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Project :	IoT Based Safety Gadget For Child Safety Monitoring and Notification
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IoT Based Safety Gadget For Child Safety Monitoring & Notification

Child tracker helps the parents in continuously monitoring the child's location. They can simply leave their children in school or parks and create a geofence around the particular location. By continuously checking the child's location notifications will be generated if the child crosses the geofence. Notifications will be sent according to the child's location to their parents or caretakers. The entire location data will be stored in the database.

Software Required:

Python IDLE

System Required:

RAM-Minimum 4GB Processor-Min. Configuration OS-Windows/Linux/MAC

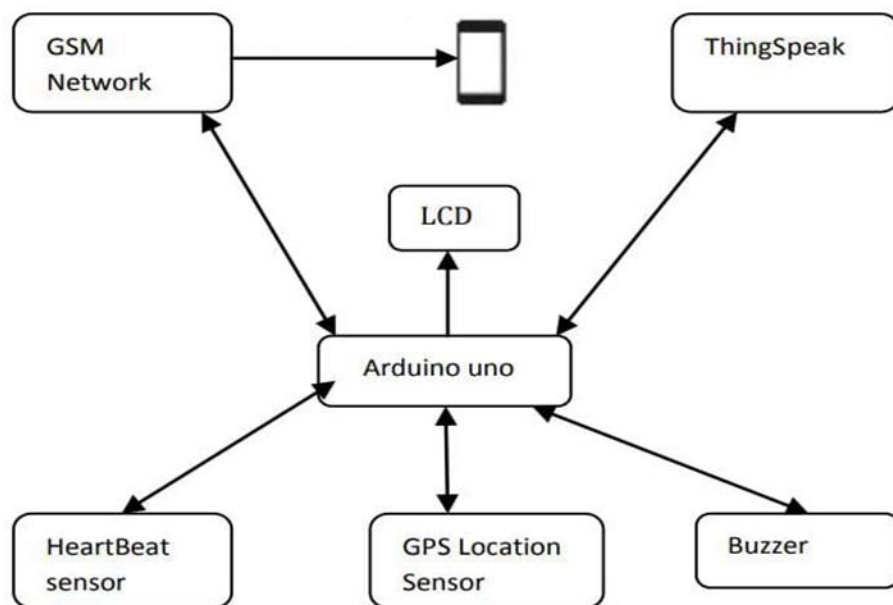


Fig -1: System Architecture

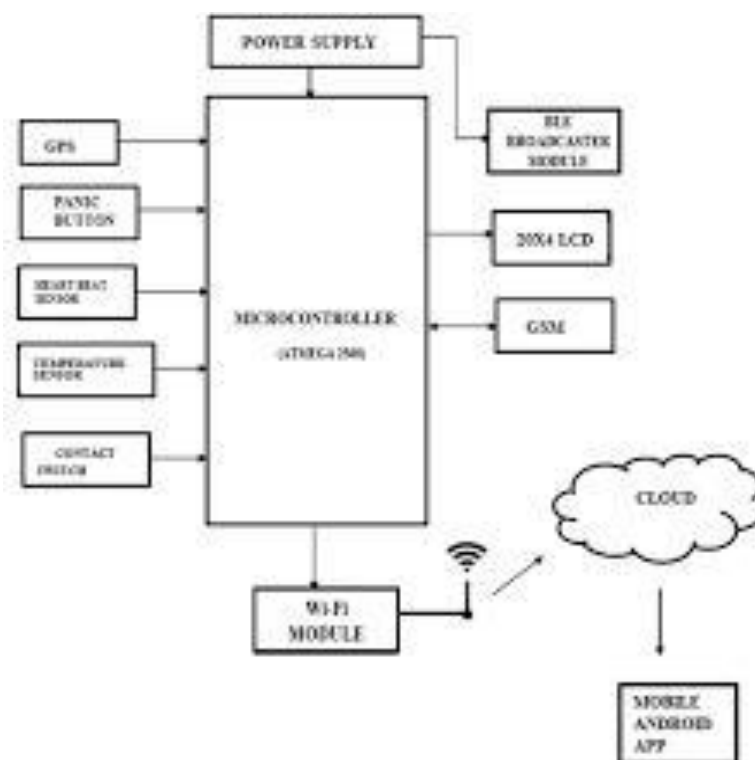
IoT Device

Parents need not have a smart mobile. Set of keywords are used to gain information from the kit. LOCATION keyword is used to obtain the location of the child. UV keyword is used to obtain the temperature of the surroundings. BUZZ keyword is used to turn on the buzzer

which is fixed in that device. SOS is used to send a signal to the device. In the existing system, we use a voice recognition module in which the alert commands from the child are stored and kept for further reference. If the same child delivers the same command, it will compare with the alert command which was previously stored and sets an emergency level according to the alert command. The GSM has a SIM which is used to send an alert message or an alert call to the trusted peoples. GPS is used to track the live location and it is used when needed. The server will search the respective device ID from the database and search for respective contacts according to that device ID and helps in alerting the registered guardians.

GEOFENCE

This application is designed to assist parents in monitoring children's movements in real-time. This child monitoring application with geofence facilities begins with an investigation of system requirements, followed by a system architecture design and a use case diagram design. Data needs in this system include the actors involved, namely children and parents. Children use smartwatches and parents use Android smartphones. The latitude and longitude positions of the child and parent are stored in the Firebase database. Geofences are set by parents and are used to restrict children's movement in certain areas. In designing this system, the haversine formula is used to calculate the distance between the child's position and geofence to find out whether the child is still in the permitted area. When the child leaves geofencing, a response will appear to the parents.



Data flow:

