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DEPARTMENT: MECHATRONICS

MATRIC NUMBER: 18/ENG05/047

COURSE CODE: GST 224

CONCEPTUALIZATION

This software is developed to an automatic irrigation system on ABUAD farm.

This software application will be allowed to determine the moisture content of the soil and the censor of the program will notify the alarm attached to the irrigation tank if the water level is low.

Access to the software is limited to only a few personal in order to restrict unauthorized access.

SOFTWARE FEATURES

A. Access control.

B. Dash board.

C. Multiple data entry control.

D. Graphical user interface.

E. Statistical analysis.

HARDWARE FEATURES

A. Central hub.

A. Access control.

B. Dash board.

C. Multiple data entry control.

D. Graphical user interface.

E. Statistical analysis.

HARDWARE FEATURES

A. Central hub.

B. Computer.
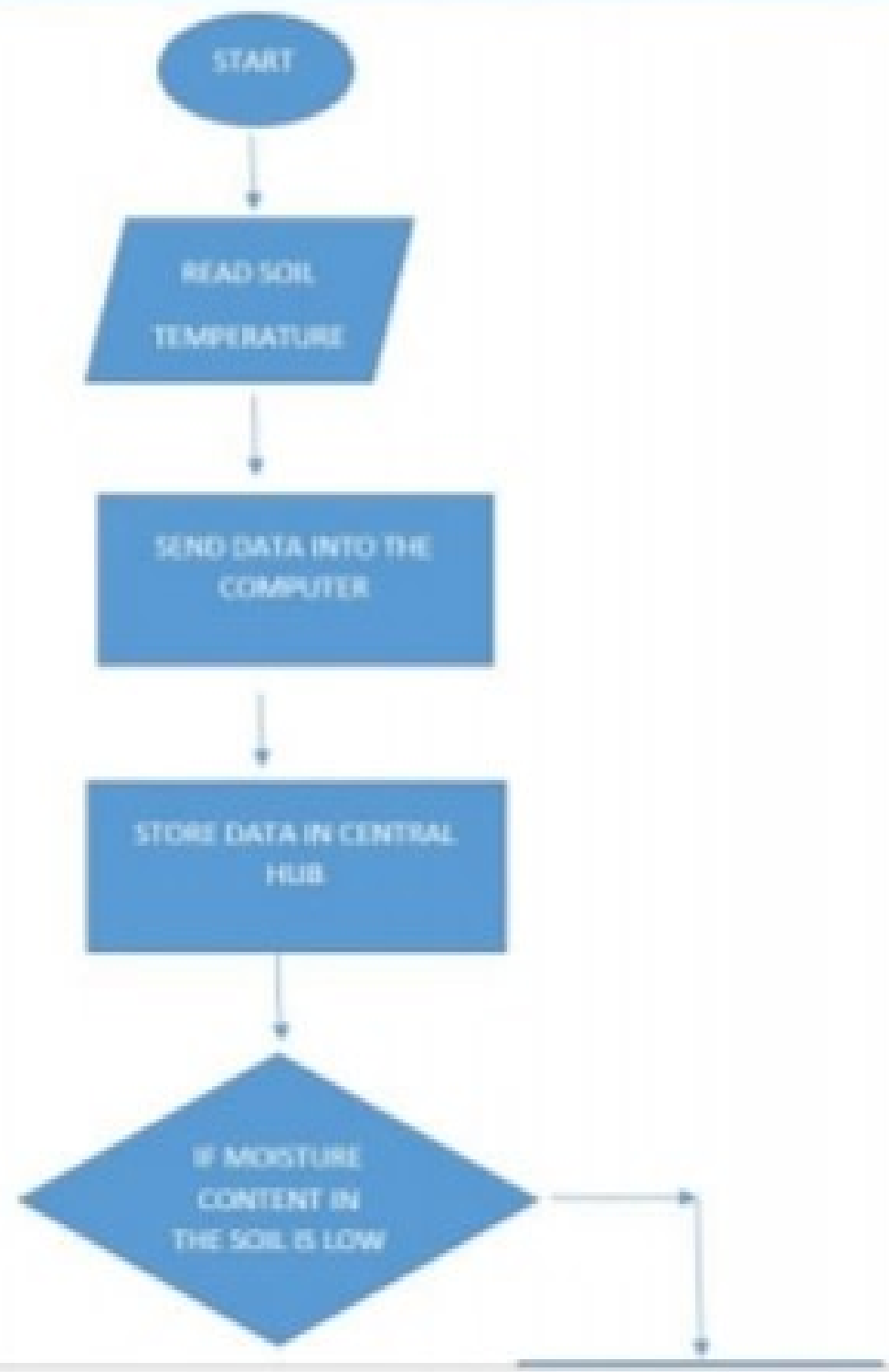
C. Alarm.

ALGORITHM

1. Start.

2. Read soil temperature.

3. Send data into the computer.

4. Store data in central hub.

5. If moisture content in the soil is low

   Print("Trigger alarm attached to the irrigation tank and start irrigation").

6. If moisture content in the soil is high

   Print("Stop irrigation and commence pumping of water").

7. Stop.

ABUAD IRRIGATION OPERATION

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ABUAD IRRIGATION OPERATION
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┌──────────────┼──────────────────────────────┐
FUNCTIONS    GRAPHIC USER                    SYSTEM
│              INTERFACE                        │
┌───┬────┬───┐        │                    ┌─────┴─────┐
STATISTICS  ACCESS  MULTIPLE DATA          UPDATE   CONTACT
ANALYSIS   CONTROL  ENTRY CONTROL                    HELP
                    │
           ┌────────┼────────┐
       DASH BOARD  TEXT BOOK  DIALOGUE
                              BOX
```