

DESIGN AND FABRICATION OF FOLDABLE AND ADJUSTABLE DESK

MUHAMMAD AMMAR AMSYAR BIN AZRAN

Dissertation submitted in partial fulfilment of the requirements for the degree of

Diploma in

(Mechanical Engineering)

College of Engineering

March 2022

ABSTRACT

In Malaysia, offices and education institutes are the backbone that contributes in increasing the economy and achievement of this country. However, the workers and students have give less and less priority in inventing a model that would make their work easier. As an example, during this pandemic mostly they work and study from home. So, they need the desks with portable and height adjustable properties because it will burden some of the desk consumers to buy many desks with different height. It also requires a lot of space to use all of the desks. In this adjustable desk project, some innovation will make which different from current desk in the market. Adjustable Desk instantly turns a desk or table into an moving desk for reading, writing and work centre. The desk must have foldable and adjustable so it can use for all ages and people with different height in daily life routine. Skill requirement during making this project is Solidwork, mechanical design and basic machining such as drilling and bonding

ACKNOWLEDGEMENT

Alhamdulillah praised to Allah S.W.T. give me strength to finish the prototype fabrication which is Design and Fabrication of Foldable and Adjustable Table and also complete the dissertation in MEC 300 subject for this semester. I also thank you to other people helping and always supporting me in completing the prototype and dissertation including my friends, parents and lecturers especially the supervisor of my project which is Sir Mohd Fadzli Bin Ismail that guide me from last semester to carry on this final year project.

TABLE OF CONTENTS

		Page
COI	NFIRMATION BY SUPERVISOR	2
ΑU	THOR'S DECLARATION	3
ABS	STRACT	4
ACKNOWLEDGEMENT		5
TABLE OF CONTENTS		6
CHA	APTER ONE : INTRODUCTION	
1.1	Background of Study	8
1.2	Problem Statement	9
1.3	Objectives	9
1.4	Scope of Work	10
1.5	Significance of Study	11
1.6	Expected result	11
CHA	APTER TWO : LITERATURE REVIEW / PROBLEM DEFINITION	ON
2.1 Information on Existing Products, Patents and Standards		12
2.2 Product Design Specification Based on Literature Review		17
CHA	APTER THREE: METHODOLOGY	
3.1 Introduction		19
3.2 Concept Design		19
3.3 (Concept Design Sketch	

CHAPTER 1: INTRODUCTION

1.1 Overview of The Project

A desk is a type of furniture with a unique flat table -style work surface used in home and work place such as school and office. It also use in academic, professional or domestic activities such as reading, writting, or using equipment such as a computer. Desks have compartments, one or more drawers, and some of them have pigeonholes to store items such as office supplies and papers. Mostly desks are made from wood and metal but sometimes materials such as glass also use in making desk.

According from history, this table furniture like desk- style actually appears not to have been used in classical antiquity and in other ancient centres of literate civilization but until today no one can explain the specific proof. Desk is the first pieces of furniture which seem to design and invent for reading and writing. The reader who live before the invention of the movable type printing press in the 15th century, was a writer or publisher since any book or other file or document has to be copy by hand. The desks were designed with slots and hooks for bookmarks and for writing implements. Manuscript volumes are large and heavy is the reason why the desks in that time have massive structures.

The changing of desk design from the old times to the later eras has slimmer structures, and more drawers are add and make it become more accurate. Some design of desks design have good-looking design in drawers which separate into three small separations and storage for pens.