

Importing libraries

In [2]:

```
import numpy as np
import pandas as pd
import matplotlib.pyplot as plt
```

importing datasets

In [3]:

```
df=pd.read_csv('Combined_Cycle_Power_Plant.csv')
```

In [20]:

```
X=df.iloc[:, :-1].values
Y=df.iloc[:, -1].values
```

Splitting the dataset into the Training & Test set

In [48]:

```
from sklearn.model_selection import train_test_split
x_train,x_test,y_train,y_test=train_test_split(X,Y,test_size=0.2,random_state=0)
```

Decision Tree Regression model Training on the Training set

In [50]:

```
from sklearn.tree import DecisionTreeRegressor
regressor=DecisionTreeRegressor(random_state=2)
regressor.fit(x_train,y_train)
```

Out[50]:

```
DecisionTreeRegressor
DecisionTreeRegressor(random_state=2)
```

Test set results Predictions

In [23]:

```
y_pred=regressor.predict(x_test)
```

In [24]:

```
np.set_printoptions(precision=2)
```

In [30]:

```
np.concatenate((y_pred.reshape(len(y_pred),1),y_test.reshape(len(y_test),1)),1)
```

Out[30]:

```
array([[431.28, 431.23],
       [459.59, 460.01],
       [460.06, 461.14],
       ...,
       [471.46, 473.26],
       [437.76, 438.   ],
       [462.74, 463.28]])
```

Model Performance Evaluation

In [32]:

```
from sklearn.metrics import r2_score,mean_squared_error as mse,mean_absolute_error as mae
```

In [37]:

```
print(r2_score(y_pred,y_test))
print(mae(y_pred,y_test))
np.sqrt(mse(y_pred,y_test))
```

```
0.9170022965392857
3.1544252873563217
```

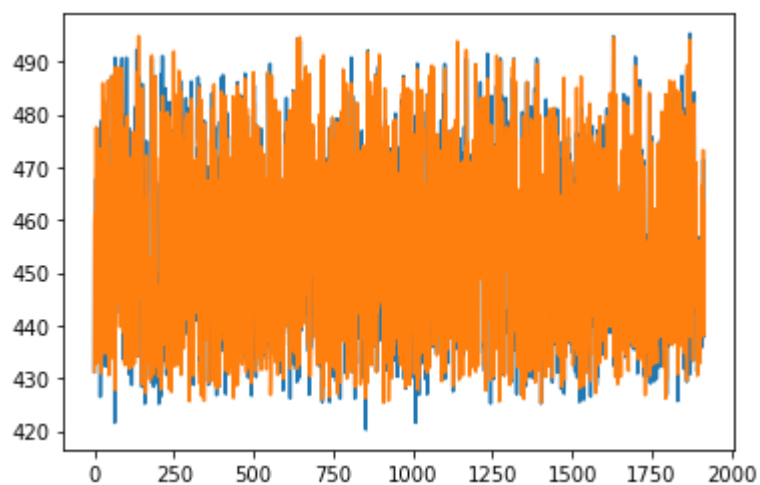
Out[37]:

```
4.880126937254804
```

Visualization

In [47]:

```
plt.plot(y_pred)
plt.plot(y_test)
plt.show()
```



In []: