CHAPTER 1

PROJECT INTRODUCTION

1.1 INTRODUCTION

This chapter explained about the problem statement, project objective, project scope that been conducted. Besides that, this chapter also covers project flow and the progress project are follows the gantt chart duration of time.

1.2 PROBLEM STATEMENT

Many tandem bicycle were invented for travelling activity. So, the tandem bicycle component must have good quality in order to keep it comfortable. Plus, the total cost for create this bicycle were very expensive. Moreover, tandem bicycle is a rare product on this country and the price were too expensive. Then, many tandem bicycle were create connecting the front and rear pedal and it will be difficult if if the second riders feel tired to make a stroke for the second pedal, there will be no place to rest their feet while the other one keep stroke the first pedal and vice versa.
1.3 OBJECTIVE

The objective of this project is to design and fabricate a tandem bicycle for front part.

1.4 SCOPE

This tandem bicycle is designed according to the scope decided by our group members. The tandem bicycle will be used for the recreation purpose and the front part of the tandem must be ride by teenager or adult and limited to 1 person. The tandem bicycle also must be an affordable type. Designing the tandem bicycle must follow this scope in order to successfully create the tandem bicycle.

1.5 PROJECT BACKGROUND

This project started with defining job scope and the objective before deciding to fabricate because scope is used to fabricate the bicycle according to the scope decided. Job scope is set as a parameter to determine the production of a product and it is needed to specify the target of the product. Next, I schedule myself using the Gantt chart. The production process were planned from the first week to the last week. This were made to ensure my project were guided and progress were not interrupt. The Gantt chart also were use as reference for my project. The Gantt chart can be refer at Appendix B for full view of the project flow.

After done deciding the project, I continue with my research about the tandem bicycle from the internet, books, and other material to the project title. Duration of literature review takes about a week to complete.

Next, after deciding the product, I proceed on my product design with my partner. Various concept design will come out during our brainstorming session. We have 3 concept design that requires to create the tandem bicycle and will be evaluate to create the final design. So, by doing this method, problem of creating the bicycle will be encountered and creating the final design of the bicycle using CAD software and done with the analysis.
Next step is defining material before proceed to fabricating and testing the tandem bicycle. The fabricating and testing method used to determine the problem I have during fabrication process. If the problem occurred, the process will return back on checking my design.

Finally, after done fabricating and testing process, I proceed to the result and discussion process before presenting and preparing the report to validate my product by the panel and the supervisor.

1.6 Thesis Organization

This thesis consist of 6 chapter that will cover the whole project. This thesis consist of introduction, literature review, design concept and selection, fabrication process and finally conclusion and recommendation.

The first chapter would be the introduction that briefly discuss about the project progress and also the starting project process that is the objective and the project scope. This chapter will also discuss the project plan from beginning to the end of process.

Then, chapter 2 that will be the literature review of the project and equipment use during fabrication. It’s to ensure the better understanding about project and progress before proceed to the creating process.

Next, the third chapter that is design concept and selection discuss about the project design and selection method to finalize the project design. This chapter also discussed about the project flow using flow chart in completing the project till the end.

Then, chapter 4 will proceed on the fabrication process that discuss about project fabricating procedure that consist of material selection and fabrication process. Also include in this chapter the safety measure during fabrication process for reader awareness.