Project Development Phase
Model Performance Test

Date	10 NOvember 2022
Team ID	PNT2022TMID35748
Project Name	Predicting the energy output of wind turbine based on weather condition
Maximum Marks	10 Marks

Model Performance Testing:

Regression Model

MODEL BUILDING

In [78]:
```
from sklearn.ensemble import RandomForestRegressor

RFR= RandomForestRegressor(n_estimators = 750, max_depth = 4, max_leaf_nodes = 500, random_state = 1)

RFR.fit(x_train,y_train)
```

Out[78]:
```
RandomForestRegressor(max_depth=4, max_leaf_nodes=500, n_estimators=750,
                      random_state=1)
```

Predicting

In [79]:
```
#predcition on the test data
y_pred=RFR.predict(x_test)
y_pred
```

Out[79]:
```
array([1765.0516864 ,  870.86991641,   10.68508007, ..., 3195.42343983,
         10.68508007,  154.83135243])
```

In [80]:
```
#predccition in the train data
pred=RFR.predict(x_train)
pred
```

Out[80]:
```
array([3442.59835514,  535.07899346,  758.12982118, ...,   10.68508007,
        995.75464469, 3435.66463465])
```

Evaluation metrics

MAE, MSE, RMSE, R2, ACCURACY

MAE	161.23
MSE	142925.86
RMSE	178.13
R2	0.9122
ACCURACY	92