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

Date	12 October 2022
Team ID	PNT2022TMID51589
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 and logging in by entering their username and password.	Registration through Form.
FR-2	User Confirmation by validating the username with respect to the password	Confirmation via pop-up Message.
FR-3	Displaying the further information about the application.	By selecting the about button the details of the application will be displayed.
FR-4	Validating the city name.	System checks whether the city entered by the user is present or not. If present it will collect the further details else it will display the pop-up message as error in the city.
FR-5	Checking the data type of the value.	System checks for the data type of the value entered by the user.
FR-6	Validating all required fields.	Before predicting the output the system checks whether all the values are entered by the user and checks whether all values are correct.
FR-7	Displaying weather conditions for a given city.	It displays the weather of the city which have been selected.
FR-8	Displaying predicted energy output power.	The predicted output will be displayed as amount of wind energy power generated.

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**	The data provided to system will be protected from attacks and unauthorized access
NFR-3	**Reliability**	The system will provide the consistency in output without producing an error.
NFR-4	**Performance**	The performance will never degrade even the workload is increased.
NFR-5	**Availability**	The application is available for 24*7
NFR-6	**Scalability**	The system can be used as web application as well as mobile application with a sufficient internet availability.