CHAPTER 1

INTRODUCTION

1.1 INTRODUCTION

This chapter explained about the background of the project, problem statement, project objectives and project scopes. Beside that, this chapter also consists of report arrangement.

1.2 BACKGROUND OF THE PROJECT

An automatic fish feeder is a solid investment for any aquarium. It is an electrical or electronic gadget that is designed to dispense the accurate amount of food into the aquarium at a particular time each day. Some fish feeders can be set to feed the fish more than once a day. Automatic fish feeders are either run on electricity through a power cord or battery operated. The advantage of electrical power feeders is there is no worry about the battery dying while battery operated feeders is without worry of electric shock or power outages. Fish feeders are usually clamped to the wall of the tank just over the water. They consist of a hopper which is loaded with a variety of dry food, a timer which rotates the hopper at regular intervals, or a method of setting the interval between feeding and the amount of food dispensed. This allows the fish to be fed on a regular basis without overfeeding. The mounting technique will vary depending on which model of fish feeder you purchase. Some have mounting brackets that will hook onto the edge of the aquarium while others have suction cups the will attach to the inner walls of the aquarium.
1.3 PROBLEM STATEMENT

Aquarist of the home based aquarium leads a busy life especially those who are away on vacation. They are often difficult to maintain a regular feeding schedule. However, the fish require regular care in order to remain healthy. If fish are not constantly fed small amounts at regular intervals, there can be significant loss of fish due to starvation. But, too much food in the water can easily clog up important filters, and cause you to have to spend more time cleaning your aquarium tank. Thus, they are recruiting a reliable helper to ensure that the fish are properly fed.

There are many different designs and brands on automatic fish feeders on the market, but some limitations on the existing fish feeders need to be improved. Though some feeders are designed specifically to keep food dry, many designs allow moisture to seep into the food hopper. This can cause clumping, and can result the failure of the mechanism. Feeding fry has been difficult. Pendulum and vibratory feeders are not very suitable, due to small particle size of fry feeds. Alternatively, clockwork feeders offer an apparent solution. However, in the presence of humidity, the feed sticks to the large surface area of the belt, and fungus grows. Consequently, a lot of labor is required to keep it running. In addition, the clockwork mechanism has to be wound up daily. Therefore, some improvement or new invention is developing to solve these problems.
1.4 OBJECTIVES

The objectives of this project are included:

i. To design an automatic fish feeder.

ii. To fabricate a low cost automatic fish feeder.

iii. To fabricate a longer life span automatic fish feeder.

1.5 SCOPES

This project development is limited within the following scopes:

i. Analysis the efficiency of the mechanism used on the automatic fish feeder.

ii. Fabricated the automatic fish feeder by using industrial machine and engineering tool which are drilling machine, vertical bend saw, protractor and vernier caliper respectively.

iii. Designed the automatic fish feeder by using engineering software which is Solidworks.

iv. Focus on habits of tropical fish.