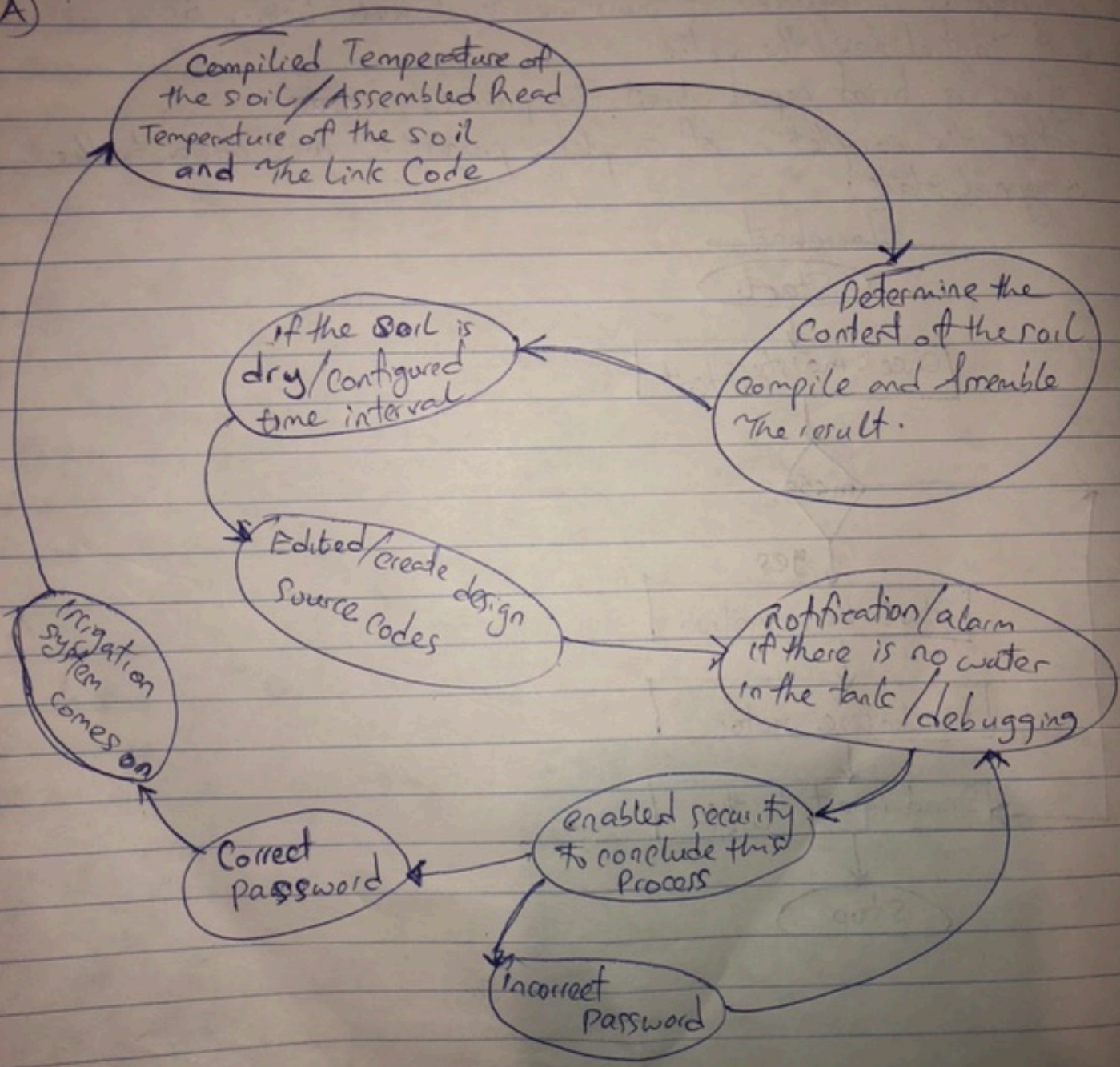


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ENG 224
18/EUG06/045
Mechanical Engineering

A)



Software

- i) Automated Irrigation system using WSN and GPRS module:
Automated Irrigated system using WSN and GPRS module having main goal is that optimize use of water for agriculture crops.
- ii) Crop Monitoring system based on WSN
The subsequent section includes the bluetooth technology wireless sensor network @p monitoring is useful to farmer for processing.
- iii) Automatic Drip Irrigation system using WSN and data mining algorithm.

Hardware Components

1) Arduino Microcontroller

Arduino is an open-source electronics platform based on easy to use hardware and software. Arduino boards are able to read inputs - light on a sensor, a finger on a button etc. A microcontroller is a small computer on a single integrated circuit.

2) Sensors:

In this system, two sensors are used in order to obtain the data about the soil and environmental condition, soil moisture sensor and temperature and humidity sensor.

1) Soil moisture sensor

2) Temperature and humidity sensor

3) Bluetooth Wireless technology

Bluetooth is a high speed, low power microwave wireless link technology, designed to connect phones, laptops and other portable equipment together with little or no work by the user.

Algorithm of the system

- Step 1 : Start the process
- Step 2 : GSM gets the initial power
- Step 3 : It will check for moisture level
- Step 4 : If the level is more than 50% irrigation is not required
- Step 5 : Irrigation is required if moisture level falls below 50%
- Step 6 : It initializes the motor
- Step 7 : gives a brief report about the process / progress
- Step 8 : after the completion of complete process it goes back to the original state.

Flowchart

