

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

This section has the following tasks

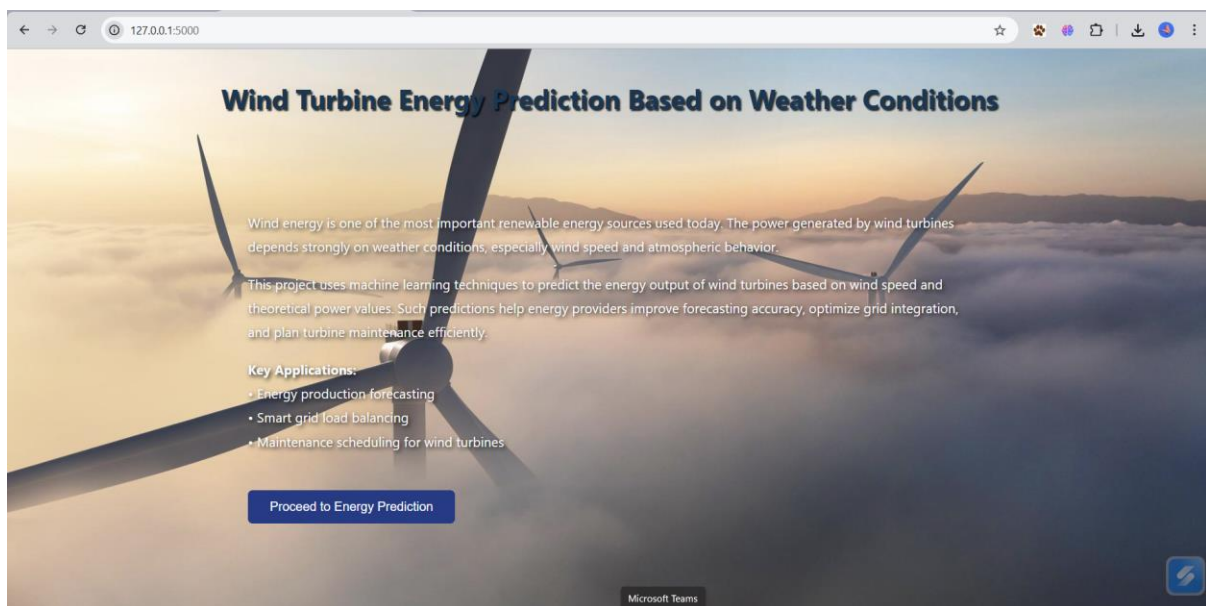
- Building HTML Pages
- Building serverside script

Activity1: Building Html Pages:

For this project create three HTML files namely

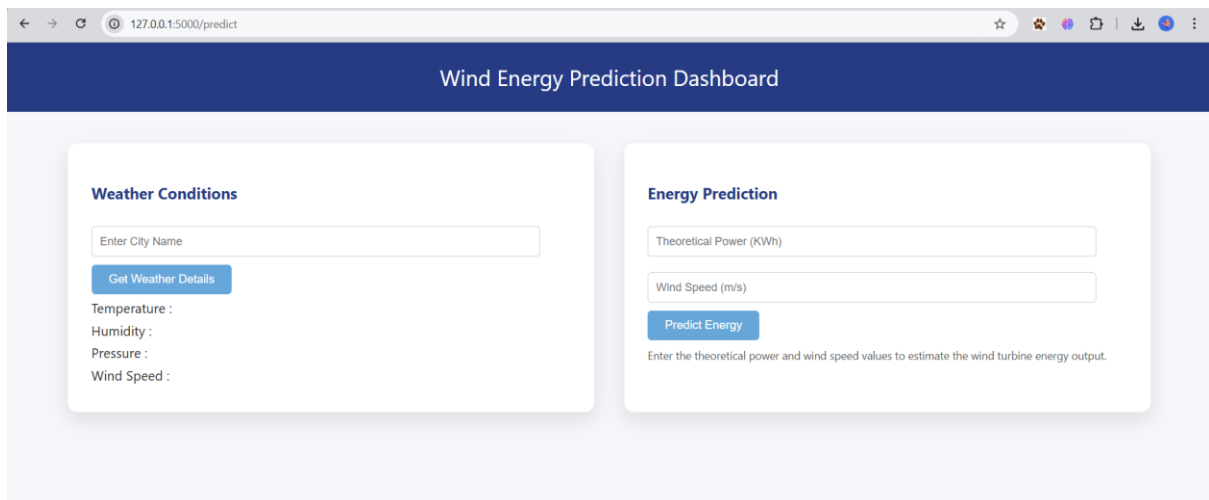
- intro.html
 - predict.html
- and save them in templates folder.

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



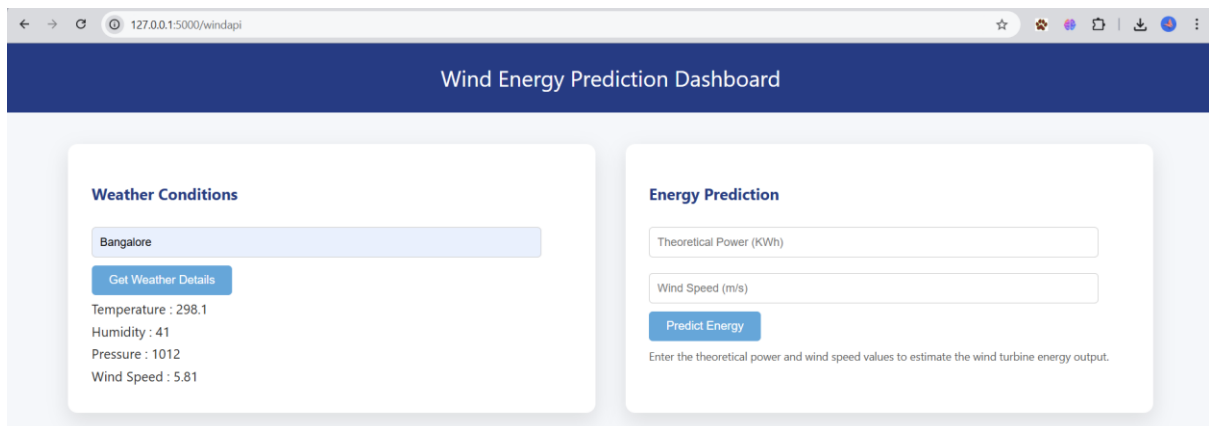
Now when you click on predict button from bottom you will get redirected to predict.html

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



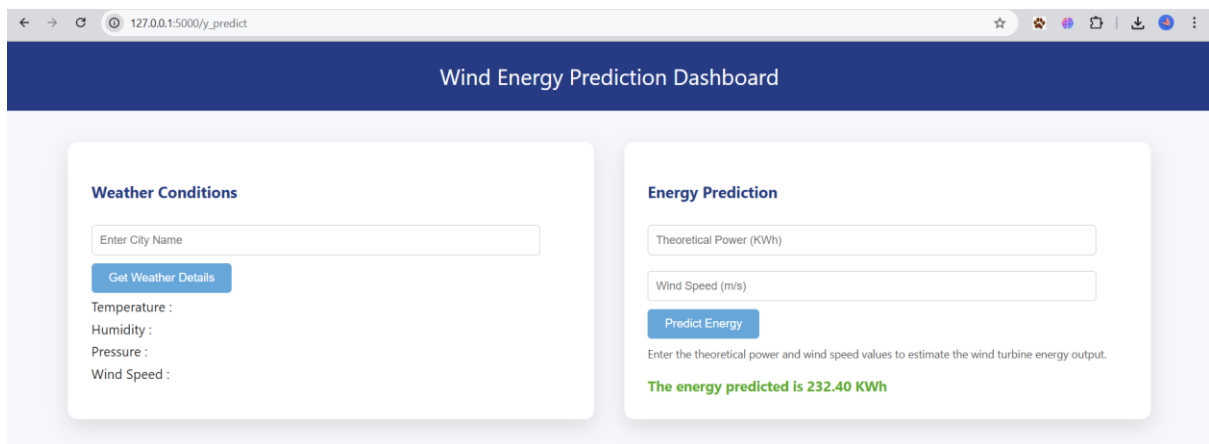
The screenshot shows a web browser window with the URL `127.0.0.1:5000/predict`. The page has a dark blue header with the text "Wind Energy Prediction Dashboard". Below the header, there are two white boxes. The left box, titled "Weather Conditions", contains an input field labeled "Enter City Name", a blue button labeled "Get Weather Details", and four lines of text: "Temperature :", "Humidity :", "Pressure :", and "Wind Speed :". The right box, titled "Energy Prediction", contains two input fields labeled "Theoretical Power (KWh)" and "Wind Speed (m/s)", a blue button labeled "Predict Energy", and a line of text: "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 web browser window with the URL `127.0.0.1:5000/windapi`. The page has the same dark blue header and layout. In the "Weather Conditions" box, the input field now contains the text "Bangalore". The "Get Weather Details" button is still present. Below the button, the text now shows specific values: "Temperature : 298.1", "Humidity : 41", "Pressure : 1012", and "Wind Speed : 5.81". The "Energy Prediction" box remains unchanged.

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



The screenshot shows the same web browser window with the URL `127.0.0.1:5000/y_predict`. The page has the same dark blue header and layout. In the "Weather Conditions" box, the input field is empty, and the "Get Weather Details" button is still present. In the "Energy Prediction" box, the two input fields are empty, and the "Predict Energy" button is still present. Below the button, the text now shows the predicted energy output: "The energy predicted is 232.40 KWh".