**VISHWAKARMA INSTITUTE OF INFORMATION TECHNOLOGY, PUNE**

**INFORMATION TECHNOLOGY DEPARTMENT**

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**Synopsis**

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**Group number: 60**

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**Title : Women Security Device**

**Objective :**

To design and develop a smart and handy security device for Women.

To alert people in its vicinity and relatives of victim about attack and also get the help form emergency services .

To track the user using google maps under crucial situation.  
 Module developed should be capable to work automatically under crucial situations.

**Abstract :**

**Briefs about Contents:**

1. **Introduction :**

Women Security device is a device which will help women to walk freely in streets anywhere and at anytime. The goal of the women security device is to provide protection to women from getting molested in different ways like rapes, sexual harassment, abuse etc.There are existing apps or devices to provide the security to women but there are drawbacks with these existing apps or devices. So to overcome such drawbacks and provide security in enhances way we are going to propose the women security device.

1. **Technical Details :**

Following modules/sensors to detect the crucial situation:

**1.Pulse rate sensor:**

Pulse rate will be the major parameter for the security device because

whenever the person is in danger person’s heartbeat gets increased. So using this parameter we can consider that person can be in danger.

**2.Temperature sensor:**

This is the second parameter can be considered as when the person is in

danger its temperature starts decreasing so this can be considered as one of the parameter to detect that the person is in danger.

**3.Motion sensor:**

This is third parameter we can consider as when the person is in danger due to

fear or anxiety person’s body starts shaking or shivering. So this can be considered as another parameter to send alarm message or call to the relatives.

**4.Voice Recognition.**

We will be using this parameter as well to detect the danger situation. We will

be recording the “HELP” word and when the person shouts when is in danger then by detecting and comparing it with the already recorded word and if it crosses the certain limit of intensity range then we can consider it as a danger situation to send alarm message or call to the relatives of the person.

Using above sensors will provide input to our device.

Also to track the user and to send emergency message to listed

contacts and to the nearest police station two modules are used:

**1.GPS module:**

Global positioning system (GPS) is able to determine the latitude and longitude of a receiver on Earth by calculating the time difference for signals from varios satellites to reach the receiver. In six different orbits approximately 12,500 miles above the earth, 24 MEO (Medium-Earth Orbit) satellites revolve around the earth 24 hours and transmit location every second as well as present time from atomic clocks and by monitoring blood flow through skin when is in contact with the wrist band at each pulse.

**2.GSM module:**

GSM is used to send data from control unit to base unit .We can use GSM 300 which operates at frequency 900MHz. It has up link band of 890MHz to 915MHz and down link Band of 935MHz to 960 MHz GSM takes advantages of both FDMA & TDMA. In 25MHz BW, 124 carriers are generated with channel spacing of 200 KHz (FDMA). Each carrier is split into 8 time slots (TDMA). At any given instance of time 992 speech channels are made available in GSM 300 [5], [6**].**

**Arduino** is used to process the data.

1. **Working :**
2. **Applications:**

Importance of the project :

In this world of advanced technology and smart electronics it is required to have a simple and cost-effective safety gadget that helps the victims during unforeseen dangers which is focused through this system. Women will feel safe and protected in the society using this device. The atrocities against the women can be brought to an end with the help of our product.

Expected outcome from the project:

A wearable security device which will be user-friendly and feature to train the device according to different users. Module to add and remove authorized people for sending alerts to them. Location will be considered while sending al

**References/Bibliography:**

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**[3]** Mr. Vaibhav A. Alone "A Study Based On Women Security System", International Journal of Science, Engineering and Technology Research (IJSETR) Volume 6, Issue 8, August 2017

**[4]** Shubham Sharma1 et.al., "IoT Based Women Safety Device using ARM7", 7 IJESC Volume 7 Issue No.5, 2017

**1. SHE (Society Harnessing Equipment):** It is a garment embedded with an electronic device. This garment has an electric circuit that can generate 3800kV which can help the victim to escape. In case of multiple attacks it can send around 80 electric shocks [3].

**2. ILA security:** The co-founders of this system, have designed three personal alarms that can shock and disorient potential attackers and hence safeguard the victim from perilous situations.

**3. AESHS (Advanced Electronics System for Human Safety):** It is a device that helps track the location of the victim when attacked using GPS facility.

**4. VithU app:** This is an emergency app initiated by a popular Indian crime television series “Gumrah” aired on Channel [V]. When the power button of the Smartphone is pressed twice consecutively, it begins sending alert messages with a link of the location of the user every two minutes to the contacts.

**5. Smart Belt:** This system is designed with a portable device which resembles a normal belt. It consists of Arduino Board, screaming alarm and pressure sensors. When the threshold of the pressure sensor crosses, the device will be activated automatically. The screaming alarm unit will be activated and send sirens asking help [4].