CHAPTER 1

INTRODUCTION

1.1 PROJECT TITLE

Design and Development of hamsters Cage

1.2 PROJECT SYNOPSIS

Many cage designs are manufactured. The basic cage used in most rabbit inches 5 wide, 25 inches long and 15 inches high. Most have rectangular sides (conventional style), but some have rounded tops (Quonset style). Doors may be hinged at the top, sides, or bottom.

Hamsters make a great pet and as an owner we should be aware of the basics to looking after them. We must keep the habitat clean to prevent the effected by virus. We must prepare a suitable cage to ensure the hamsters feel safe and comfortable.

1.3 PROJECT BACKGROUND

This project consists of the stage of design and development of an Hamster Cage. Simple analysis and collecting data to design a simple cage.
The project will be funded by the student final year project funding, University Malaysia Pahang (UMP) short term project funding as well as sponsorship obtained from industrial sponsors such as of equipments, products and also monetary funding.

1.4 PROJECT OBJECTIVE

1.4.1 General Objective

Diploma final year project objective is to practice the knowledge and skill of the student that have been gathered before in solving problem using academic research to born an engineer that have enough knowledge and skill. This project also important to train and increase the student capability to get know, research, data gathering, analysis making and then solve a problem by research or scientific research.

The project also will educate the student in communication like in presentation and educate them to define their research in presentation. The project also will generate student that have capability to make a good research report in thesis form or technical writing. This project also can produce and train student to capable of doing with minimal supervisory and more in and more independent in searching, detailing and expanding the experiences and knowledge.

Nevertheless this project also important to generate and increase interest in research work field.

1.4.2 Specific Objective

The final year project is:-

a) Design and development of a hamster cage
b) To fabricate the mechanical component.
1.5 PROBLEM STATEMENT

a) How to fabricate the good mechanical cage
b) make comfortable cage for hamster like their habitat
c) Make the cage for easy to use
d) Current market made from plastic plus metal
e) Quality

1.6 PROJECT SCOPE

The scope of this project will cover:-

a) Product design easy to use
b) fabricate the mechanical part of system
c) design using CAD software Solid Work
d) Knowledge in welding, cutting and etc

1.7 PROJECT PLANNING

According to the Gantt chart from Table 1, this project has been started at the week 1 to week 3 to selecting the material by collecting data, information and literature review via internet, books, supervisor, and others relevant academic material that related to the title. Review and survey current design was started at this week. Then follow by 3 concept design which started on week 4. Then matrix chats on week 6. Design with sold work at week 7. Fabrication process which was started on week 9. Report preparation was started on week 11. Twice of presentations were held which are in week 7 and week 15. In details, Table 1 represents the Gantt chart for the project.