

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

Date	15 October 2022
Team ID	PNT2022TMID53075
Project Name	Project - Predicting The Energy Output Of Wind Turbine Based On Weather Condition
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 Form Registration through Gmail Registration through LinkedIn
FR-2	User Confirmation	Confirmation via Email Confirmation via OTP
FR-3	User Login Into Website	Login using user entered credentials during registration Change/Forgot Password by updating user credentials
FR-4	User Profile Edit Option	Edit through Form
FR-5	Navigate Through Website Menu	Explore through Menu option in taskbar Explore through Search function in the home page
FR-6	Enter Wind And Other Required Parameters	Entry through Form
FR-7	Evaluate Wind Parameters	Model evaluating parameters submitted through form
FR-8	View Wind Power Prediction	Display prediction results in website window
FR-9	Download Prediction Results	Download as image Download as PDF Download and share to Email
FR-10	View Previous Evaluations	Navigate through User profile Navigate through previous pages of website window
FR-11	User Log Out Of Website	Logout through option provided.
FR-12	Admin Role Login to the website	Login through the admin-only restricted Login page using login credentials.
FR-13	Admin adds content, new subpages and publishes content to the assigned pages	Add content to the super admin-assigned pages Make changes to the content Publish content in the super admin-assigned pages
FR-14	Super Admin adds content and access all items on the website	Add content to all pages Publish content on all pages Add new pages without restriction Edit site design and layout Edit site permission settings Monitor site traffic and make decisions
FR-15	Admin Role Logout from the website	Logout through option provided.

**Non-functional Requirements:**

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

FR No.	Non-Functional Requirement	Description
NFR-1	<b>Usability</b>	The website is responsive in various devices like computers and mobile devices.
NFR-2	<b>Security</b>	The user registration and login credentials are of single use - show error messages if credentials don't match an existing user profile. Limiting number of Login attempts. User credentials are stored with a unique ID - salting and hashing. Stored data can be protected using cloud security services.
NFR-3	<b>Reliability</b>	Well designed user interfaces to steer users through the website correctly. Historical data used for prediction is updated frequently. Building credibility by mentioning contact means of the website and through social proof. Install SSL Certificate. Website is fault-tolerant. Any critical failures are solved within 24 hours or less.
NFR-4	<b>Performance</b>	Website gives quick evaluation responses to user queries.
NFR-5	<b>Availability</b>	Website is available to users for use at all times of the day. Any maintenance work is priorly mentioned and done in less time.
NFR-6	<b>Scalability</b>	Website is equipped to handle requests from multiple users through cloud services. Volume of historic data from prediction is scaled.