

Project Development Phase

User Acceptance Testing (UAT)

Date	18 February 2026
Team ID	LTVIP2026TMIDS90282
Project Name	Weather-Based Prediction of Wind Turbine Energy Output: A Next-Generation Approach to Renewable Energy Management
Maximum Marks	

User Acceptance Testing(UAT):

A UI is provided for the user where he has to enter the values for predictions. The entered values are given to the saved model and prediction is showcased on the UI.

This section has the following tasks

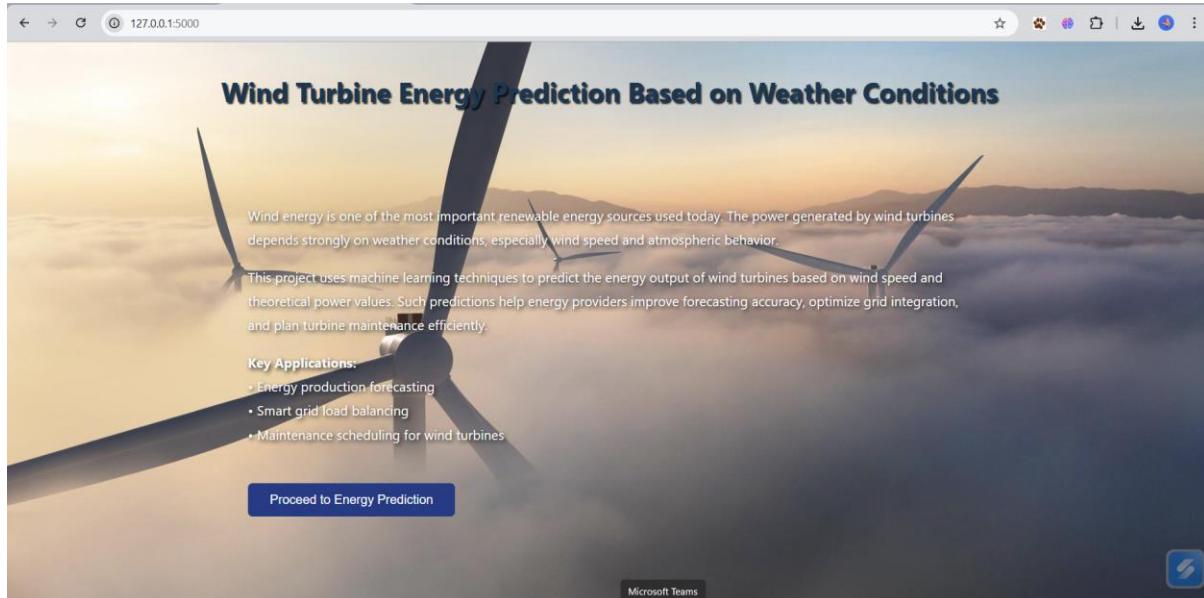
- Building HTML Pages
- Building serverside script

Activity1: Building Html Pages:

For this project create three HTML files namely

- intro.html
 - predict.html
- and save them in templates folder.

Let's see how our intro.html page looks like:



Now when you click on predict button from bottom you will get redirected to predict.html

Let's look how our predict.html file looks like:

The screenshot shows a web browser window with the URL `127.0.0.1:5000/predict`. The title bar says "Wind Energy Prediction Dashboard". The page is divided into two main sections: "Weather Conditions" on the left and "Energy Prediction" on the right.

Weather Conditions: A text input field labeled "Enter City Name" and a blue button labeled "Get Weather Details". Below these are four text labels: "Temperature : ", "Humidity : ", "Pressure : ", and "Wind Speed : ".

Energy Prediction: Two text input fields: "Theoretical Power (KWh)" and "Wind Speed (m/s)". Below them is a blue button labeled "Predict Energy". A note at the bottom states: "Enter the theoretical power and wind speed values to estimate the wind turbine energy output."

After entering a city name and click Get Weather Details but to show these details.

The screenshot shows the same dashboard after entering "Bangalore" in the city name input field and clicking "Get Weather Details". The "Weather Conditions" section now displays the following details:

- Bangalore
- Get Weather Details
- Temperature : 298.1
- Humidity : 41
- Pressure : 1012
- Wind Speed : 5.81

The "Energy Prediction" section remains the same as in the first screenshot.

After giving details like Theoretical Power and Wind Speed and click Predict Energy button:

The screenshot shows the dashboard after entering "298.1" in the "Theoretical Power (KWh)" field and "5.81" in the "Wind Speed (m/s)" field, and then clicking the "Predict Energy" button. The "Energy Prediction" section now includes the following message:
"The energy predicted is 232.40 KWh".