

**UNIVERSITI TEKNOLOGI MARA**

**AUTOMATIC WATER SYSTEM  
PLANT**

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Dissertation submitted in partial fulfillment  
of the requirements for the degree of  
**Diploma**  
**(Mechanical Engineering)**

**College of Engineering**

**Feb 2023**

## **ABSTRACT**

Home gardening offers a relaxing hobby for city dwellers. Frequently, they have to get involved with activities outside of the city which leaves their home gardens unwatered for some time. A drought may increase the atmospheric temperature, especially in the city region. An unwatered garden and extreme heat can lead to fatal dehydration in the plants of a home garden. Most automatic watering systems work on the time-activated system which fail to cater well for raising the temperature. This project works on developing a conceptual prototype of a mobile application watering system for home gardens in urban dwellings. A mobile application (App) is an application software designed to run on a mobile device for performing a specific task by the user. A specific Sonoff device is installed into the house garden watering system. The Sonoff device is a WiFi switch that can be distantly controlled for activating the mobile application watering system house garden watering system. The WiFi switch is initiated using a smartphone App via internet communications. On a very hot day, he can frequently view and water his home garden while working at the office desk. The project has successfully implemented and tested the conceptual prototype of a mobile App house garden watering system.

## **ACKNOWLEDGEMENT**

First and foremost, I'd like to thank God for making everything easier for me as I finished my final year project. Next, I'd like to thank my supervisor, Mr. Dr Hasannuddin Bin Abd Kadir, for his patience with me. He is very dedicated to assisting me in explaining, recommending, and checking the results of work such as Solidworks detail drawings, along with many other things. My supervisor is very flexible and the best listener I've ever met because he hears my ideas with an open heart. He's also extremely knowledgeable. A lot of the lessons I learned from him were not only about project management, but also about how to have a great personality. I'd like to express my heartfelt gratitude to him once more. He is, without a doubt, the best lecturer I have ever met.

My biggest thanks to my mother, and father, for all the prayers and blessings they have given me to be successful in the final year of this project. The words of encouragement and attention they gave me were extremely beneficial in preventing me from experiencing severe depression or stress. Besides, my siblings, who is always asking about my project updates.

I'd like to express my gratitude to myself for being a better version of myself. Thank you for being a strong person and continuing to do your best to please yourself, your supervisor, and the judging panels. You have evolved into a truly remarkable individual because you were able to step outside of your comfort zone and pursue your passion. I wish you the best of luck in your future endeavours.

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# CHAPTER ONE

## INTRODUCTION

### 1.1 Background of Study

During the covid pandemic season, cultivation became a very popular communal activity and it had also become popular even before the pandemic. Therefore, it is shown that this cultivation has become a common routine in society because plants can decorate our homes with a pleasant atmosphere for those who crave a greener interior, and can creatively decorate ideas for home as well. Cultivation activities become an attraction to the community because they can help the community to fill their free time, can reduce stress, and be able to spend time with family. Also, growing plants indoors space naturally helps clean the air of human breath and also acts as a bit of oxygen a supplier that is beneficial to human beings. It is proven in studies by NASA and Allied Landscape Contractors of America.

However, most people have trouble keeping their plants healthy and alive. According to some studies, people often forget to cultivate their plants, between daily activities[1]. Plants need to be watered with sufficient amounts to keep them fertile. Therefore, watering is an important activity in plant care. Every plant needs a variation of sufficient quantity of water because too much water can suffocate plant roots and too little water causes growth to be erratic and stunted.

### 1.2 Problem Statement

This system will guarantee that the plants are watered depending on their needs, and the user will be aware of the results and status.

Today, there are far too many failed plants across the neighborhood. If we disregard this issue, it will take a long time to transplant the plant. This difficulty arose as a result of the household's activity with job and life. Every household wants to have their own crop where they may plant anything they want, but they don't have time to irrigate their plants.