

Functional & Performance Testing (Flask App)

Project Name	Weather Based Prediction Of Wind Turbine Energy Output - A Next Generation Approach To Renewable Energy Management
Date	14 February 2026
Team ID	LTVIP2026TMIDS83348

Test Scenarios & Results

Test Case ID	Scenario	Test Steps	Expected Result	Actual Result	Pass/Fail
FT-01	Input Validation	Enter valid and invalid weather parameter values (wind speed, temperature, humidity, pressure)	Valid inputs accepted; invalid inputs rejected with error message	System correctly validates inputs and displays proper error messages	Pass
FT-02	Prediction Endpoint	Submit weather input form	Predicted wind energy output (kW/MW) displayed clearly	Energy prediction displayed with numeric output	Pass
FT-03	Missing Value Handling	Leave one optional field blank	System handles missing values using preprocessing pipeline	Missing values imputed successfully	Pass
FT-04	Model Loading	Restart server and request prediction	Saved model and scaler load without errors	Model loads successfully and predicts	Pass