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## A smart wearable device for child monitoring and tracking system using IoT technology

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### ABSTRACT

*Parents today are concerned about their children and want to keep a constant eye on them. Since this is physically impossible, safety monitoring systems were developed to enable parents keep an eye on their kids' whereabouts from anywhere in the world. Child monitoring systems can aid parents who need to maintain tabs on their children's whereabouts as well as alleviate the big problem of missing children. The use of the geofencing technology enhances the ability to resolve this issue successfully. For determining the child's border, the system makes use of a Node MCU controller. When the child arrives, alert messages are received.*

**Keywords:** Monitoring, Safety, Node MCU, Voltage, Wifi and Children, etc .

### 1. EXISTING SYSTEM

Parents do not need to have a smart phone to use the current method. Information from the kit is retrieved using a set of keywords. To find the child's whereabouts, use the keyword LOCATION. The UV keyword is used to determine the ambient temperature. The device's built-in buzzer can be activated with the BUZZ keyword. SOS is used to transmit a signal to a gadget in an emergency situation.

#### 1.1 Proposed system

Establishing virtual boundaries to keep an eye on the child. Monitoring is enhanced by IoT platform adoption. It enables data to be sensed quickly and precisely. When a child crosses a certain threshold inside the home, the system will be able to generate an alert message through a web-based interface and immediately sound an alarm. As they can use this information to take action, this feature will assist the unit's work flow be optimised. For quicker and more accurate tracking, IoT technologies are deployed. It gives the parent the ability to consistently manage

their child's environment. It is not necessary to manually monitor. Excellent event management using data and real-time border alerts. An alert online notification is sent when the wearable device is not present.

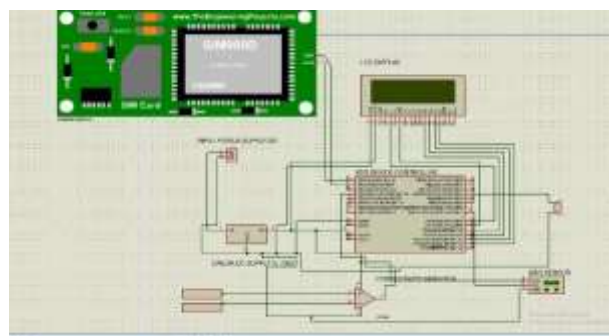


Chart-1 Circuit diagram

The circuit shown above includes the essential parts of the Node MCU controller, LCD display, conductivity sensor, buzzer, GSM module, Axis sensor, voltage regulator 7805, and power supply. The Node MCU controller, which controls the entire circuit, is its beating heart. Voltage regulator 7805 is used to convert the 12v supply to 5v. The controller board is then provided the 5v supply. LCD display data pins are coupled to various controller digital pins, including d2, d3, d4, d5, and d7. While VDD is connected to 5 volts, GND is connected to ground. Three pins are on the axis sensor. The VCC pin is linked to a 5 volt supply. Ground is connected to GND pin. The analogue pin of the Node MCU controller is connected to V0. In this circuit, a WIFI device is utilised to track the RSSI signal strength. The digital pins of the Wi-Fi equipment are connected to the data pins of the LCD panel. VDD is connected to 5 volts, and VSS is connected to ground. The buzzer has two pins, the positive pin of which is connected to the controller's D0 pin and the negative pin

of which is attached to the ground pin. The GSM module includes three pins: a ground pin, a transmitter pin, and a receiver pin. These three pins connect to a wifi device

## 2. CONCLUSION

This book is meant for parents and children. The idea was made to help parents keep an eye on and track their kids. With the aid of two components, such as RSSI and IOT technology services the application is constructed in, this project was given in-depth information about child tracking system. Finally, there is opportunity for improvement in this application. Features like emergency notifications can be added to improve the system.

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