SMART IRRIGATION

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INTRODUCTION

- Water irrigation system based on Internet of Things (IoT).
- Delivers a smart and cost effective irrigation system.
- Irrigate the farmland in an efficient manner with automated irrigation

System based on soil moisture.

- Operates by monitoring the value on soil moisture sensor and based

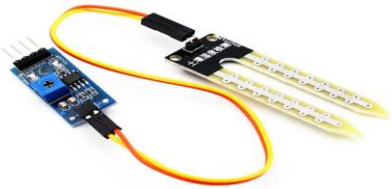
on the reading, motor is kept ON or OFF.

- User-friendly experience with the help of mobile application.

COMPONENTS

1. Arduino

2. Soil moisture sensor



3. 5V Relay

4. Water pump with tubes

5. Jumper wires

EXISTING SYSTEM

- In existing system, we require manual supervision and labour for proper irrigation.
- It needs additional labour and is costlier. We cannot guarantee its efficiency.
- As per the paper *"An IoT Based Smart Irrigation System," 2021* , existing system consist of a motor that pumps water automatically based on the value of sensor.

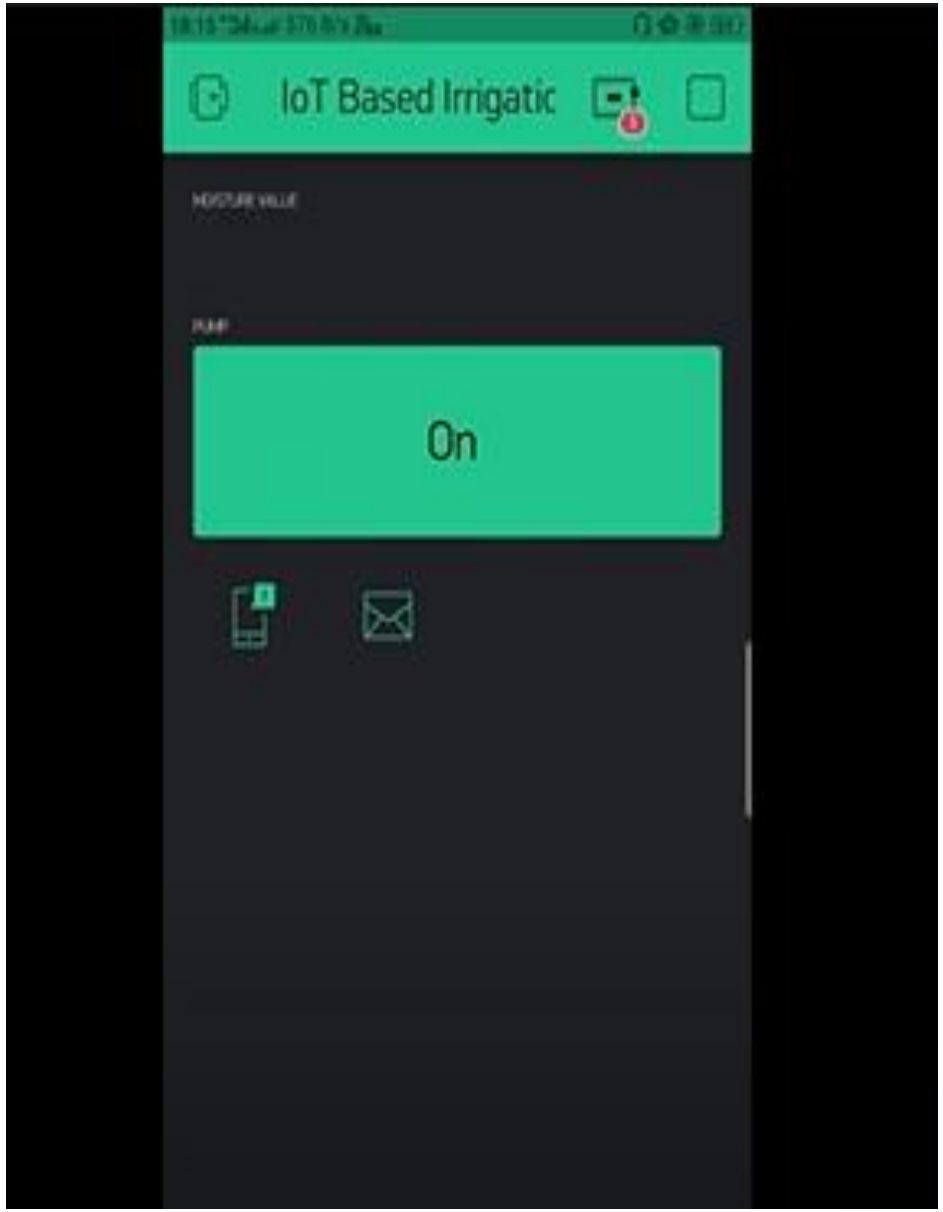
PROPOSED SYSTEM

- In the proposed system, the watering process is automated which reduces manual work.
- Various parameters of the plant and soil such as temperature, humidity and moisture

are sensed with the help of sensors and is displayed in the mobile application.

- When there is a decrease in any of these sensed values, it sends a signal to the user and

the user can turn ON the motor by a simple click on mobile phone.


IoT Based Irrigatic
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REFERENCE

- M. R. H. Naeem, S. Gawhar, M. B. H. Adib, S. A. Sakib, A. Ahmed and N. A. Chisty, "An IoT Based Smart Irrigation System," 2021 2nd International Conference on Robotics, Electrical and Signal Processing Techniques (ICREST), 2021, pp. 243-247, doi: 10.1109/ICREST51555.2021.9331092.

- C. Stolojescu-Crisan, B. -P. Butunoi and C. Crisan, "An IoT Based Smart Irrigation System,“ in IEEE Consumer Electronics Magazine, doi: 10.1109/MCE.2021.3084123.

- V. R. Balaji, V. Kalvinathan, A. Dheepanchakkravarthy and P. Muthuvel, "IoT Enabled Smart Irrigation System," 2021 International Conference on Advancements in Electrical, Electronics, Communication, Computing and Automation (ICAECA), 2021, pp. 1-6, doi: 10.1109/ICAECA52838.2021.9675690.