



اَوْنُوْرُسِيْتِي تِيْكْنُوْلُوْجِي مَارَا  
UNIVERSITI  
TEKNOLOGI  
MARA

**ENT600**

**TECHNOLOGY ENTREPRENEURSHIP**

**TECHNOLOGY-BASED BUSINESS IDEA BLUEPRINT**

**SMART DEFENCE SPRAYING PEPPER DEVICE**

<b>NOOR FARHANAH BINTI MOHD</b>	<b>2014816738</b>
<b>NURATIQA H BINTI MOHD NGARIP</b>	<b>2014404726</b>
<b>NURUL NADIAH BINTI ARIS</b>	<b>2014209232</b>
<b>SITI NAJIHAH BINTI SANI</b>	<b>2014833326</b>
<b>NURUL ATIKAH SYAHIRAH BINTI MD MANSOR</b>	<b>2014607198</b>

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## CHAPTER 1

### 1.0 PRODUCT DESCRIPTION

#### 1.1 Introduction

The team is inventing a Smart Defence pepper spray device that can be used as a traditional pepper spray. However there are the additional unique features and technology that been added towards this pepper spray which is camera and GPS sensor. The function of the GPS sensor is for users to connect with the registered numbers during emergencies and allow this sensor to locate the location of the users. Moreover, the main purpose of the camera is to capture the picture of the attacker automatically once the sprayed button is pressed.

#### 1.2 Purpose of Development

- To provide a smart defence device which enable 24 hours personal protection towards the individuals.
- To enable registered party to locate the position of the users.

#### 1.2 Product Concept

- Design for personal protection that offers a self-defence system.

#### 1.3 Applications

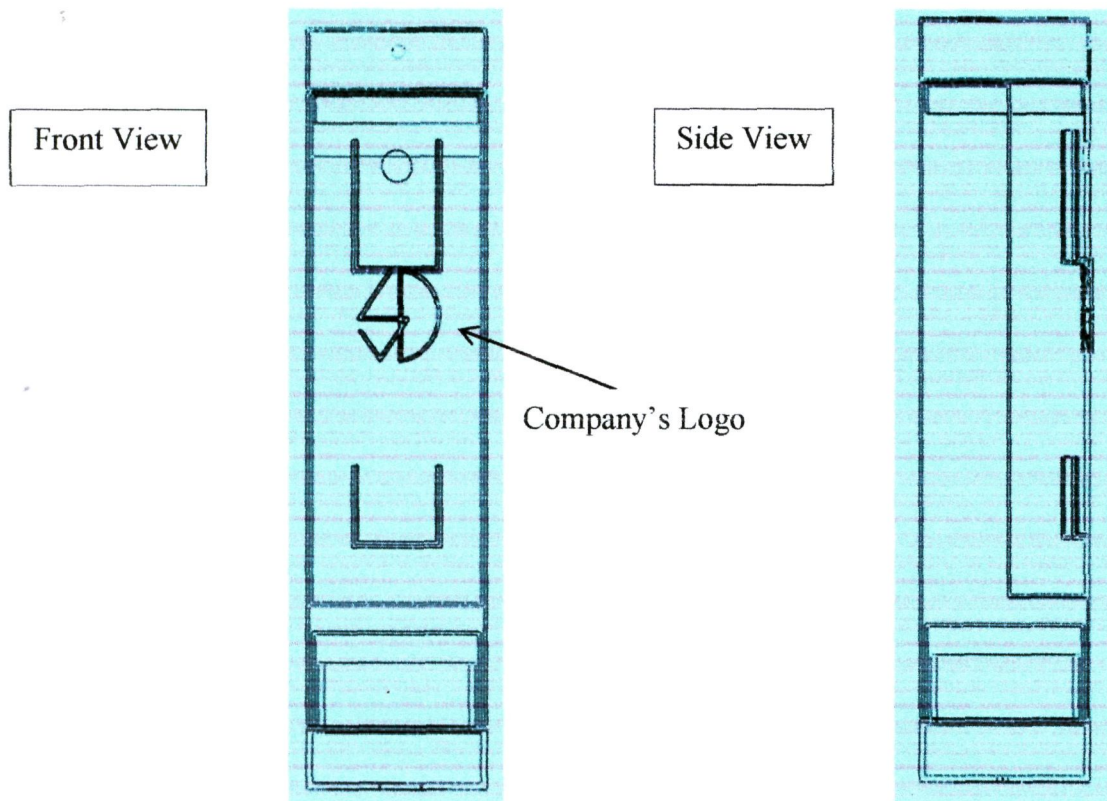
##### 1.3.1 Functions

- Spray system – as a path for spraying the pepper solution onto the attacker's eyes make the vision of the attacker temporary blind.
- Camera system = automated snaps the picture of the attacker and connects with the alert system.
- GPS sensor system – to locate the user's position.
- Alert system – the registered party aware of the information of the attacker's and the location of the user

### 1.4 Unique Features

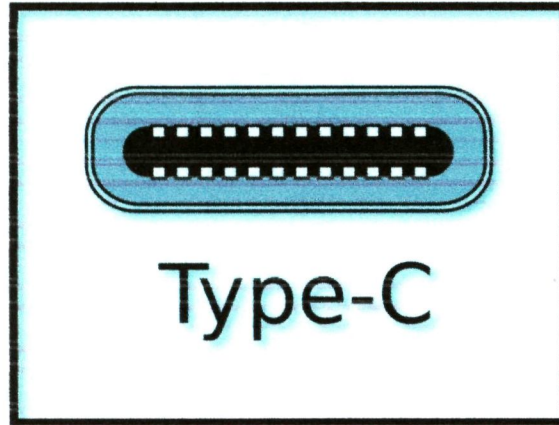
- **Alert system:** warn and inform the registered party by the GPS sensor in order to trace the location and assist the victim during the emergencies.
- **Micro camera:** allow the users to snap the picture of the attackers and uploaded it into the registered software.
- **Grip size:** ease of handling and convenience.
- **Refillable:** The pepper solution is refillable in the form of canister.
- **Rechargeable:** device consist of USB port charger

#### 1.4.1 Picture Description



## 2.2 Key Component and Function

### 2.2.1 Charging Port Dock Connector USB Type-C



#### Description:

The USB Type-C is a specification for a small 24-pin reversible-plug connector for USB devices and USB cabling. USB Type-C devices also support power currents of 1.5 A and 3.0 A over the 5 V power bus with an addition to baseline 900 mA. A device can either negotiate increased USB current through the configuration line. A Type-C port measure is just 8.4mm by 2.6mm. This means it's small enough to work for even the smallest peripheral devices. With Type-C, a USB cable's both ends will be the same, allowing for reversible plug orientation.

#### Specification:

Top speeds	10Gbps
Max power output	20V, 5A
Power direction	Bi-direction

Target supplier: Shenzhen Jisheng Electronic Co., Ltd.

Website: [http://www.nanguagu.com/p4\\_shenzhen-jisheng-electronic-co-ltd-5289.html](http://www.nanguagu.com/p4_shenzhen-jisheng-electronic-co-ltd-5289.html)