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UNIVERSITI
TEKNOLOGI
MARA

FACULTY OF ELECTRICAL ENGINEERING (EE242)

TECHNOLOGY ENTREPRENEURSHIP (ENT 600)

NEW PRODUCT DEVELOPMENT

SMART INTELLIGENCE BACKPACK (SiB)

EE 2428 C

Semester: March-July 2019

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Submission Date: 29 April 2019

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2.0 EXECUTIVE SUMMARY

Smart Intelligence Backpack (SiB) is a innovation backpack that equipped with the technological parts. This idea started with one of our team members who is a student and hikers. The problem is he always run out of its cellular battery during camping. Besides that, he is also need some safety accessories that can be used immediately during dangerous situation. There are many existing products in the markets that similar to this project but the accessories are not enough to fulfil the needs of the users. So, the purpose of this innovation is to create a backpack that easy to use, convenient, on-the-go charging for people who are outside their homes and provide more safety system through this SiB.

SiB converts the sun energy to the electrical energy through the flexible solar panels which allows the users to have a charged battery packs in the backpacks at all times. It can be used to charge the electronic device such as laptops, tablets or cell phone. This product also has been enhanced with the technology system which are Global Positioning System (GPS), Anti-Theft System, and Buoyancy Aids System.

The backpack markets are highly competitive and Smart Intelligence Backpack will have to compete with the others products. But we strongly believe that this innovation product has its own advantages that will get a place among students and people who always with their electronic devices.

3.0 INTRODUCTION

Backpacks are definitely a must have for people with active lifestyles from students to executive to adventure seekers, a reliable backpack will surely keep their activities running without any problems. Backpack is use for travel, camping and carried daily for various reason. People can choose another intelligent yet reliable and organized storage to carry their devices and other daily needs.

3.1 Problem statement/Issues

There are several problems related with the that associated with the user. The problem are:

i.   Running out of electronic devices battery.

ii.   There is no protective accessory.

iii.   There is no security profile.

3.2 Methodology

Research methodology is classified on where, when and how to innovate this backpack has been classified as below.

i.   **Who:**

Among lecturer and electrical engineering students in UiTM Shah Alam Campus.

ii.   **Where:**

UiTM Shah Alam Campus

iii.   **When:**

Working hours from 1st to 15th of April 2019.

iv.   **How:**

Online surveys, face to face interview and questionnaire.

3.3 Limitation

i. **Sample size of respondent**

The small amount of respondent makes the data collected to develop the product is limited.

ii. **Age of data**

Data collected might not be accurate as the development of the product take place as technology growth rapidly.

4.0 NEW PRODUCT DEVELOPMENT

4.1 Definition

Smart Intelligence Backpacks or SiB is featured with 20000mAh solar integrated battery and a charging port in every pocket that can be used to charge the phone, tablet, or electronics device. This is the most important factors for the users to keeps their device or gadgets energized with good amount of power. It is also equipped with a navigation device which is Global Positioning System (GPS). The main reason for the GPS system is to track the device's movements and determine the user location. The recorded location data can either be stored within the tracking unit or transmitted to an interconnected device such as cellular. SiB also equipped with the buoyancy aid which is it can be trigger by user by using the switch besides the bag. This product also equipped with a high security profile. An Anti-Theft system has been designed in order to secure their item in this backpack. It will send a notification to the user phone if someone tried to open the bags without permissions.