

Project Design Phase-II
Solution Requirements (Functional & Non-functional)

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| Date | 03 October 2022 |
| Team ID | PNT2022TMID52641 |
| Project Name | Predicting the energy output of wind turbine based on weather conditions |
| 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) |
|--------|---|--|
| FR-1 | User Registration | Registration through Gmail Registration through form |
| FR-2 | User Confirmation | Confirmation via Email Confirmation via OTP |
| FR-3 | User login into website | Login using credentials Forgot password/change password for updating user credentials |
| FR-4 | Displaying further information about the site | To know more about the site, user can click on the about button |
| FR-5 | Enter required parameters | Inputs like city name, area and more |
| FR-6 | Validating all required fields | System checks whether all the required fields are filled and those values are correct |
| FR-7 | Displays weather conditions of entered city | Climatic conditions of the entered city will be displayed to the user |
| FR-8 | Displays prediction results | User can view the results predicted |
| FR-9 | Download prediction results | Download as jpg/png, download as pdf |
| FR-10 | Logout from the site | User can log out from the site using the option provided |

Non-functional Requirements:

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

| FR No. | Non-Functional Requirement | Description |
|--------|----------------------------|--|
| NFR-1 | Usability | The responsive website satisfies the user needs and is easy to use. |
| NFR-2 | Security | Login credentials will be protected from attacks and of single use only. If it doesn't match the existing one, it shows error message. Number of attempts to login to the site is limited |
| NFR-3 | Reliability | User interface to guide the users throughout the website. |

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| | | User credibility is maintained by means of social proof System provides the precise output without generating errors |
| NFR-4 | Performance | Site evaluates the user queries quickly |
| NFR-5 | Availability | User can access the site from anywhere, anytime. |
| NFR-6 | Scalability | With sufficient internet access, the system can be used as a web application to handle users from multiple users. |