SMART AGRICULTURE SYSTEM
PROJECT REPORT

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1.INTRODUCTION

1.1.OVERVIEW:

● Smart Agriculture System based on IoT can monitor soil moisture and climatic conditions to grow and yield a good crop.

● The farmer can also get the real time weather forecasting data by using external platforms like Open Weather API.

● Here we are using the Online IoT simulator for getting the Temperature,Humidity and Soil Moisture values.

1.2.PURPOSE:

- To connect technology with agriculture for the better growth of yield and helping farmers.

2.LITERATURE SURVEY

2.1.EXISTING PROBLEM

● Farmers do not have much idea about the exact weather and their land condition,

their most of the work is based on assumptions, which sometimes results in poor yield.

● Farmers who are not aware of their land condition might be growing the wrong crop according to their land properties, for example, may be the land is more suitable for Cash crops but the farmer is growing Horticulture crops on it.

● Similarly, may be the farmer may not have an exact idea about upcoming weather, suppose he starts growing his summer crop without knowing that there could be rain tomorrow because he does not know about upcoming weather, which leads to crop destruction.
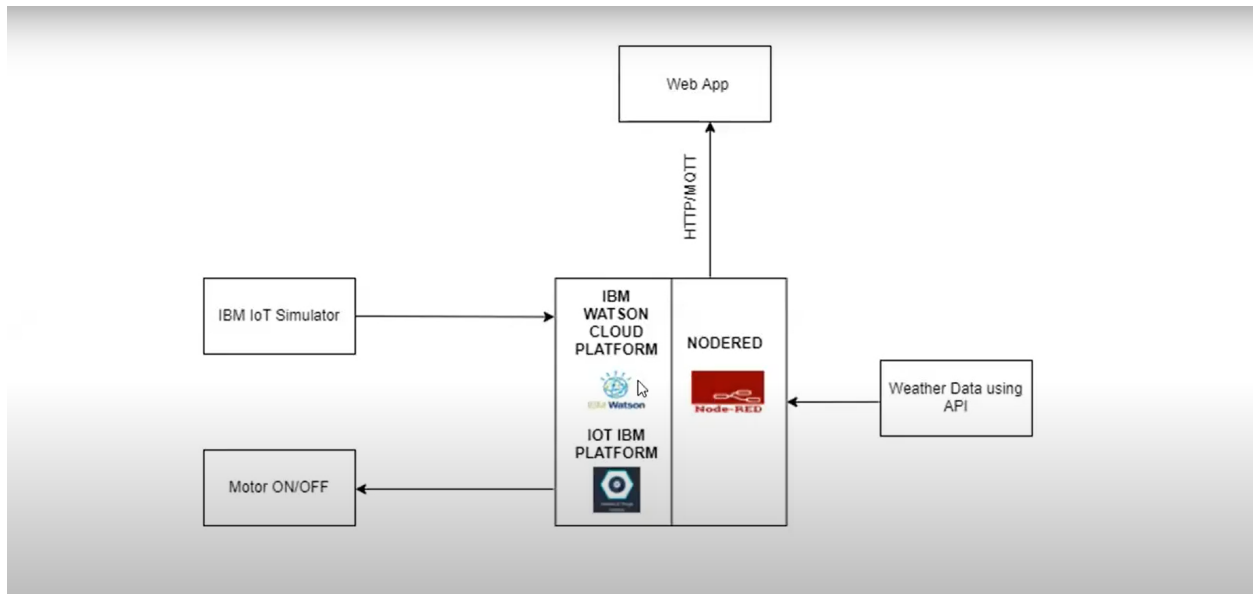
2.2.PROPOSED SOLUTION

- With the help of our web app farmer will be able to know about exact weather conditions.
- With help of our web app farmer can control his motor from anywhere which lead to saving of water and he can water his crop whenever he want from anywhere with the help of this app.

- With the help of our app farmer can about his land's soil moisture value by which he can decide which crop he needs to grow.
- With the help of our app Farmer will be able to know about temperature and humidity value.

3.THEORITICAL ANALYSIS

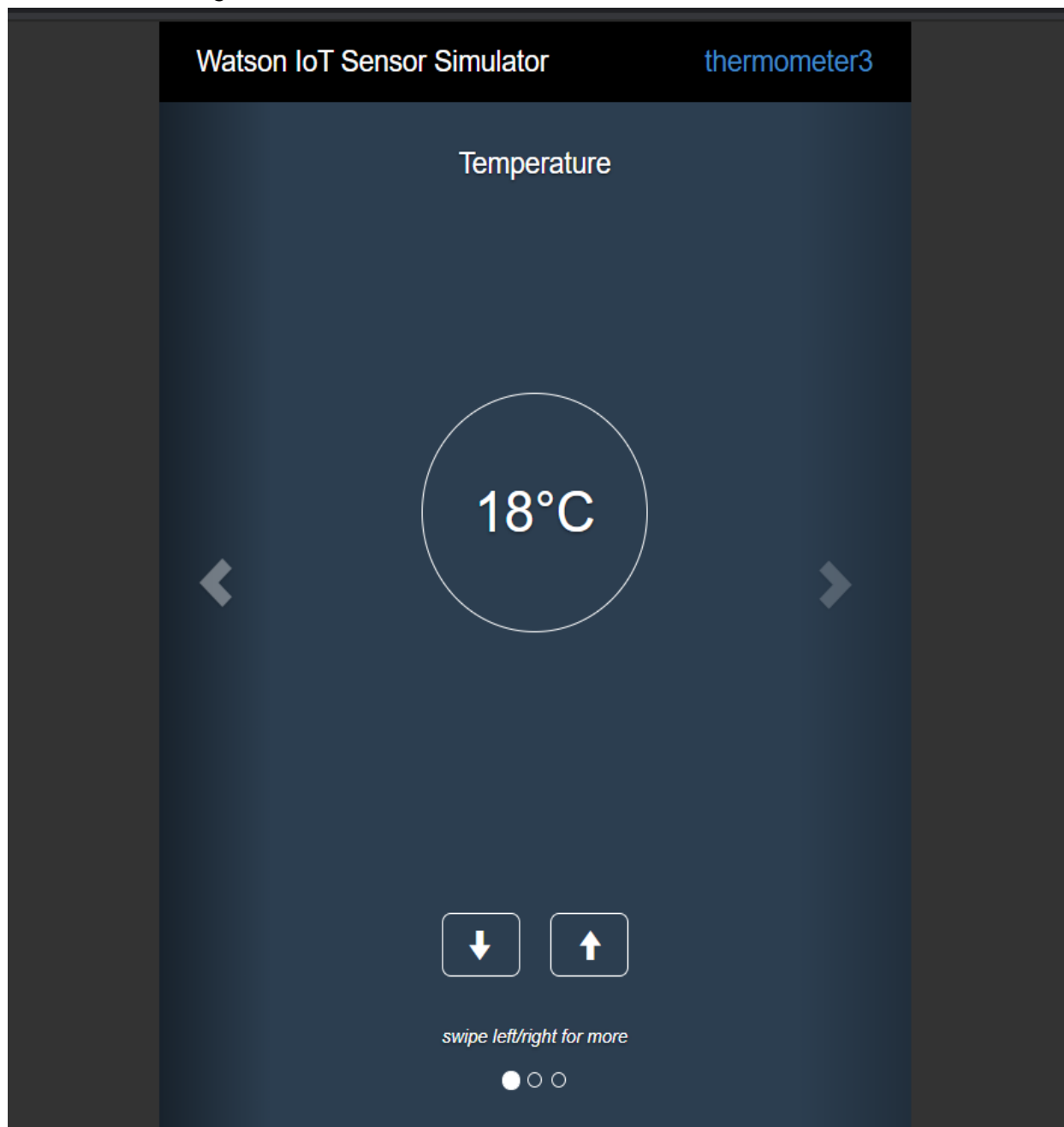## 3.1 BLOCK DIAGRAM

3.2 HARDWARE/SOFTWARE DESIGNING

➤ CREATION OF IOT devices on IBM Watson platform

➤ Connecting the IoT device with a simulator
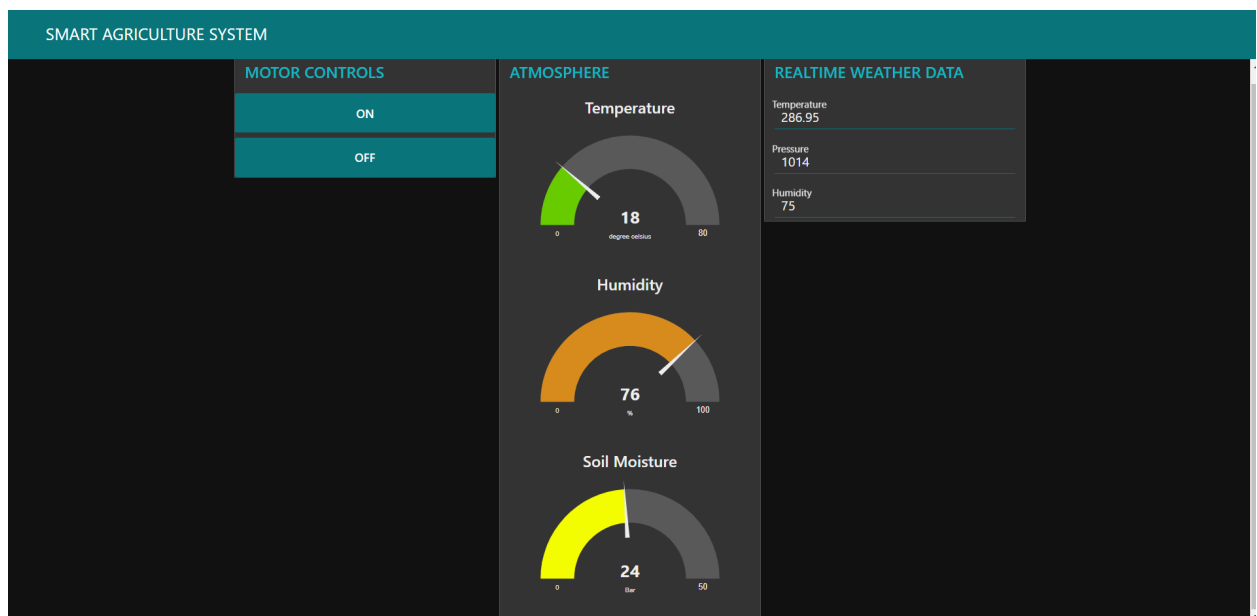
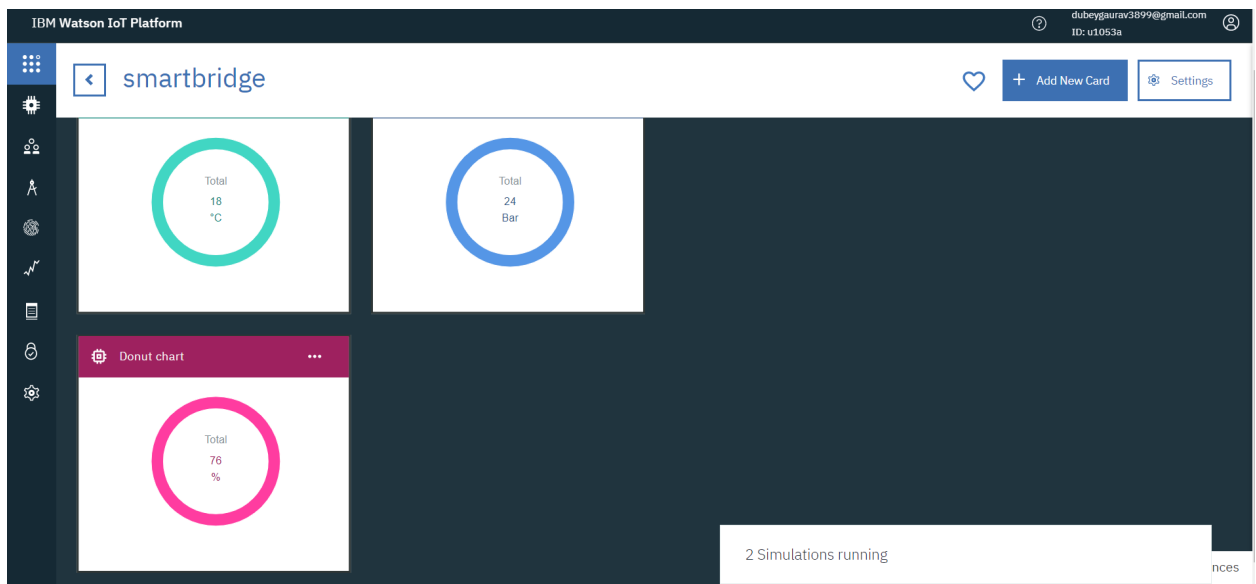➤ Connecting the nodes in Node-Red
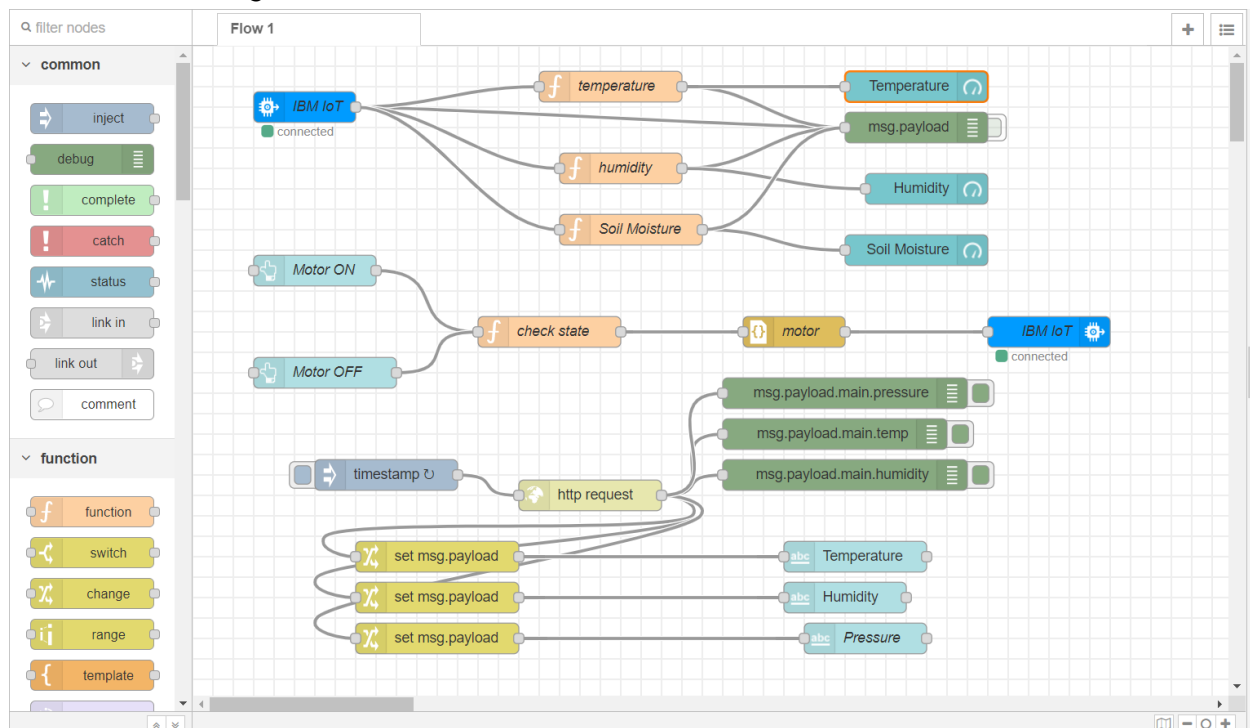
4.EXPERIMENTAL INVESTIGATION

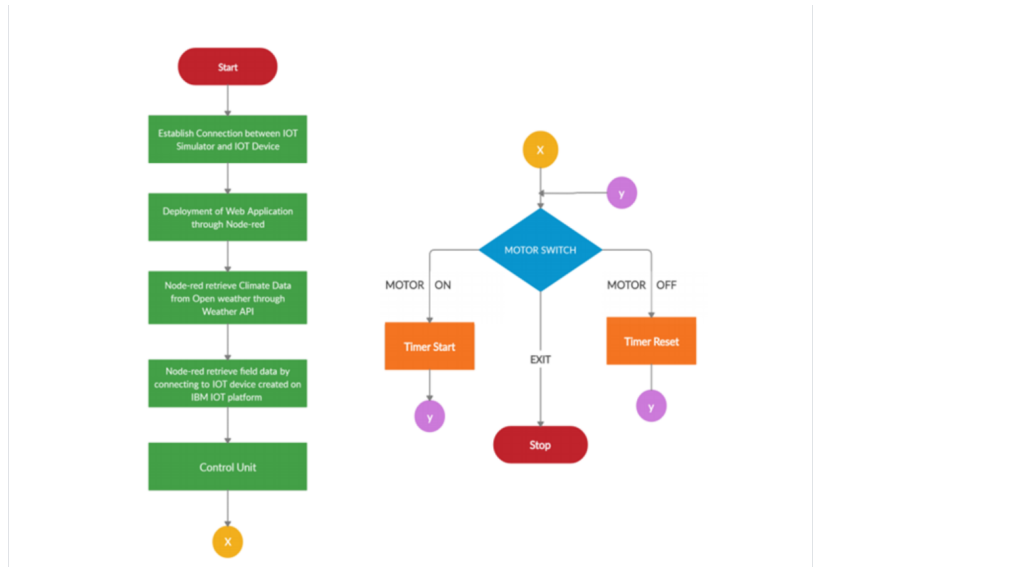OUTCOMES OF OUR ABOVE STEPS-

➤ WEB APP UI

➤ DATA FROM SIMULATOR IN GRAPHICAL FORM

➤ MOTOR RECEIVING COMMAND FROM WEB APP

5.FLOW CHART

6.RESULT

We have successfully created a web app which can tell us about temperature, humidity and soil moisture and with the help of this app we can control motor also. This app also provides real time weather.

7.ADVANTAGES

➤ Having idea about real time weather can help farmers in effective decision-making about planting of crops.
➤ Switching motor off instantly with the help of our web app helps in avoiding wastage of water.
➤ Controling motor from any where with the help of our app will reduce some hard work of farmer.

8.DISADVANTAGE

➤ This app can only help a farmer who knows how to use mobile phone apps otherwise it is not of any use for him.
➤ since it is a lot based app so it requires internet access all the time to operate

and as we know internet services are poor in rural areas so it might not be able to work properly.

9.CONCLUSION

IT IS A GOOD APP WHICH WILL HELP FARMERS IN MANY WAYS.THOUGH IT HAS SOME DRAWBACKS BUT BY THE TIME THEY ALSO GOT RESOLVED AND ITS A GOOD START TO CONNECT AGRICULTURE WITH IOT TECHNOLOGY.

10.BIBILOGRAPGHY

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