

**OPTIMIZED AQUARIUM CARE
MONITORING SYSTEM**

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ABSTRACT

In today's world, many people are interested in taking care of aquatic life as a hobby. There are also those who are interested in aquatic life because it can generate a decent income. A common problem in taking care of this aquatic life is to provide an optimal environment for their aquatic life. So, to constantly do a water quality tests manually to monitor the water quality will take a lot of time. To solve this issues, Optimized Aquarium Care Monitoring System has been developed using hardware such as a Temperature sensor, Total Dissolved Solids (TDS) sensor, pH sensor, and Nodemcu ESP8266. Software like Arduino IDE, Proteus 8, and Tinkercad also being used to develop this project. This device is design to test the water quality for freshwater fish by measuring pH, temperature, and turbidity. This device enables quick and efficient water quality assessment, assisting both hobbyists and fish farmers. Additionally, this device can connect to the Blynk App, it allows the users to monitor water quality remotely via a smartphone or directly on the Blynk website thereby eliminating the need for manual testing. Ultimately, this innovation offers a significant time-saving solution for the users.

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CHAPTER 1

INTRODUCTION

1.0 Introduction

In this Chapter 1, it will provide context about the information discussed about this project including background of study, objectives, project contribution, problem statement and scope of project. The main idea of this project, Optimized Aquarium Care Monitoring System by monitoring the quality of water such as the temperature, turbidity, and pH of the water in a short time.

1.1 Background of study

Nowadays, hobby of keeping ornamental fish at home is becoming more popular. This hobby is also becoming more popular because it is a hobby that everyone can afford in this modern age. In addition, the increase in popularity of this hobby is also due to the benefits of treatment for mental health. In addition, the increase in popularity of this hobby is also due to the benefits of treatment for mental health. For example, engaging in the charming beauty of aquatic life after a stressful experience has the potential to lead to a sense of tranquillity. Being involved in the hobby of keeping ornamental fish also provides an opportunity to form new relationships and friendships. The proof is that on Facebook there is a group called " Komuniti Ikan Dan Akuarium Malaysia". This group has over 22 thousand members and this group was created so that they can share their experiences, asking questions about aquatic problems, buying, and selling item involving aquatic life.