**Project Design Phase-II**

**Solution Requirements (Functional & Non-functional)**

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| Date | 16 October 2022 |
| Team ID | PNT2022TMID35083 |
| Project Name | Project - IOT Based Safety Gadget for Child safety  Monitoring & Notification |
| Maximum Marks | 4 Marks |

**Functional Requirements:**

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| --- | --- | --- |
| **FR No.** | **Non-Functional Requirement** | **Description** |
| NFR-1 | **Usability** | It can easily track and monitor the location of the child and share the information to parents |
| NFR-2 | **Security** | The cloud database is highly secured and it prevent data from hacking issues |
| NFR-3 | **Reliability** | Safety of the children is assured all the time. |
| NFR-4 | **Performance** | Monitoring the child whether he/she is within the geofence |
| NFR-5 | **Availability** | To check the presence of child within the geofence area |

Following are the functional requirements of the proposed solution.

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| **FR No.** | **Functional Requirement (Epic)** | **Sub Requirement (Story / Sub-Task)** |
| FR-1 | User Registration | Registration through Gmail  Registration through Number |
| FR-2 | User Confirmation | Confirmation via Email and OTP |
| FR-3 | User Login | login through User Id and Password |
| FR-4 | Network Connectivity | via wifi/mobile data  Internet connection with at least 10 to 20 kbps |
| FR-5 | IBM IoT Platform | Access cloud storage via internet and it gives coordinates |
| FR-6 | Node-RED | World Map node- Coordinates are converted into map location.  Geofence - ensures the child is within the geofence |
| FR-7 | Fast2sms | used to send pop up messages. |

**Non-functional Requirements:**

Following are the non-functional requirements of the proposed solution.

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| --- | --- | --- |
| NFR-6 | **Scalability** | It can be adapted to both local and also larger areas based on the customer preference. |