

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

Title: Predicting the energy output of wind turbine based on weather condition

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 Registration through Form by entering their username and password.
FR-2	User Confirmation by validating Confirmation via pop-up Message the username with respect to the password
FR-3	Displaying further By selecting the about button the details of the information about the application will be displayed application.
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 System checks for the data type of the value entered by value 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 It displays the weather of the city which has been for a given city selected.
FR-8	Displaying predicted energy The predicted output will be displayed as the amount of output power. 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 unauthorised access
NFR-3	Reliability The system will provide consistency in output without producing an error
NFR-4	Performance The performance will never degrade even if the workload is increased.
NFR-5	Availability of The application is available for 24*7
NFR-6	Scalability The system can be used as web application as well as a mobile application with sufficient internet availability.