Project Development Phase
Model Performance Test

Date	14 November 2022
Team ID	PNT2022TMID52913
Project Name	Project - Smart Lender - Applicant Credibility Prediction for Loan Approval
Maximum Marks	10 Marks

Model Performance Testing:

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

S.No.	Parameter	Values	Screenshot
1.	Metrics	**Classification Model:** Confusion Matrix - , Accuracy Score- & Classification Report -	Figure 1 and Figure 2
2.	Tune the Model	Hyperparameter Tuning - Validation Method -	Figure 3

Figure 1

```
In [63]: print("Random Forest Model Testing Accuracy")
         print(accuracy_score(ytest,ypredR))

         Random Forest Model Testing Accuracy
         0.8972972972972973
```

```
In [64]: from sklearn.metrics import confusion_matrix
         cf = confusion_matrix(ytest, ypredR)
         import seaborn as sns
         sns.heatmap(cf, annot=True)

Out[64]: <AxesSubplot:>
```

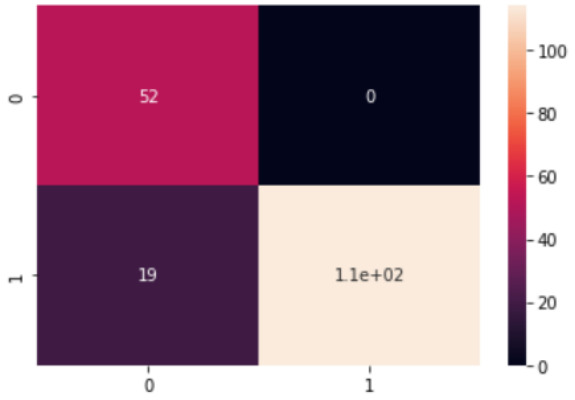

Figure 2

Evaluating Preformance and Saving the Model

Random Forest is selected

```
In [69]: print(classification_report(ytest,ypredR))
```

	precision	recall	f1-score	support
0	0.73	1.00	0.85	52
1	1.00	0.86	0.92	133
accuracy			0.90	185
macro avg	0.87	0.93	0.88	185
weighted avg	0.92	0.90	0.90	185

Figure 3