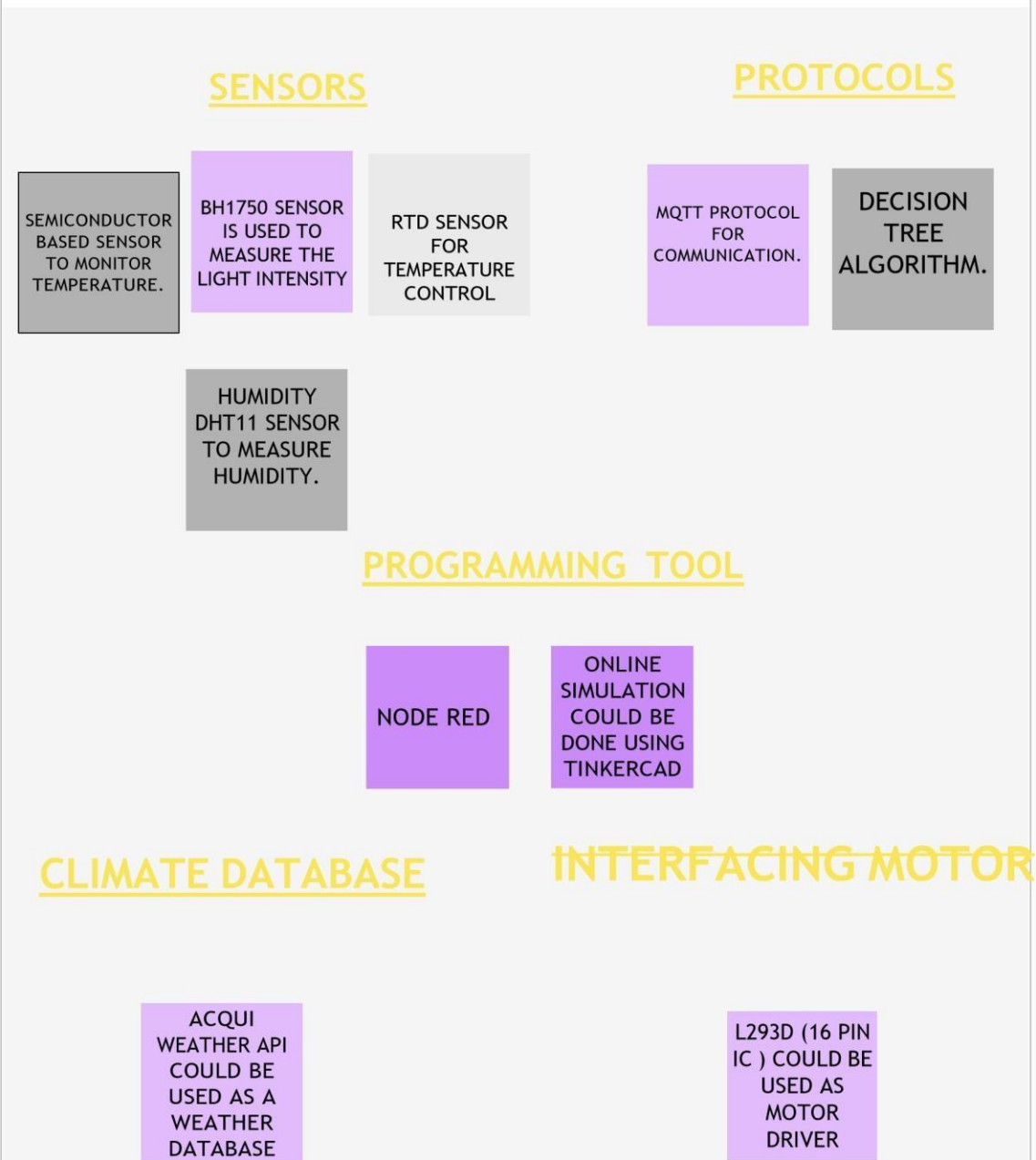

Brainstorm

10 minutes

THERMOCOUPLE BASED SENSOR

L293D (16 PIN IC) COULD BE USED AS MOTOR DRIVER

SEMICONDUCTOR BASED SENSOR (range from -70 to 180 degree celcius)

HUMIDITY- DHT11 SENSOR

MQTT PROTOCOL FOR COMMUNICATION

USE OPEN WEATHER MAP FOR OBTAINING THE GLOBAL WEATHER DATA

LIGHT INTENSITY- BH1750 SENSOR WHICH USES I2C COMMUNICATION

ACQUI WEATHER COULD BE USED FOR WEATHER MONITOR

DECISION TREE ALGORITHM

DEPLOYING OPTICAL SENSOR IN DRONE TO MONITOR SOIL MOISTURE

RTD SENSOR FOR TEMPERATURE CONTROL

TENSIOMETER SENSOR FOR MEASURING MOISTURE IN SOIL

ATREE SOILMETER SENSOR FOR MEASURING MOISTURE IN SOIL

NODE RED COULD BE USED AS PROGRMMING TOOL

SPI -SERIAL PERIPHERAL INTERFACE FOR COMMUNICATION

SERIAL USART COULD BE USED FOR COMMUNICATION

IoT CORE COULD BE USED FOR MANAGING DATA

THINGS BOARD FOR DATA COLLECTION

ONLINE SIMULATION CAN BE DONE BY USING TINKERCAD PLATFORM

RS-PH-N01- TR-1 CAN BE USED AS PH SENSOR

Group ideas

20 minutes

SENSORS

PROTOCOLS

SEMICONDUCTOR BASED SENSOR TO MONITOR TEMPERATURE.

BH1750 SENSOR IS USED TO MEASURE THE LIGHT INTENSITY

RTD SENSOR FOR TEMPERATURE CONTROL

MQTT PROTOCOL FOR COMMUNICATION.

DECISION TREE ALGORITHM.

HUMIDITY DHT11 SENSOR TO MEASURE HUMIDITY.

PROGRAMMING TOOL

NODE RED

ONLINE SIMULATION COULD BE DONE USING TINKERCAD

CLIMATE DATABASE

INTERFACING MOTOR

ACQUI WEATHER API COULD BE USED AS A WEATHER DATABASE

L293D (16 PIN IC) COULD BE USED AS MOTOR DRIVER

Prioritize

20 minutes

ACQUI WEATHER API COULD BE USED AS A WEATHER DATABASE

MQTT PROTOCOL

NODE-RED AS PROGRAMMING TOOL

SEMICONDUCTOR BASED SENSOR FOR TEMPERATURE CONTROL

RTD SENSOR FOR TEMPERATURE CONTROL

L293D (16 PIN IC) COULD BE USED AS MOTOR DRIVER

ONLINE SIMULATION COULD BE DONE USING TINKERCAD

DECISION TREE ALGORITHM

Importance

If each of these tasks could get done without any difficulty or cost, which would have the most positive impact?

Feasibility