Smart Remainder SoS And Emergency Detection Device

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Abstract: The lack of a dedicated device to remind chronic patients when to take their medications, the difficulty in quickly pressing an SOS button, and most importantly the delay in communication between the time of an accident and contact with care takers or hospitals were the three factors that served as the inspiration for the project. A study found that prompt treatment could preventable most 85% of deaths brought on by minor and major heart attacks, strokes, and shortness of breath. Therefore, a visible SOS button would be adequate A side from that, data demonstrate that it is detrimental to one's health to take prescriptions as prescribed and to take the incorrect medication at the incorrect time. In addition, News18 reports that each year 36,579 persons pass away in motor vehicle collisions, 36,213 in two-wheeler collisions, 31,997 in truck and lorry collisions, and nearly 45,000 in incidents involving other modes of transportation. A delay in bringing the patient to the hospital accounts for over 76percent of deaths in each vehicle. Guardians were unable to reach the injured in half of the cases, or the victim was not helped to get to the hospital in time. In such a scenario, a device or technology that detect

Index Terms: SOS, heart attacks, strokes.

I. INTRODUCTION

The lack of a dedicated device to remind chronic patients when to take their medications, the difficulty in quickly pressing the SOS button and most importantly delay in communication between the time of accident and contact with care takers or hospitals are the three factors that served as the inspiration for the project.

II. LITERATURE SURVEY

Existing Model: Senior citizens living alone are vulnerable to panic situation due to safety reasons or sometimes medical conditions. This device can send an SOS call and simultaneously raise an alarm. Disadvantages of Existing model: This device does not respond until user press SOS button.

III. PROPOSED METHODOLOGY

In this proposed system, the LCD screen is used to display time, medicine names, the temperature sensor is used to sense the temperature of the chronic patients and the accelerometer it is a device that is used to measure acceleration force, the pulse sensor is used to measure the blood oxygen saturation, and the voice play back module which includes multiple message record / playback device.

IV. WORKING

1. The patient medicine details have been saved in the pre saved data and it will be shown in the LCD screen displaying at the correct timings.
2. If user/patient presses the SOS button if she/he falls.
3. The GPS module is activated that obtains the coordinate points of the location.
4. The temperature sensor values are noted at the instance when the SOS button is pressed.
5. And the pulse sensor is placed to measure the patient blood oxygen saturation.
6. Voice playback module is fixed as voice recording (and playback).

7. The GSM module is activated, which sends the SMS with the location from the GPS module, and the captured sensor values.
8. The message is sent to the presaved contact numbers in the device.
9. After a certain amount of time the sound sensor detects the sound by noise

V. METHODS

STEP 1: Pre-saving information about the names and timings of the user's medications, with an LCD panel and a buzzer alerting them when it is time. The body's temperature is measured using a temperature sensor. The human heart rate is measured via a pulses ensor.

STEP 2: The device has an SOS button that is slightly away from the user and less accessible in case of an emergency to prevent inadvertent button pushing. When pressed, the button uses the SIM900A GSM module to send a text message to the user's phone notifying it of its precise location as determined by the NEO-6M GPS module. Two MPU 6050 Accelerometers are installed in the device; they are arranged in two different orientations and continually collect any vibrational data that the gadget experiences. Figure shows the ongoing evaluation, comparison, and matching of the vibrational data to a machine learning model of typical unintended vibrations.

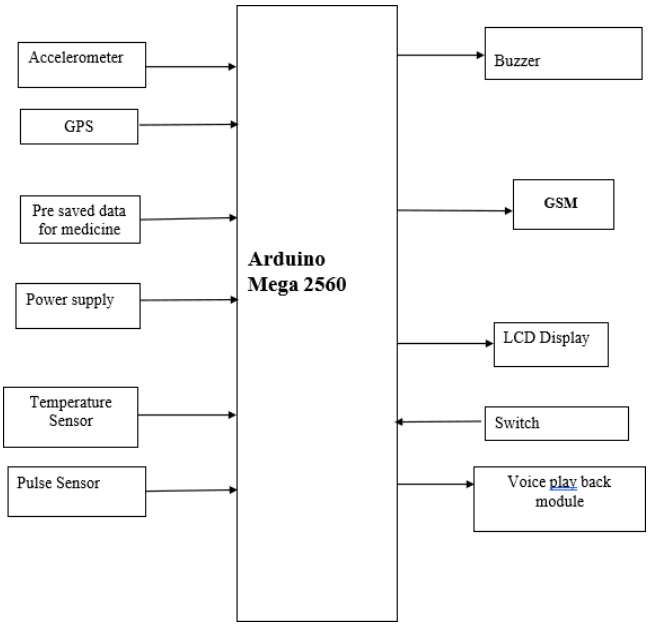
STEP 3: The user can choose a threshold for the level of match if a match is found between the data being collected and the previously saved model.

STEP 4: A constant track of the victim's whereabouts is sent to loved ones in the case that a different vehicle or pedestrian has tried to help by moving him to another nearby location or hospital.

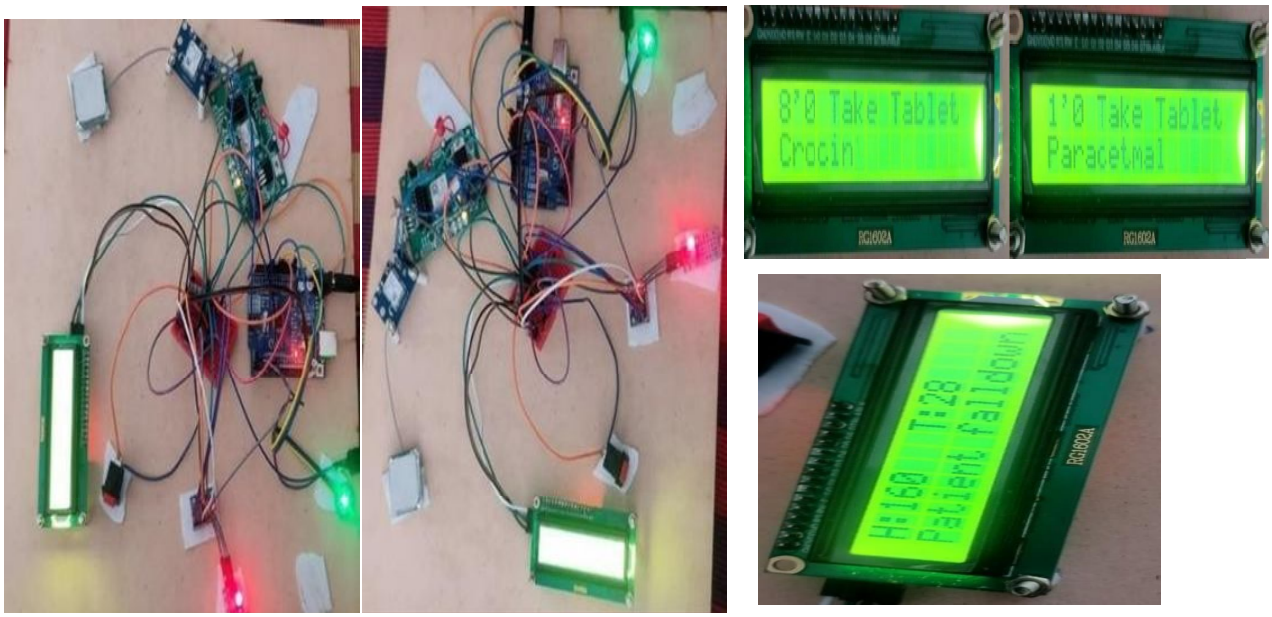
Software required

Thonny IDE:

- An integrated Python development environment for beginners is called Thonny (/ni/ THON-ee). Aivar Annamaa, an Estonian programmer, was the one who made it .It offers various methods for iteratively traversing the code, step-by-step expression evaluation, thorough call stack visualisation, and a mode for illuminating the principles of references and heaps.



- Feat
- Line references
- Stepping through statements without breakpoints
- Live variables during debugging,
- Stepping through expression evaluation (expressions are replaced by their values), replacing expressions with their values, and separate windows for calling functions (to explain local variables and the call stack).
- A more realistic model (name address/id value) or a simplified model (name value) can both be used to explain variables and memory.
- Simple pip GUI
- Support for CPython and Micro Python.



ADVANTAGES:

- Easy to alert an emergency response center of their need for urgent assistance.
- GPS positioning is not the most accurate but is in vicinity.
- Quick start to work.
- There is free version of the functionality.

DISADVANTAGES:

- A significant in the free version.
- There are not enough settings to use.
- Victim's family will also be helpless if the victim is out of station.

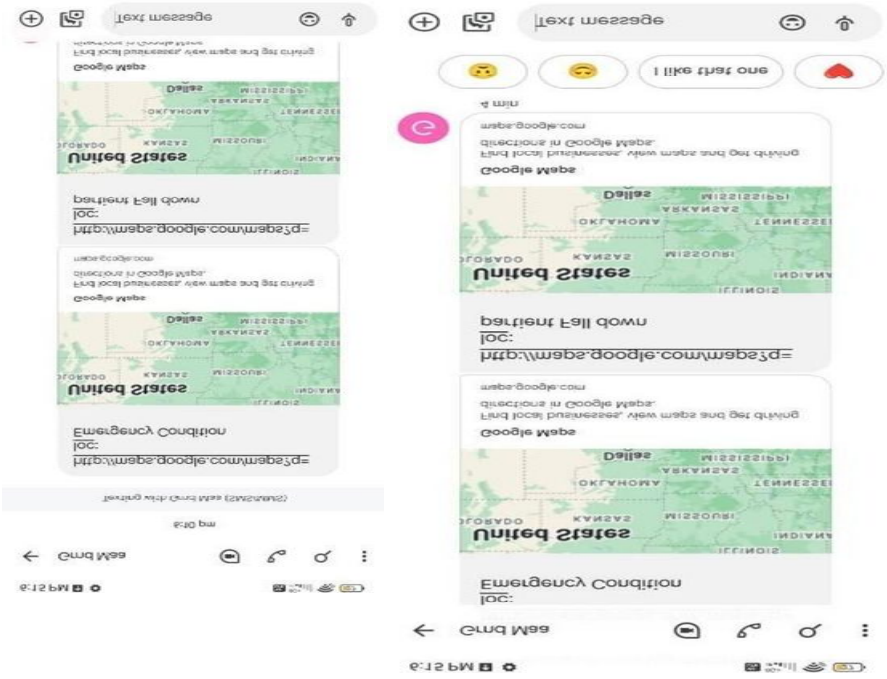


Fig 1. Location and alert message is sent to local guardian and parents

Monitoring the home patient and continuously assessing their condition of health is a particularly difficult chore in the routinely busy work. In order to prevent life-threatening circumstances, people of all ages, especially the elderly, should have frequent health checks and assessments. The goal of this project is to create a system that can recognize when an accident occurs, remind older adults to take their medications, and notify the family of the victim of the accident at pre-determined phone numbers. It also seeks out the closest hospital and notifies them of the accidents they can send help right away. This strategy has benefited in cutting down the amount of time it takes to respond to an accident by effectively reporting to the hospitals. The victims' lives could have been saved because of this. As a result, we considered creating a single gadget that might serve as are minders for chronic patients, an SOS device for elderly, disabled, and other vulnerable persons, as well as detect any type of accident or collision. We also aim to improve the device's functionality by giving it a brain of its own that can automatically detect any collision and send an email alert to the neighborhood watch group and the closes the hospital.

VI. CONCLUSION

Monitoring the home patient and continuously assessing their condition of health is a particularly difficult chore in the routinely busy work. In order to prevent life-threatening circumstances, people of all ages, especially the elderly, should have frequent health checks and assessments. The goal of this project is to create a system that can recognize when an accident occurs, remind older adults to take their medications, and notify the family of the victim of the accident at pre-determined phone numbers. It also seeks out the closest hospital and notifies them of the accidents they can send help right away. This strategy has benefited in cutting down the amount of time it takes to respond to an accident by effectively reporting to the hospitals. The victims' lives could have been saved because of this. As a result, we considered creating a single gadget that might serve as are minder for chronic patients, an SOS device for elderly, disabled, and other vulnerable persons, as well as detect any type of accident or collision. We also aim to improve the device's functionality by giving it a brain of its own that can automatically detect any collision and send an email alert to the neighborhood watch group and the closest hospital.

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