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

Date	15 October 2022
Team ID	PNT2022TMID33022
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.

Energy Forecasting

FR No.	Functional Requirement (Epic)	Sub Requirement (Story / Sub-Task)
FR-1	Registration	Registration through Application If customer wants to check their weather, temperature, Humidity they must be registered first.
FR-2	Login	After registration Confirmation were received via Email. • User received confirmation, He/ She can Login through valid user id and password you provide.
FR-3	Location	Turn on location service for getting better local search results and Detect location by GPS and network.
FR-4	Modify Location	• Search and Manage the Multiple location. • Customer can see weather in any places you like.
FR-5	Forecast for free	• This Application offers daily weather, hourly weather forecast . • Forecasts which includes atmospheric pressure, weather condition, visibility distance, relative humidity, wind speed and direction, in addition to 32 hourly future weather forecast.
FR-6	Predict the wind energy	From the output of the wind speed customer can easily predict the Energy outcome through the weather condition
FR-7	Store & Share	The report what are the customer get collected has option to save and share through email, messages, etc,..
FR-8	Reports	The Final report that customer should get , • Hourly and Daily forecast • Pressure, Temperature, Humidity, Wind Speed. • The prediction of energy.

Non-functional Requirements:

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

FR No.	Non-Functional Requirement	Description
NFR-1	Usability	Application should be easily used by the customer.
NFR-2	Security	• A web application firewall works by inspecting and, if necessary, blocking data packets that are considered harmful. • Application security enhance the security of an application by making it less vulnerable to threats
NFR-3	Reliability	The ability of the application working constantly in the way of user acceptable manner when working within the specified environment over a set duration of time.
NFR-4	Performance	• The application helps in predicting the energy produced by the wind turbine. • By selecting the location over the local area or world wide we can easily get the wind speed, Pressure, humidity and so on based on the location we selected. • Using this information customer can easily predict the energy produced by the wind turbine. • Performance should be very accurate and reliable.
NFR-5	Availability	This application forecast the live information and should be available at all times. The user can access the application by using a web browser, only restricted by the down time of the server on which system runs.
NFR-6	Scalability	Application scalability may depends upon the response time of the particular software and also based on the network usage and memory usage.