

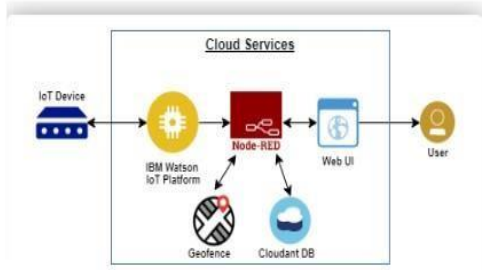
## Project Design Phase-I

### Proposed Solution

Date	19 September 2022
Team ID	PNT2022TMID11670
Project Name	IoT Based Safety Gadget for Child Safety Monitoring and Notification
Maximum Marks	2 Marks

S.No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	A parent has to ensure the safety of his child from anywhere in case of need

2.	Idea / Solution description	<p>Three Steps:</p> <p><b>1.Location tracking</b></p> <p><b>2.Mapping the coordinates</b></p> <p><b>3.Send message to parents</b></p> <p>Step 1 generally requires a GPS module and the coordinates need to be updated periodically</p> <p>Here we are going to use an assumed longitude latitude location in python code</p> <p>Step 2 is done using world map node in NODE RED app facility in IBM Cloud that maps the coordinates on map as a pin location</p> <p>This location is also fed to geofence node that checks whether the location is within the radius or not</p> <p>Step 3 ensures message is shown if location is not inside geofence area</p> <p>For real world application GPS module can be given to children in form of watch or any other sophisticated gadget</p>
3.	Novelty / Uniqueness	<p>Parents will receive accurate location anytime anywhere (they will know if the child is in the geofence or not)</p>

4.	Social Impact / Customer Satisfaction	<p>Child Safety will be within reach for the parents</p> <p>Gadget will be childsafe and environment friendly</p>
5.	Business Model (Revenue Model)	<p>Technical Architecture:</p>  <p>The diagram illustrates the technical architecture of the system. It shows an IoT Device connected to a Node-RED hub. The Node-RED hub is connected to a Web UI, which is then connected to a User. The Node-RED hub also interacts with several cloud services: IBM Watson IoT Platform, Geofence, and Cloudant DB. The Web UI also interacts with the Cloudant DB. The entire system is labeled 'Cloud Services'.</p>
6.	Scalability of the Solution	<p>Requires proper internet connection for working with cloud</p>