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A Concept :- An automated system that allows ABUAD farm to track their irrigation status, start and finish the process with a press of a single button, Read the temperature of the soil, determine the moisture content of the soil and crop status.

Design :- In this stage of software development cycle starts by turning the software specification into a design plan with an easy to use interactive design, with simple icons that are self explanatory and easy to understand.

Testing :- The codes written for the operation of the irrigation system are tested and debugged to ensure optimum working conditions.

Maintenance :- Maintenance would be performed monthly on the software, ~~firmware~~ and hardware to ensure it runs smoothly.

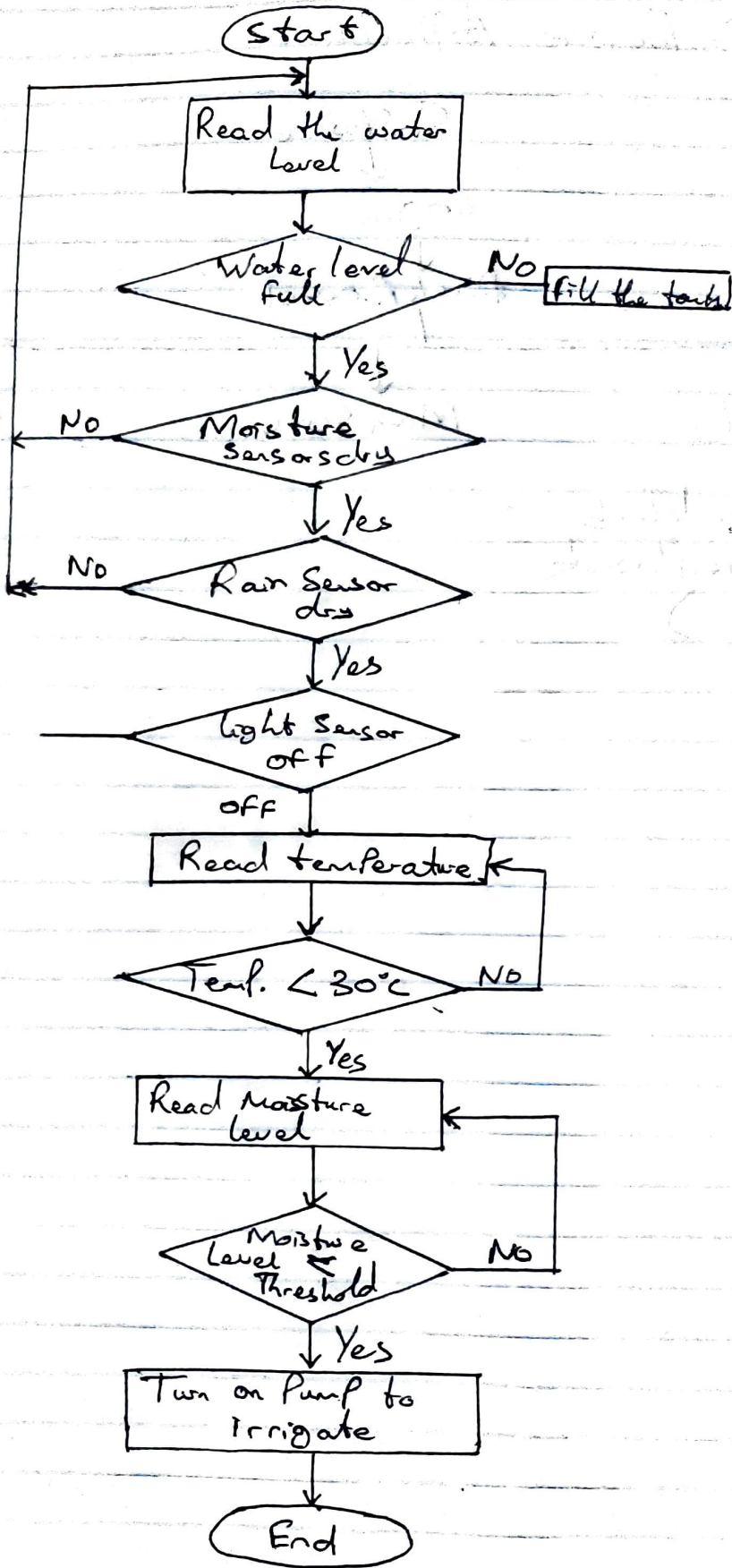
B Software features Of the Irrigation System
The irrigation system will be accessed through a smart phone or laptop. The user enters profile credentials and gets redirected to the management page which gives the user access to the sensors that collect and communicate the data on the moisture levels, temperature and soil status.

- Schedules :- With the the software connected to the moisture sensor, the watering system should be able to stop automatically after a threshold is reached.

- Notification System :- The system should be able to notify the farmer about the start of watering and its finish, as well send error alerts.
- Weather and environment analytics :- With the farmers schedules, field locations and, current weather and the weather forecast, the system should be able to predict an irrigation schedule suitable for the crops.

Hardware feature for the Irrigation System

- Sprinklers :- The usage of sprinklers with rotating nozzles will allow water to get access to all areas of the land.
- Soil moisture sensor :- It measures the capacity of water content in the soil.
- LED lights :- The usage of LED lights can be used to notify the farmer about change of moisture and temperature as well as error alerts.
- Temperature sensor :- A sensor that utilizes is used to utilize the degree surrounding.
- WiFi - The system would transmit information by using wireless network from the sensors to the data processing center to the farmers controller dashboard.



FLOWCHART FOR IRRIGATION SYSTEM

Top-Bottom Approach

Software



Login



Dashboard



Detail



Sensors details
(moisture, flowrate,
Temp.)

Main Screen

Analysis
Bottom

