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**COURSE: STRUCTURED PROGRAMMING (ALGORITHM)**

**COLLEGE: COLLEGE OF ENGINEERING**

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**DEPARTMENT: CIVIL ENGINEERING**

### **CONCEPTUALIZATION**

As we all know, the appearance of crops depends on the when they are planted, to solve this problem, I'm proposing an application designed with the primary aim of reading weather patterns and past climate conditions in order to decide the most efficient time to plant a particular crop. The software reads the both past and present weather patterns, while also cross-referencing past weather and climate changes to decide when it is most favourable to farm a specific crop or fruit (plant). It uses the common instruments like anemometer, pressure sensor, thermometer, hygrometer, rain gauge e.t.c that come in-built with most androids phones to do this. In a scenario where an android phone does have such sensors, using a laptop, one can connect such sensors to the laptop to get the readings and decide the time to farm.

### **SPECIFICATION:**

#### **Hardware**

- Digital anemometer,
- digital pressure sensor,
- digital thermometer,
- digital hygrometer,
- digital rain gauge
- stable internet connection
- android phone/ laptop

## **Software**

- GUI (graphical user interface) pushbutton dialogue-box IDE, mobile user interface
- Timer
- Online weather and climate changer database forum

## **DESIGN**

Using flowcharts and algorithms, the application is specified and given a blueprint as to how it will carryout operations.

## **IMPLEMENTATION OR CODING**

Using an array of programming languages like visual basic, java, python e.t.c to build the and string together the application.

## **TESTING AND DEBUGGING**

The application is tested for further errors. The Defects are logged into the defect tracking tool and is re-tested after the bug is fixed

## **MAINTENANCE**

With the aid of the feed back from the users, the application will have regular maintenance to solve bugs and issues

## **RELEASE AND UPDATE**

With the aid of user feedback after release, the app will updated based on their feedback

## **HARDWARE AND SOFTWARE FEATURES**

- **HARDWARE:** The application is designed with a software and uses the sensors **i.e** (Digital anemometer, digital pressure sensor, digital thermometer, digital hygrometer, digital rain gauge e.t.c) of the device it is being operated on, to check the present weather and climate changes while cross-referencing it with the previous weather and climate changes of past farming seasons (the application accesses the past weather and climate changes of previous farm seasons by accessing an Online weather and climate changes database forum) to determine the most effective and efficient time to farm a crop or fruit (plant)
- **SOFTWARE:** The application was developed using the Microsoft operating system. I also used an IDE (integrated development environment) which is a graphical user interface for source code editing, compiling, and debugging and a code free development. Also, mobile user interface design is a user friendly interface used in Its development so as to help users to manipulate the system, and a Device output that allows the system to indicate the effects of the user's manipulation.

## **ALGORITHM**

STEP1:Start.

STEP2: enter type of crop to plant

STEP3: wait for app to cross-reference date

STEP4: look at the results

STEP5: then apply to farm

STEP6: STOP

## **FLOWCHART**

