APPLICATION PERFORMANCE

To Assess the application performance metrics submitted or verify using performance testing tools

The accuracy obtained from random forest classifier is 83.78

The mean accuracy is 83.78

The accuracy obtained from decision tree classifier is 81.79

The mean accuracy is 81.79

```
from sklearn.model_selection import train_test_split
X_train, X_test, y_train, y_test = train_test_split(X, y,test_size=0.25,random_state =1)
```

```
from sklearn.tree import DecisionTreeClassifier

tree_classifier = DecisionTreeClassifier(max_depth = 10, random_state = 42)
tree_classifier.fit(X_train,y_train)
```

```
DecisionTreeClassifier(max_depth=10, random_state=42)
```

```
y_tree_pred = tree_classifier.predict(X_test)
```

```
from sklearn.metrics import confusion_matrix, accuracy_score, f1_score, precision_score, recall_score
acc = accuracy_score(y_test, y_tree_pred)
```

```
acc
```

```
0.8179347826086957
```

```
from sklearn.ensemble import RandomForestClassifier
forest = RandomForestClassifier(n_estimators = 100, criterion = 'entropy', random_state = 0)
forest.fit(X_train, Y_train)
```

```
RandomForestClassifier(criterion='entropy', random_state=0)
```

```
forest.score(X_train, Y_train)
```

```
0.8378684807256236
```