UNIVERSITI TEKNOLOGI MARA

AUTOMATIC WATERING SYSTEM FOR PLANTS USING ARDUINO

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ABSTRACT

Plants are known as the most important things for human being in so many aspects. Not only plants use to produce oxygen, plants also help for keeping the environment healthy by cleaning air naturally. So, it is a big responsible for us to keep the plants grow healthy by provide them a sufficient amount of water, sunlight and much more. But due to civilization, many people are so busy with their jobs and often to forget to water their plants causing the plants to suffer many disorders and ultimately died. Therefore, a system is required to handle this task automatically so we do not have to worry about watering our plants anymore. With the power of our modern technology such as Arduino, we can create an Automated Watering System for Plants that can keep the plants watered in a suitable amount of water.

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CHAPTER ONE
INTRODUCTION

1.1   Background of Study

People nowadays are too busy with their work. Most of them tend to focus on something until they neglect their home task such as watering the plant. This is because people do not know how to manage their time properly. Here by, the effective solution to this problem is to design an automatic and notification plant watering system. By using this system, it will notify the user and the feedback from this notification will start automatically watering the plant. From the problem faced, an Automatic Watering System for Plants are designed.

This project sends reminders to the user to keep plants watered automatically. This system's target audience is those who are always busy and can't manage their time well enough to water their own plants. Users will supply four sensors and place one in the soil. Water will be controlled by an automatic valve that will open when the user responds. Water will flow through tubes that are limited to 5.

The system's basic operation is straightforward: it will monitor the soil's condition and water the plants automatically. The soil condition will be read by this device, and the user will receive notifications via Short Messaging Service (SMS). The system will then open a valve and water will flow to the designated plants based on the user's response. The system's main goal is to assist people in caring for their plants while they are away from home. An Arduino Mega 2560, a Siemens TC35 GSM module, a 3/4-inch solenoid valve, four moisture sensors, and some PVC tubing make up the system. The circuit requires 5V to 12V to function. The sensors' data will be utilised to send an SMS to the user, and the user's response will regulate the valve's opening.