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CHILD SAFETY SYSTEM USING ANDROID APP

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ABSTRACT:

Starting late various occasions of missing youths is extended. Child's prosperity has reliably been a fundamental issue. Most by far of watchmen consider their child's prosperity. Undoubtedly, even in the 21st century where the advancement is rapidly creating and new contraptions were delivered at this point simultaneously child's are going up against issues yet Parents reliably worry over the probability of catching of their youths., For these issues our paper hope to layout and develop a Smart Wearable GPS device unit with Smart Android App which will follow the circumstance of the annexed child and moreover to screen kid each and every activity and Irregular Attacks. The structure involves two contraptions right now. One is the splendid contraption casual ID for kid's and changes the principal style of informal ID by then arrangement some model for youths and put a couple of sensors in it. The sensors will recognize children's status by then sent to the Parent. Moreover, make a scratched light to show adolescents' information. These devices screen kids status also as can be a Spangle at home. Carved Wireless Lamp can be set at home or watchmen's office. Gatekeepers can realizes their children's data by research scratched light Or they can check these information on Mobile application The crucial methodology is to infer minute region and a distress message to the cops and selected number like watchmen, family members, etc. Accordingly this paper goes for outfitting watchmen with a doubt that everything is great and useful for their child in right now.

1. INTRODUCTION

In a shocking revelation, a government specially made survey has found that more than 53% of children in India are subjected to sexual abuse, but most don`t report the assaults to anyone. It also found that every child have been physically abused. Relatives and persons known to the child or in a position of trust and responsibility were found to be the perpetrator's of child abuse in the country. In Delhi, eighteen children go missing

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every day on average. Only a few are harassment towards adults and women. Recently, the murder of seven year old Hasini from Chennai has set across shock waves. She went missing from her apartment and two days later she was found dead and severely abused. Another shocking incident just after the 7 year old girl Hasini`s death, three year old girl was being sexually beaten and in Chennai. She was found in a garbage yard with her mouth was gagged by rags. These all incidents happened against child made us to develop such a Smart security for child safety. It will help the child`s who are all feeling in security in external environments as well as it will helps them preventing from danger and to alert the parents while in danger. Smart security for child safety is an innovative safety application for child and anyone who needs assistance in an urgent situation. Children in all over the world are facing a lot of physical harassment and kidnapped by anyone. There is a need of advanced child security system to provide the safety measure in public places as well as travelling alone through public transports. This project provides a new model for the child security in public places which aims to provide the 100% safe environment. traced and restored to their parents. Childs security is a critical issue in today's world and it is very much needed for everyone over such an issue.

2. LITERATURE REVIEW:

[1] AkashMoodbidri, Hamid Shahnasser 2017 has proposed "Kid Safety Wearable Device" This undertaking depicts the idea of a brilliant wearable gadget for little children..The reason for this gadget is to enable guardians to find their kids easily. Wi-Fi and Bluetooth seem, by all accounts, to be a problematic medium of report between the parent and kid. Consequently, the focal point of this paper is to have a SMS content empowered correspondence medium between the youngsters' wearable and the parent as the earth for GSM portable correspondence is relatively present everywhere. At the point when Child is press the catch SMS sent to Parent gadget. UV radiation and SOS utilized optional gadget measure actualized was utilizing a splendid SOS Light and misery alert ringer introduce on the wearable gadget which when actuated by the guardians by means of SMS content should show the SOS flag brilliantly and sound a caution which an observer can

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without much of a stretch spot as an indication of pain.

Children Safety Using RFID, GPS, GSM" This Project comprises of RFID labels and perusers which are intended to investigate relegated with a label which holds the exact points of interest. When he/she enters the vehicle, the peruser peruses the individual's tag and stores the points of interest of passage and exit. This data is told to the concerned specialist through SMS utilizing GSM. The proposed framework encourages to think about the territory where the vehicle has crossed the way utilizing RFID. The GPS innovation associated with this framework helps in securing reports on understudy's ongoing area.

3. MODULES

- Flexi Force Sensor
- Temperature Sensor
- MEMS Accelerometer
- Alert Module

FLEXI FORCE SENSOR

Since this is a security framework, GPS watch ought to be constantly joined to the observed Child and evacuating or harming this gadget ought to be controlled. To accomplish this, a Flexi-Force Sensor

A.NasneenFathima, R.Chitra 2016 has proposed "Vehicle Tracking System for the passage and exit of a man in a vehicle. Every individual

is appended to the back of the gadget and it detects the grasp power of the gadget with the client skin. The gadget will send a SMS to the specialists if the gadget gets altered or expelled by any methods. To debilitate this security bolt highlight an approved Child Parents could essentially empower or incapacitate Wearable unit utilizing a Mobile Keypad.

MEMS ACCELEROMETER

MEMS (Micro-Electro Mechanical System)- based accelerometers are gadgets that measure the best possible quickening. At the point when a Child falls or Attacks, a 3-hub Digital MEMS Accelerometer sensor in the wearable gadget could detect this and caution the focal unit by means of remote correspondence which thus will send area and in addition kid every last Activity data are screen and show it

TEMPERATURE SENSOR

The term temperature sensor, with electrical thermometers, depicts a unit from at least one temperature sensor

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components and a use particular defensive of, for instance, association head, neck tube, thermo well or a hand grasp. The sensor component incorporated with the temperature sensor takes the genuine estimation and proselytes the deliberate temperature into an electrical flag. [2] discussed about Positioning Of a Vehicle in a Combined Indoor-Outdoor Scenario, The development in technology has given us all sophistications but equal amounts of threats too. This has brought us an urge to bring a complete security system that monitors an object continuously. Consider a situation where a cargo vehicle carrying valuable material is moving in an area using GPS (an outdoor sensor) we can monitor it but the actual problem arises when its movement involves both indoor (within the industry) and outdoor because GPS has its limitations in indoor environment. Hence it is essential to have an additional sensor that would enable us a continuous monitoring /tracking without cutoff of the signal. In this paper we bring out a solution by combining Ultra wide band (UWB) with GPS sensory information which eliminates the limitations of conventional tracking methods in mixed scenario(indoor and outdoor) The same method finds layer, which can comprise application in mobile robots, monitoring a person on grounds of security, etc.

ALERT MODULE

Because of the lower control nature of the gadget the remote radio correspondence standard, IEEE 802.15.4 is chosen for this task. In excess of one SMS and area can be sent in the event that it needs to. The technique encourages us to make any measure of predefined security zones inside a zone which isn't practical with human securities. [3] proposed a novel method for secure transportation of railway systems has been proposed in this project. In existing methods, most of the methods are manual resulting in a lot of human errors. This project proposes a system which can be controlled automatically without any outside help. This project has a model concerning two train sections and a gate section. The railway sections are used to show the movement of trains and a gate section is used to show the happenings in the railway crossings. The scope of this project is to monitor the train sections to prevent collisions between two trains or between humans and trains and to avoid accidents in the railway crossings. Also an additional approach towards effective power

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utilization has been discussed. Five topics are discussed in this project : 1) Detection of obstacles in front of the train;2) Detection of cracks and movements in the tracks;3) Detection of human presence inside the train and controlling the electrical devices accordingly 4) Updating the location of train and sharing it with other trains automatically 5) Controlling the gate section during railway crossing. This project can be used to avoid accidents in the railway tracks.

4. HARDWARE REQUIREMENTS:

The hardware requirements may serve as the basis for a contract for the implementation of the system and should therefore be a complete and consistent specification of the whole system. They are used by software engineers as the starting point for the system design. It should what the system do and not how it should be implemented.

- Arduino UNO
- MEMS Sensor
- Temperature Sensor
- Bluetooth TXR
- GPS Receiver
- LCD display
- RGB Light

4.1. SOFTWARE REQUIREMENTS:

The software requirements document is the specification of the system. It should include both a definition and a specification of requirements. It is a set of what the system should do rather than how it should do it. The software requirements provide a basis for creating the software requirements specification. It is useful in estimating cost, planning team activities, performing tasks and tracking the teams and tracking the team's progress throughout the development activity.

- Operating system : Windows 07/ 08
- Software : MPLAP X IDE
- Coding Language : Embedded "C"

5. SYSTEM ARCHITECTURE:

Child tracking is mainly based on two units GPS watch unit and Android monitoring unit. The GPS wearable device unit contains a GPS receiver, Flexi Force

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Sensor, Temperature Sensor, MEMS accelerometer. This device unit is attached to the hands of the Child. Using the GPS receiver we can monitor the movement of the students and child. This GPS receiver will work under the control of GPS satellite and then if the device unit is removed or gets tampered the Flexi Force Sensor will alert the authority with the help of Bluetooth Connection with Android App. This Flexi Force is available Sin the bottom of the watch which makes a grip we can monitor while they removing the watch unit from the hand. MEMS accelerometer present in the device unit is used for monitoring the sudden fall and Attack of the Child and child stages. This device unit will send the signals to the Android monitoring unit with Bluetooth communication. The fig.a, fig.b shows

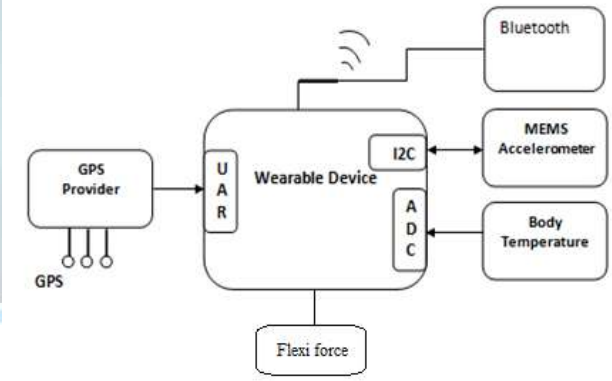

Fig a: Wearable device unit

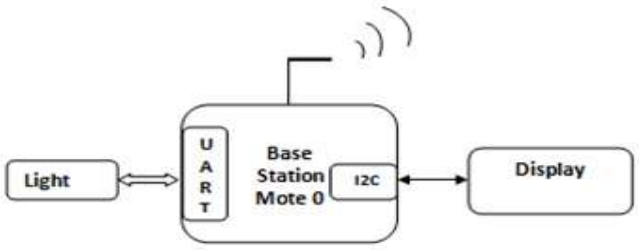

Fig b. Wireless Lamp Display

If the child crosses the given border line the signals will be send to the monitoring unit using the GPS receiver present in the GPS device unit. The monitoring unit

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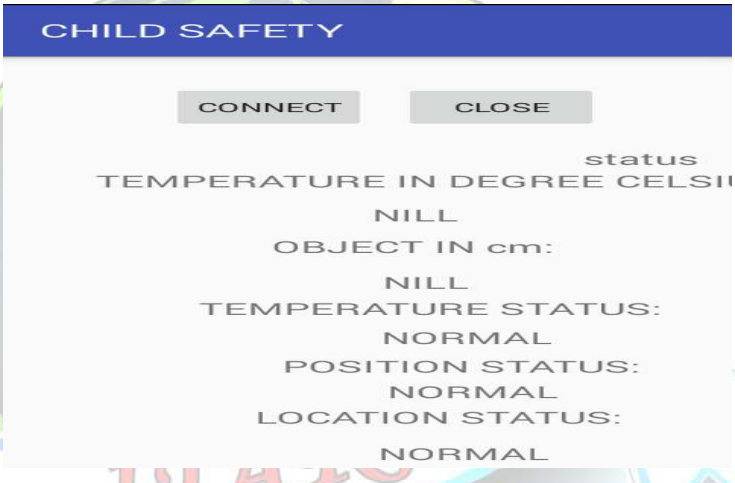
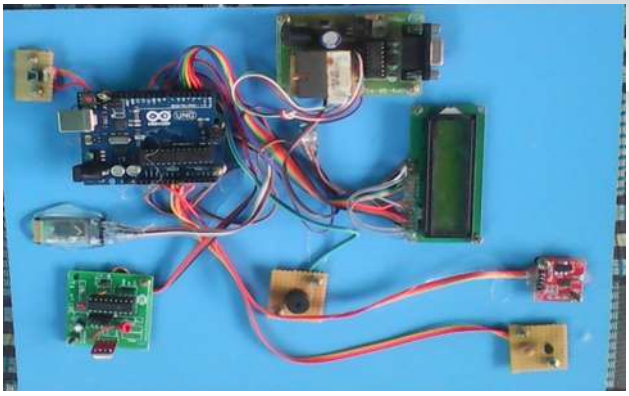
sends location to the Android Phone. Removing the device unit from the hand or gets damaged is prohibited. If it happens, it will alert the authority using the Flexi Force Sensor. If the children go inside any dangerous zone present inside the school campus it can also be monitored using the GPS receiver. Sudden fall or Attack of the Child can also be monitored using GPS device unit. It will send Help Request to Special Android App.

RESULT:

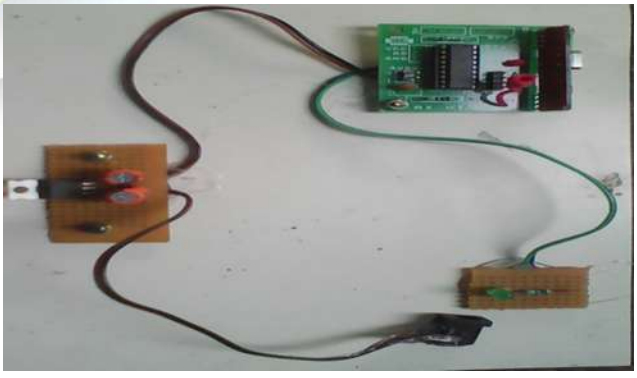
CHILD STATUS



WEARABLE DISPLAY UNIT



WIRELESS LAMP RGB LIGHT



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CONCLUSION:

This security Wearable Device will keep the child safe and also the abusement against the child will be decreased. The parent of child will get continuous update about their child status so that they cannot afraid about their child when they are not being with the child. This will create some fear to the persons those who all involving in harassment and child trafficking. As like well-known proverb "Prevention is better than cure", this application will prevent the child from harassment and kidnapping.

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