Smart Band

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ABSTRACT:

Since the crime rate on women harassment increases rapidly these days. The designeddevice used to ensure the safety of the women. The system monitors the heartbeat of the person. During the time of danger, the abnormality of the heartbeat is noted and triggers the process of sending a text message contains the geolocation of the person by the GPS installed in the system to the volunteers mobile.

Keywords: Women safety, Heartbeat, GPS, security.

I. INTRODUCTION:

Women endure a lot of kidnapping and sexual harassment these days which is alarming day by day. The situation is extremely serious in developing countries as well as underdeveloped ones. Consequently, it poses a significant challenge to women's empowerment as well as to a country's budgetary growth. For that, we are advancing a device that can make women's movement safer. If any incident occurs, this device can track the user's location in real-time and send it to the nearby police box and volunteer. The user can also get location of the nearest safe zone by this device as well. The user can still use the device to access the nearest police box and volunteer support. The device consists of Micro Controller, GPS, Heartbeat sensor. The aggregate of all these elements collectively offers this device to be affordable and easy to navigate.

II. COMPONENTS USED:

Monitoring Unit:

- **Pulse sensor** placed in person's wrist to regularly monitor the heartbeat of the person.

Alerting Unit:

- **GPS** is to provide the geo location of the person.

- **GSM** is used to send the collected geo location of the person in a text message format.

- **Node MCU** controls the whole process.
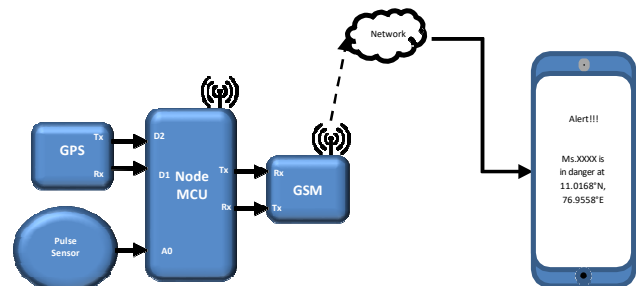
III. SETUP:

Monitoring Unit:

The pulse sensor monitors the persons heartbeat. In case of any danger situation, the abnormality of the person sensed and initiates the Alerting Unit

Alerting Unit:

The geo location of the person is fetched using GPS and the location data is sent to the Volunteers mobile using GSM
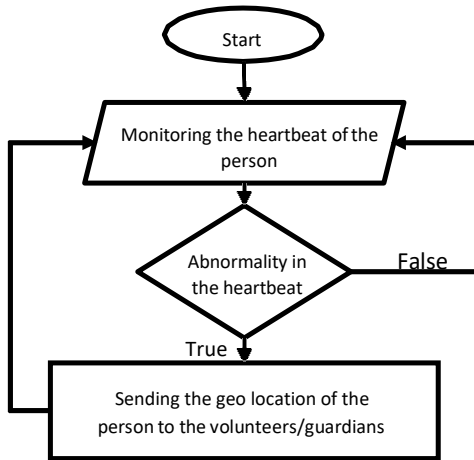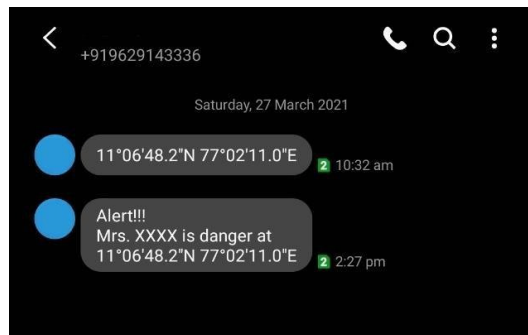
IV. BLOCK DIAGRAM:

V: WORKING PRINCIPLE:

The monitoring of the heartbeat is a regular process. If there any abnormality in the heartbeat (more than that of after workout/exercise, in case of panic situation) is sensed. Then the Node MCU initializes the alerting process. During that process, the geo location of the person is fetched using the GPS. The fetched information is sent through the GSM to volunteers/guardians of the person. This process continues till the person's heartbeat becomes normal.

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VI. OPERATION MODE:

VII. OUTPUT:

VIII. ADVANTAGES OF THE DESIGNED SYSTEM:

The design of the system encircles the scope of it by working with all gender of all age group. Additionally, we can make ensure of elderly and children health status with this system.

IX. APPLICATION OF THE DESIGNED SYSTEM:

Moreover, it is like a health band there it can be used regularly without causing any discomfort to the user. It is not needed to make any action to push alert (such as by pressing any button) during the time of kidnapping. With the GPS location we can easily track down the possible way of routing while kidnapping. During any sexual harassment, the women doesn't need to go to police station to file a complaint, we can automatically send a complaint report via Internet.

X. CONCLUSION:

By this system we can ensure the health and safety of the person using this system. As mentioned, women's empowerment alongside men can lead the nation to a better place, by this system we can greatly decrease the most happening criminal activity along the nation.

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