CHAPTER 1

INTRODUCTION

1.1 PROJECT BACKGROUND AND PROBLEM STATEMENT

Basically, the purpose of fabricate new upper piston is for the new cylinder head concept for 4 stroke engine system. The new cylinder head concept for 4 stroke also known as 6 stroke cylinder head. The 6 stroke cylinder system was developed in the 1920s. The new engine system been used in Ducatti motorcycle and some of mini helicopter engine.

According to the design of the motorcycle system, none of the motorcycle using a new system that are more to bring benefit. Such as increase the output power, efficiencies and emission reduction in a 4-stroke single-cylinder motorcycle engine.

The new cylinder head concept was designed by the PSM student. The concept was model completely using solid works. However, in order to further understanding og the concept’s working principle, a physical model must be constructed.

In this final year project, the design and fabrication of new upper piston is for the new cylinder head.
1.2 PROJECT OBJECTIVE

- To design the new cylinder head model.
- To re-design the upper piston for first prototype.
- To fabricate the upper piston using casting and machining method.

1.3 PROJECT SCOPE

From the title that has been given, the development of this project must include how to design the mechanical part of machine and how to fabricate the system of this mechanical part. It also needs some knowledge and skill to finish the project. There is some other guide must followed to finish this project.
1.4 PROJECT SCHEDULE

Table 1.4.1: Gantt chart