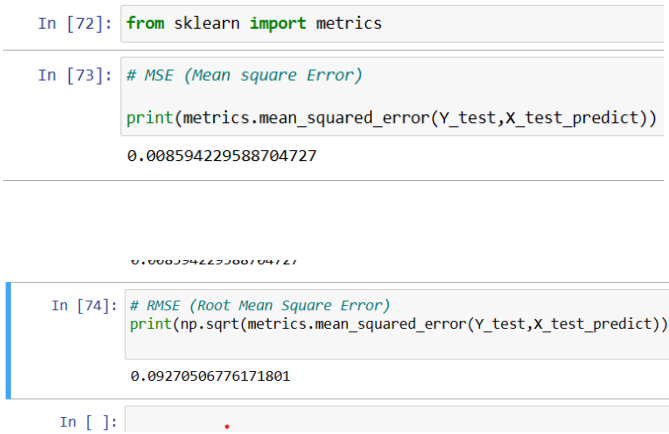
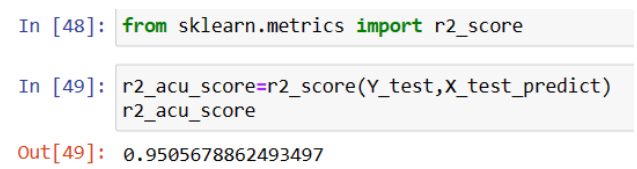
Project Development Phase
Model Performance Test

Date	9th November,2023
Team ID	Team - 593038
Project Name	ML Model For Occupancy Rates And Demand In The Hospitality Industry
Maximum Marks	10 Marks

Model Performance Testing:

Project team shall fill the following information in model performance testing template.

S.No.	Parameter	Screenshot
1)Metrics	**Regression Model:** Mean Square Error Root Mean Square Error r2_score:-	 

Classification Report

```
In [69]: from sklearn.metrics import classification_report

In [71]: print(classification_report(Y_test,X_test_predict))
```

	precision	recall	f1-score	support
0	1.00	0.99	0.99	1264
1	0.98	0.99	0.98	365
accuracy			0.99	1629
macro avg	0.99	0.99	0.99	1629
weighted avg	0.99	0.99	0.99	1629

Classification Model:-

Confusion Matrix:-

```
In [48]: cm=confusion_matrix(Y_test,X_test_predict)

In [49]: cm   #FN   #FP
              #TN   #TP

Out[49]: array([[1255,    9],
                [   5,  360]], dtype=int64)
```

Accuracy Score :-

```
In [45]: from sklearn.metrics import accuracy_score

In [46]: acc=accuracy_score(Y_test,X_test_predict)

In [47]: acc

Out[47]: 0.9914057704112953
```

S.No	Parameter	Screenshot
2)	**Encoding**	Label Encoding

```
In [30]: le1=LabelEncoder()
         le2=LabelEncoder()
         le3=LabelEncoder()

In [31]: X["Year"]=le1.fit_transform(datatrain.Year)
         X["Month"]=le2.fit_transform(datatrain.Month)
         X["Day"]=le3.fit_transform(datatrain.Day)

In [32]: X.head()
```

Out[32]:

	Temperature	Humidity	Light	CO2	HumidityRatio	Year	Month	Day
1	23.18	27.2720	426.0	721.25	0.004793	0	0	0
2	23.15	27.2675	429.5	714.00	0.004783	0	0	1
3	23.15	27.2450	426.0	713.50	0.004779	0	0	2
4	23.15	27.2000	426.0	708.25	0.004772	0	0	3
5	23.10	27.2000	426.0	704.50	0.004757	0	0	4