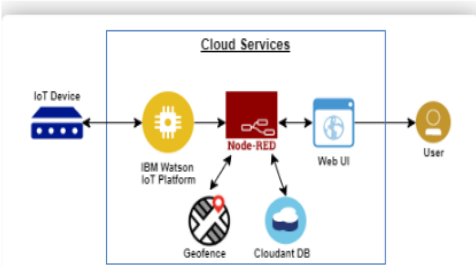


## Project Design Phase-I Proposed Solution

Date	19 September 2022
Team ID	PNT2022TMID21372
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> <ol style="list-style-type: none"> <li><b>1.Location tracking</b></li> <li><b>2.Mapping the coordinates</b></li> <li><b>3.Send message to parents</b></li> </ol> <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	Parents will receive accurate location anytime anywhere (they will know if the child is in the geofence or not)
4.	Social Impact / Customer Satisfaction	Child Safety will be within reach for the parents Gadget will be childsafe and environment friendly
5.	Business Model (Revenue Model)	<p><b>Technical Architecture:</b></p>  <p>The diagram illustrates the technical architecture of the system. It features an 'IoT Device' on the left, which connects to a central 'Cloud Services' box. Inside this box, the data flows from the 'IoT Device' to the 'IBM Watson IoT Platform' (represented by a yellow gear icon). From there, it goes to 'Node-RED' (a red square icon), which then connects to the 'Web UI' (a blue square icon). The 'Web UI' is linked to a 'User' (represented by a person icon). Additionally, 'Node-RED' has bidirectional connections with 'Geofence' (a circular icon with a red dot) and 'Cloudant DB' (a blue circular icon with a cloud). The entire 'Cloud Services' section is enclosed in a blue-bordered box.</p>
6.	Scalability of the Solution	Requires proper internet connection for working with cloud