IoT Based Safety Gadget for Child Safety Monitoring & Notification

INTRODUCTION

The internet of things (IoT) refers to the set of devices and system that stay interconnected with real-world sensor and to the internet. During years' Child safety is under threat and it is very important to provide a technology-based solution which will help them under panic situations and monitor them using a smart gadget. The proposed system is equipped with GSM and GPS modules for sending and receiving call and SMS between safety gadget and parental phone, the proposed system also consists of Wi-Fi module used to implement IoT and send all the monitoring parameters to the cloud for android app monitoring on parental phone. Android application can be used to track the current location of safety gadget using its location coordinates on parental phone android app and also via SMS request from parent phone to safety gadget.

Tools Used

Hardware Requirements:

- Arduino Mega [ATMEGA 2560].
- GSM SIM 800C.
- GPS Neo 6m.
- 20X4 LCD.
- I2C LCD Driver
- 7805 Voltage Regulator.
- Heart Beat Sensor.
- DS18B20 Temperature Sensor.
- 1x4 Switch.
- ESP8266-12E
- Push Button
- Logic Level Convertor
- Buzzer
- LED
- ESP32
- OLED
- Jumper Cables

What is the utility involved?

Tools Used

Software Requirements:

- Arduino IDE
- Android Studio

->Languages Used:
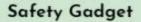- Embedded C
- Java

What is the: Future Scope of Work

This system can be further enhanced by installation of minicamera inside smart gadget for better security so that live footage can be seen on parental phone during panic situations. The system can be modified by installation of small solar panels for charging the battery of smart gadget to gain maximum battery backup.

Safety Gadget

Child Safety is an important commodity which families are seeking

Limitations

Power failure, Signal failure, Recognition failure