

PROJECT DEVELOPMENT OF SPRINT 4:

CHILD SAFETY AND CHILD MONITORING DEVICE:

ABSTRACT:

For every 40 seconds, a child goes missing in this world. Children are the backbone of one's nation, if the future of children was affected, it would impact the entire growth of that nation. Due to the abuse, the emotional and mental stability of the children gets affected which in turn ruins their career and future. These innocent children are not responsible for what happens to them. So, parents are responsible for taking care of their own children. But, due to economic condition and aims to focus on their child's future and career, parents are forced to crave for money and for some other Reasons. Hence, it becomes difficult to cling on to their children all the time. In our system, we provide an environment where this problem can be resolved in an efficient manner. It makes parents to easily monitor their children in real time just like staying beside them as well as focusing on their own career without any manual intervention.

INTRODUCTION:

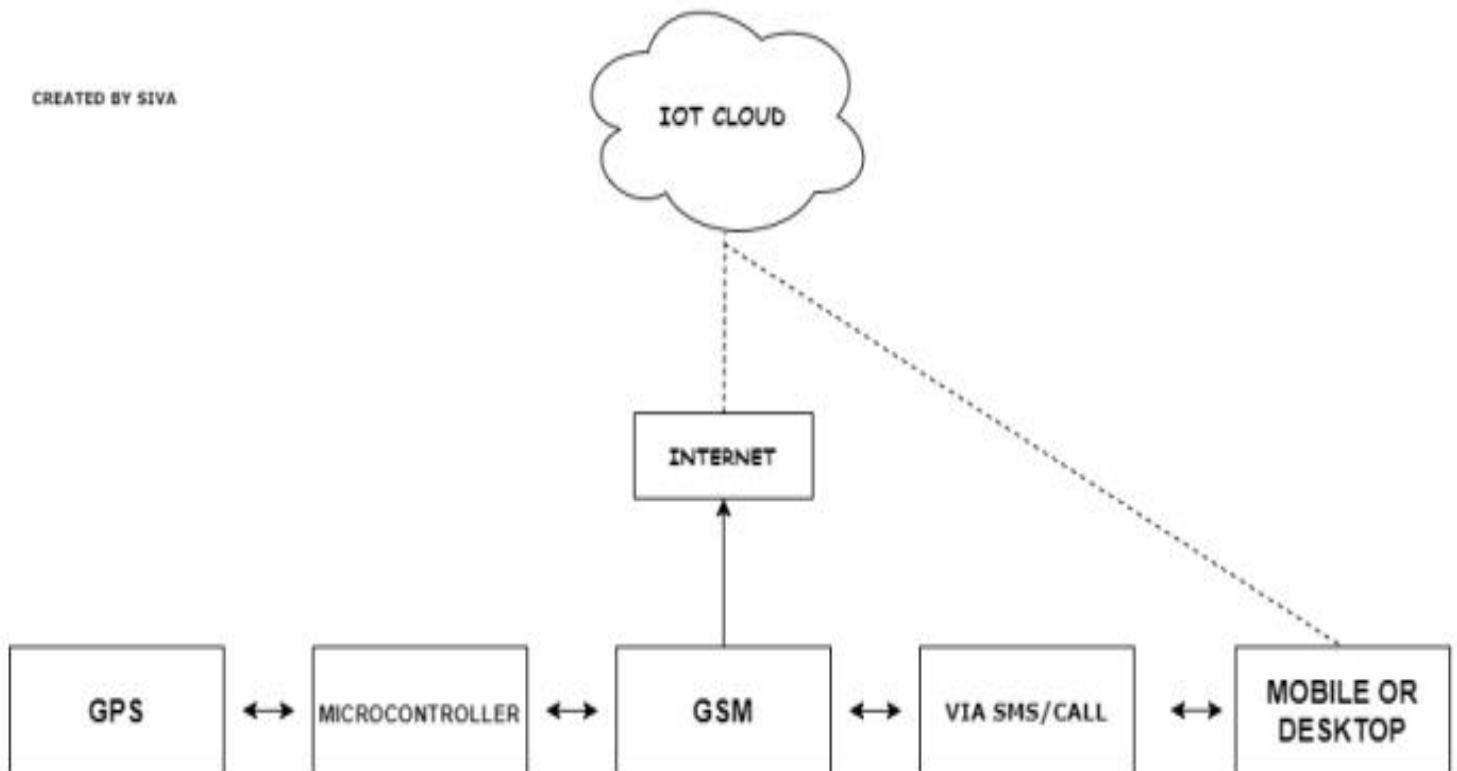
Basically, children cannot handle the Danger situations like getting kidnapped by strangers and Parents cannot identify or find them that they are Kidnapped or harassed or other danger situations. Children can't even realize what actually happens to them at their age. Since to prevent children an autonomous real-time monitoring system is necessary for every child out there. In this system, the collected values from every sensor like temperature sensor, pulse rate detection sensor and the location value from GPS are used to detect the status of the child and alerts the respective guardians using GSM and Via Internet (IOT) Accordingly.

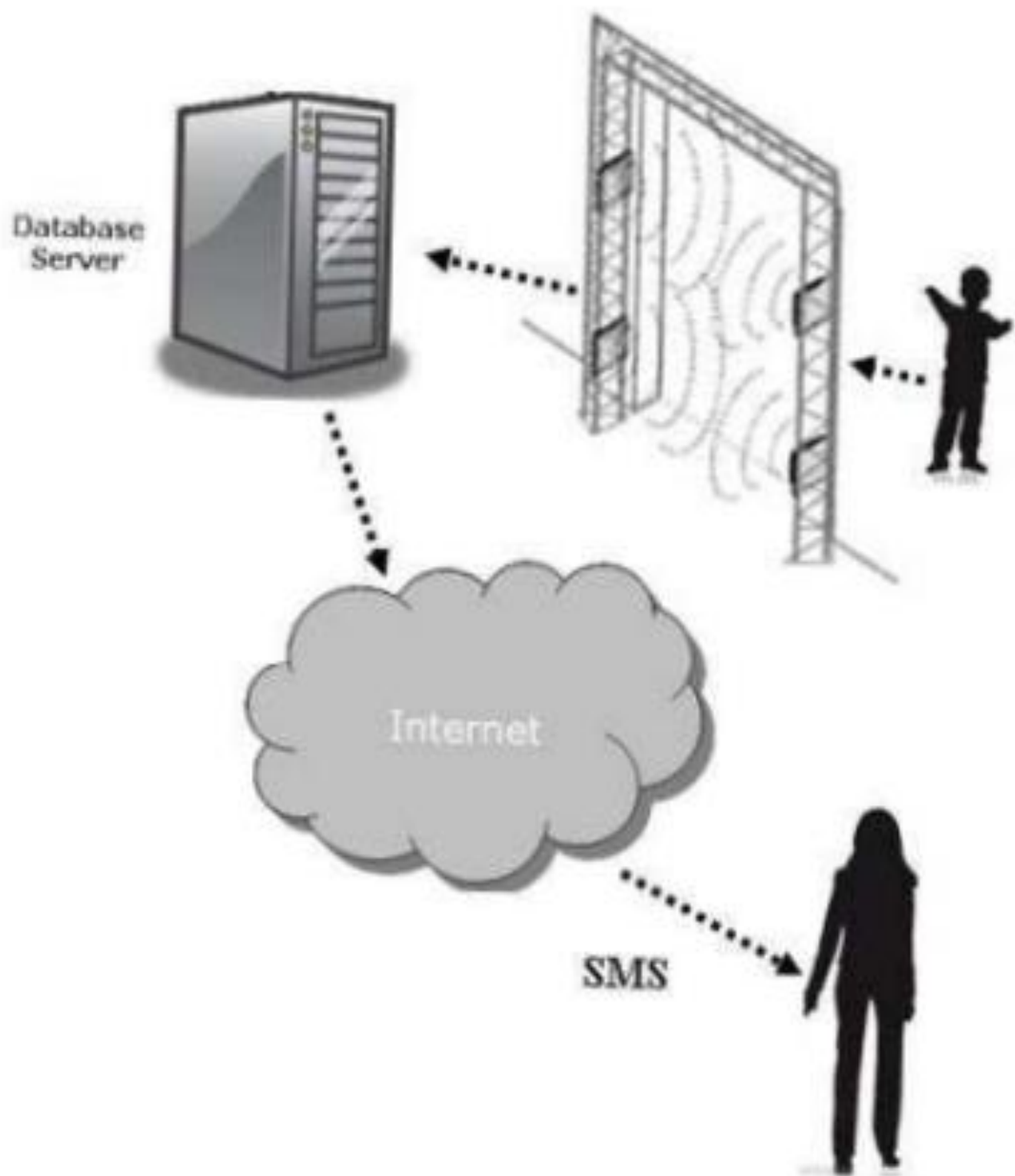
WORKING METHOD:

The working of the project is quite simple. I have configured Blynk application to use GSM as the communication protocol. In the Blynk part I have provided a Map

to show the location and value displays to display Latitude, Longitude, Speed, Direction and Number of satellites that can attain Location coordinates. Now, as soon as the device is powered up it gets its location by using the GPS module and then pushes it to the Blynk server through GSM which is then received and displayed on the Blynk application. As an emergency feature, I have added two microswitches in the PCB itself. Pressing one of which initiates a call to the mobile number mentioned in the code and the other sends a predefined emergency message to that number. I had also added the Geofencing Method that will create a user-defined geo-fence. If the child crosses the fence or the limit area, an alert has been sent automatically to the parents.

WORKING FLOWCHART:





COMPONENTS USED:



LilyGo – TTGO TCALL MODULE is used as microcontroller development board that consists of Inbuilt Wifi, Bluetooth and SIM800L GSM module.

EXPLAIN:

A developmental milestone is an ability that is achieved by any child by a certain age and thereby indicating the typical/healthy growth and development. Developmental milestone are comprised of Physical, cognitive, speech communication and Socio-emotional skills. Frequently playing with, talking to, singing to, and doing fingerplays with very young children. Sharing cardboard books with babies and frequently reading to toddlers on the adult's lap or together with one or two other children. You can include running, jumping, balancing, throwing, catching and other fun actions like jump roping or hula hooping. Yoga helps strengthen muscles and develop coordination and balance. There are many books and DVDs available to help teach yoga to children.

Daily activity is important for children in early years settings as it supports healthy growth and development. Physical activity needs to be incorporated from very early on, so that it becomes part of children's normal everyday routine. Identify the key milestones. ... Define each milestone in more detail. ... Get feedback and approval from stakeholders. ... Assign each milestone to a person/ team. ... Visualize your project phases using a Gantt chart.

Developmental milestones are a set of functional skills or age-specific tasks that most children can do at a certain age range. Your pediatrician uses milestones to help check how

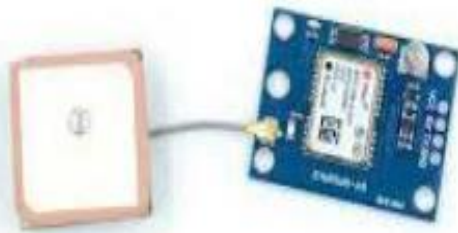
your child is developing. A milestone plan is a frequently used tool in project management and displays the milestones of one or more projects in chronological order. Its clear visualisation makes it easy to understand and highlights events of particular significance.

Using milestones helps managers to distribute resources effectively so that projects are delivered on time and on budget. Payments to vendors are often based on milestone completion - keep track and time payments to key suppliers with the completion of milestones. Project milestones help managers keep track of the schedule, deadlines and reach critical KPIs. With the achievement of successive milestones, management can also maintain a more accurate understanding of how the project is advancing according to the initial plan.

Atomicity: A milestone has no entry/exit point. ... No enforced ordering: Milestones can be passed in any order and repeatedly. ... Semantic Types: Milestones may have one or more semantic classifications that describe the milestone's role in an application's execution. The CPWF defines a milestone as a project deliverable that marks the completion of a set of activities, described in the project Gantt Chart. Progress reports are not counted as milestones, except for the Inception Report, which marks the completion of project inception. Separate tasks from project milestones. One of the first steps is to identify your milestones in the project.

Physical growth activities also include the development of self-care skills, such as eating, toileting, dressing and undressing. Engage in activities that foster independence. Exercise for children's growth and development. Physical activity is vital for a child's development because it doesn't just develop the body. Playing, running, jumping, sports, dance, and all forms of exercise play a role in a child's physical, mental, and emotional well-being.

Build endurance and develop strong muscles and bones. Maintain good sleeping patterns. Improve fine motor skills including balance, dexterity, and flexibility. Develop better social skills. Planning is vital to ensure that children's learning is effective, that they are making the required progress towards the early learning goals and is key to making learning effective, exciting, and progressive, ensuring all children have access to the same development opportunities and enjoy a balanced curriculum. Play improves the cognitive, physical, social, and emotional well-being of children and young people. Through play, children learn about the world and themselves. They also learn skills they need for study, work and relationships such as: confidence.



NEO-6M GPS MODULE is used For Sending GPS Coordinates Inorder to get Live location.



PUSH BUTTON is used for Intimating SOS Alerts In the Format of CALL/SMS.



3.7V LITHIUM POLYMER BATTERY is used as Power source as it is Light weight and Rechargeable About 1500 Cycles.

