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

Date	19 October 2022
Team ID	PNT2022TMID21736
Project Name	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 Gmail
FR-2	User Confirmation	Confirmation via Email
FR-3	User login into website	Login using credentials
FR-4	Home page of the website	Description of the Predictor app
FR-5	Redirection to prediction page	Clicking on a button from home page takes user to next page
FR-6	Enter required parameters	Inputs like city name, area and more
FR-7	Validating all required fields	System checks whether all the required fields are filled and the linked API has the weather condition of the city mentioned
FR-8	Displays weather conditions of of the entered city	Climatic conditions of the entered city will be displayed to the user from the API on the webpage
FR-9	Displays prediction results	Users can view the energy output of the entered weather conditions
FR-10	Download prediction results	Download as jpg/png, download as pdf
FR-11	Logout from the site	User can log out from the site

Non-functional Requirements:

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

FR No.	Non-Functional Requirement	Description
NFR-1	**Usability**	The system satisfies the user goals and the application 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 an error message. Number of attempts to login to the site is limited

NFR-3	**Reliability**	The system will provide consistency in output without producing an error. Prediction Model is well trained
NFR-4	**Performance**	Prediction Model will be well trained and accurate with a accuracy above 70 percent to predict correct results
NFR-5	**Availability**	Users can access the site from anywhere, anytime. The resources to the website like the API to get weather conditions will be available at all time
NFR-6	**Scalability**	With sufficient internet access, the system can be used as a web application to handle multiple users.