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TECHNOLOGY BLUEPRINT

UNIVERSITI TEKNOLOGI MARA MALAYSIA

SMART i-BOT

Faculty	:	FACULTY OF HEALTH SCIENCES
Program Code	:	HS243
Group	:	7A
Course	:	TECHNOLOGY ENTREPRENEURSHIP
Semester	:	SEPTEMBER 2018 - JANUARY 2019
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Submission Date

6/12/2018

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COMPANY'S LOGO

CHAPTER 1

PRODUCT DESCRIPTION

1.1 Introduction

The product is known as Smart i-Bot. Smart i-Bot is a small, light and portable auto-mobilize appliance that is used for air purifying inside the building using activated carbon. It comes with beeper that assist the Smart i-Bot to detect the presence of allergen, dust and pollutant at particular spaces. Apart from functioning as air purifier, Smart i-Bot also acts as security camera that can be directly send the real-time or recorded footage of security camera as well as the data of air quality performance to the mobile phones using Wi-Fi connection. It is also a self-rechargeable appliance where it will recharge itself when the battery is low.

Indoor air quality and health of the occupants are closely related to poor indoor air quality that affect the health of the occupants acutely or chronically. According to the statistic by a researcher in Australia, most of the people spend 90% of their time indoor rather than outdoor. In addition, indoor air pollution is ranked in Top 5 of environmental risk to public health based on the data obtained from Environmental Protection Agency (EPA). The public are also unaware of the importance of indoor air pollution that can cause health effect towards them.

Housebreaking is one of the largest crime in Malaysia that causes harm or even death to the building occupant. As said by Director of Crime Prevention and Community Safety Department, housebreaking cases was recorded with a number of 6,662 cases in 2016. Lastly, hopefully this Smart i-Bot can help in reducing the cases of health concern regarding indoor air pollution as well as reducing the number of housebreaking cases and will be accepted globally one day.

1.2 Purpose of development

The purpose of the product development are:

- Reducing emission of pollutant inside the building premises
- Alarming the building occupants if there is a housebreaking in the premises.
- Identifying air quality performance of the indoor building premises.

1.3 Product Concept

The concept of Smart i-Bot is to encourage people's awareness on the importance of indoor air quality which can lead to various health effects. Another concept of this product is to enhance the safety of occupant and the property inside the building premises. Smart i-Bot assist in improving the quality of air and alarming the occupant inside the building premises.

1.4 Functions

- Air purifier
  - To purify the allergen, dust and pollutant inside the building premises using activated carbon.
- Beeper
  - Assisting Smart i-Bot to detect the allergen, dust and pollutant inside the building premises that will be transmitted using infrared wavelength to notify the Smart i-Bot to purify them.
- Wi-Fi Network Connection Device
  - The data of air quality performance will be directly connected to mobile phones for reference and also be saved in the memory storage of mobile phones.
- Security camera
  - To display the real-time and record the footage of every activity inside the building premises.