AUTOMATED GREEN-HOUSE

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***Abstract*—** Nowadays, green-house projects are widely being developed across the whole country. Since various components need to be checked in this kind of projects, it is very exhausting to visit the green house on regular basis. Moreover, sometimes it is confusing to monitor and maintain such activities. Automation in this field would help the owner to monitor such activities. This user-friendly mobile application would help owner to monitor and maintain temperature, irrigation, humidity and even fertilization without visiting the greenhouse. This application would sooth the work for greenhouse owner.

# INTRODUCTION

It is an app to provide automation in green-house. Components such as temperature, humidity, soil-moisture and irrigation can be monitored using this app. This application will be developed using Java. To monitor the different components Arduino UNO board and few sensors will be used in the project. This user-friendly app will help owner to reduce their work-load.

# Motivation

Watching over 3-4 parameters of green-house on daily basis can be tedious and confusing. One might mix-up or forget to maintain such parameters. To obtain more efficiency in this kind of work an android application would be a better option. Owner can maintain his/her green-house with much ease.

# Proposed system

The application is supposed to be user friendly. As user will have options of manual or automatic generation of these activities. If user want to set implementation of these activities according to his time or requirement, it will be available for him. User can even use these applications for various number of crops and sections. Real-time clock will be beneficial for implementation of such activities. User will be able to set parameters such as amount, time etc for temperature, humidity, irrigation and fertilization activity. User will be able to set alarm if he wants to operate some activities manually. Moreover, User will be notified if anything goes wrong or in case of any predefined problems. This application would help owner to regulate his/her green-house even without visiting it regularly.

# arduino-uno & Sensors

To obtain values for selected parameters of the green-house is the first step of the project. Here, Arduino-UNO board is used to read various inputs along with few sensors.

* List of the sensors used for the project:

DHT11: Digital Humidity and Temperature Sensor

LDR: Light Dependent Resistance Sensor

Soil moisture sensor

These sensors were connected to arduino-UNO board. The values of the parameters were displayed on screen.