

Project Design Phase-II

Solution Requirements (Functional & Non-functional)

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| Date | 03October 2022 |
| Team ID | PNT2022TMID28269 |
| Project Name | Signs with smart connectivity for better road safety |
| Maximum Marks | 4 Marks |

Functional Requirements

Following are the functional requirements of the proposed solution.

| FR No. | Functional Requirement (Epic) | Sub Requirement (Story / Sub-Task) |
|--------|-------------------------------|--|
| 1 | User Registration | Registration through Form Registration through Gmail |
| 2 | User Confirmation | Confirmation via Email Confirmation via OTP |
| 3 | IoT devices | To do Automation Work without manually |
| 4 | Python code | To give some input to the devices for performing some action to complete the tasks very easily |
| 5 | OpenweatherMap | To check the weather,humidity,Temperature,slippery of roads for safety purpose |
| 6 | IBM Cloud | To predict the terms such as weather and accidents. And application will be available as pubic version after deployment |
| 7 | Node-Red | To integrate the Hardware devices with the web application and GUI application for linear workflow |
| 8 | Web UI | User interface (UI) is anything a user may interact with to use a digital product or service. |
| 9 | User | By using the above applications ,the user can easily get to know prior information regarding road safety |

Non-functional Requirements

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

| FR No. | Non-Functional Requirement | Description |
|--------|----------------------------|--|
| 1 | Usability | To avoid unwanted accidents and ensure the safety |
| 2 | Security | If the data should be encrypted strongly by using high secured network and the fire wall cannot be broken from foreign users |
| 3 | Reliability | For to ensure the network presence at every place ,we can offer free data pack after the instance user creates their account |
| 4 | Performance | The performance of these applications is easy to access for all peoples |
| 5 | Availability | By using smart traffic light ,traffic control systems and artificial Intelligence can contributed |
| 6 | Scalability | These application can be supported for all users without degradation of quality of services |