



**FACULTY OF MECHANICAL ENGINEERING**

UiTM Terengganu, Campus Bukit Besi

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**MULTIPURPOSE TABLE REPORT**

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## 1.0 INTRODUCTION

### 1.1 Overview

Our project is about a analysis of the Gear Motor System on our Smart Table Project. Gear Motors are complete motive force systems consisting of an electric motor and a reduction gear train integrated into one easy-to-mount and -configure package. This greatly reduces the complexity and cost of designing and constructing power tools, machines and appliances calling for high torque at relatively low shaft speed or RPM. Gear motors allow the use of economical low-horsepower motors to provide great motive force at low speed such as in lifts, winches, medical tables, jacks and robotics. They can be large enough to lift a building or small enough to drive a tiny clock.

Most industrial gear motors are AC-powered, fixed-speed devices, although there are fixed-gear-ratio, variable-speed motors that provide a greater degree of control. DC gear motors are used primarily in automotive applications such as power winches on trucks, windshield wiper motors and power seat or power window motors.

### 1.2 Design Objective

Objective:

- To improve gear motor system application

The table with adjustable height function which is suitable for every community such as Worker, Student and Gamer

- To bring the wellness to our space

The table can be use for study, work and play games. Doesn't have to buy separates table/desk.

- To standing encourage movement

It was designed to make both standing and sitting a natural part of your day.

### 1.3 Scope of Project

There is a few factor that limited during our analysis which is :-

#### Gear Motor System

- This smart table can extend its height or can lower its height for the convenience of the user but it will use a lot of gear motor system and that will causes a lot of cost .

#### The Shape of The Smart Table ( L shape )

- The table will be in L shape and it will fix at the corner of house or room at that will give us a lot spaces in the area
- The material that being use is engineered wood like plywood or melamine that will sufficient for the gear to extend it .

#### RGB light

- There a lot of user that need bright light or dim light when their work and with RGB light they can control the brightness of the light during their working .

#### Limitation on analysis

- There is not much about smart table data and video in how to make the smart table functioning.

#### **1.4 Significance of the Project**

The multipurpose table was designed to bring the wellness to our space. The table can be use for study, working and playing games. So, user do not have to buy separates table anymore. The material of the prototype is reasonable and significantly affordable. This project is expected to fully utilize space in the house better than other table that have specific use like some common types of table are the dining room table, which is used for seated persons to eat meals; the coffee table, which is a low table used in living rooms to display items or serve refreshments; and the bedside table, which is used to place an alarm clock and a lamp.

Most people also do not like to use table because the table do not fit with their height. By using this table, their can adjust height of the table according to their comfortability. Beside that, our project is very useful for those who like doing using table because It was designed to make both standing and sitting a natural part of your day. By not having this project, it will cause user need to but a lot of table so we can see that this table can save a lot of customer's money.

In the nutshell, this multipurpose table can be one of the best products and create its own label in the future. It provides varies benefits and advantages if this prototype being use in the right way and prudence.