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REPORT

AQUA SENSE

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ABSTRACT

The concept of the smart aquarium has received significant attention in recent years, which is it offers a modern technology for the people that loves to keep fish as their hobbies. With the modern technology and tools, it provide a range of automated functions, real time monitoring and give more experience to the user. The benefits for this system are the condition of the aquarium and the fish can be managed by only using the system automatically. For example, the user no need to use the thermometer to identify the temperature of the water, no need to monitor the water level of the water level manually, and the quality of the water will be monitor by the system. With this system, the user can save their time to do their work without always worrying about the condition of their aquarium and fish.

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CHAPTER ONE

INTRODUCTION

1.1 Research Background

Aqua sense is a smart maintenance for fish aquariums. In this system, it includes 3 sensors which are temperature sensor, water level sensor, and turbidity sensor. These 3 sensors work as a safety system for the aquarium. Then, this system also has a timer which will work to control the feeding time of the fish. After the three sensors receive their input, the output will display on the LCD and the LED and buzzer will turn on if the condition for them to turn on are complete..

In order to set the condition for temperature sensor, the study has been done. The good temperature for fish is between 25°C to 27°C. A few species need to be kept several degrees warmer and some species require temperatures a few degrees cooler. A thermometer is vital. Stick-on types enable to check the temperature whenever look at the aquarium. However, this system use DS18B20 as a temperature sensor and the value will be displayed on LCD.

Fish that live in the natural aquatic world are different from fish that are kept in aquariums. When adding a fish to an aquarium, the owner has to be aware of whether the fish is a herbivore (eats plants), a carnivore (eats animals), or an omnivore (eats both). Fish must be fed at a precise time in order for them to receive food that is appropriate for their diet. According to the data, 60% of individuals neglect to feed their fish every day. The fish in the aquarium will be fed automatically with the food that is in the container thanks to this system, and the servo motor that is used to turn the system will spin according to the timer that has been set.

Aeration is produced by the level and movement of water, which continually mixes the water's surface with the rest of it. Despite the plants that are placed in the