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**NEW PRODUCT DEVELOPMENT**

**MAGNETIC LEVITATION LIGHTING KIT**

**SEMESTER :**

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## 1. EXECUTIVE SUMMARY

In this modern era, busyness is more than just a companion. Thus, our team foresee the responsibility in designing a device that really care for those who always work on the go to really work at their utmost efficiency and comfortability. Unlike any others, this product (magnetic levitation lighting kit) combine the technology of eye scanning and magnetic levitation to not just upgrading the culture of portable workspace but also maintaining good eye vision.

## 2. INTRODUCTION

### 2.1 PROBLEM STATEMENT / ISSUES

- No regular check on eye health condition. Busyness tends to push people to work on-the-go, without realizing the effects of the blue light towards someone's eyes.
- Organize personal items misplace of personal items such as phone, car keys and pen might waste our time and also prone towards the lost of things.
- All gadgets need to be charged – have limited battery life. In the society where people 24-hours mingling with gadget, they tend to keep using the gadgets, wishing the battery to not flatten.
- Tangled power cable issues – it can be very dangerous and most people are not aware of the dangers.
- Most electric devices are water resistance. Usually, only the outer part of the devices are resistant to water, but damaged when in contact with water.

### 2.2 METHODOLOGY

- The data was collected in 3 ways:

#### 1. Air Charge technology (for multiple charging)

By interviewing some students at Perpustakaan Tun Abdul Razak, UiTM Puncak Alam. The observation was conducted during their group discussion where most of them bring their personal computers with only one electrical plug available at their meeting place. The results shows that a number of extensions have been used and the wires are all

tangled, reducing their working space. Air charge require wave transmission of energy, allowing wireless charging.

## 2. Lighting kit

By observing the need of the hostel students that live in a shared room. The condition is that they were working late at night with their table light on. The results shows that most of their roommates were woken up with the table light because of the wide spread of the light brightness. With the help of lighting technology inside this device, sufficient and suitable lighting brightness were provided just for the user at that certain time without interrupting other people.

## 3. Magnetic levitation

The same study were conducted on students working late at night with their personal items on the table. The result shown that 20% of them could not find their belongings immediately due to the result of their unorganized working space. Therefore, the presence of this technology is to organized all their personal items by floating them on a designated surface.

## **2.3 LIMITATIONS**

- The limitation is that the technology incorporated inside the device can only be operated within specific radius.

## **3. NEW PRODUCT DEVELOPMENT PROCESS**

### 3.1 Definition

The product is Mag-Lev Lighting Kit. It is a hybrid product, which combined a pocket lighting kit which will smartly adjust their brightness at any place and space to meet the eyes most perfect brightness level and the magnetic levitation technology that will float things that are placed above its platform. It is a brilliant product that will not only help in maintaining the eyes' health, but at the same time, will save the users' time to search for their belongings.

### 3.2 Classification of New Product Development

#### - Stage of Development

The product is still at pre R&D stage. The team is designing a product that could apply both the eye scanning technology and magnetic levitation that both benefit human eye care.

#### - Similar products in market

There is no similar product in the market. The existing products only highlighting on specific purposes only, doesn't have multiple features and elegant designs.

- a) Crealev –for accessories purposes only
- b) Apple air power – contacted charging



(a)



(b)

### 3.3 New Product Development Process

#### 3.3.1 Research and Development

Idea generation – through observation and experience

The team comes out with the idea after thorough observation and experience when working on group tasks and assignments at the library of Uitm Puncak Alam and Mc Donald Puncak Alam.

- They have a difficulty in sharing the extension, to charge their electrical appliances due to limited number of the power chords.
- Possession of gadgets pruned us towards the possibilities of being a sloppy individual. Too many electronic devices tend to leave us unorganized especially when doing works. One can sometimes misplace their belongings and that lead us to come out with this solution.