TEAM ID	PNT2022TMID48226
PROJECT NAME	Statistical Machine Learning Approaches to Liver Disease Prediction

Team Leader: P.M.Priyadharshini

Team Member: N.N.Deepika

Team Member: T.G.Yamini

Team Member: S.S.Megha

MODEL Evaluation

Finally, we need to check to see how well our model is performing on the test data.

Evaluation Metrics:

accuracy_score of SVM is

```
# Checking for accuracy score from actual data and predicted data
SVMaccuracy=accuracy_score(SVMpred, ytest)
SVMaccuracy
```

```
0.7606837606837606
```

accuarcy_score of Random forest classification is

```
#Random Forest Classifier Model
from sklearn.ensemble import RandomForestClassifier
RFmodel=RandomForestClassifier()
```

```
# train the data with Random Forest model
RFmodel.fit(xtrain, ytrain)
```

```
RandomForestClassifier()
```

```
RFpred=RFmodel.predict(xtest)
```

```
# Checking for accuracy score from actual data and predicted data
RFaccuracy=accuracy_score(RFpred, ytest)
RFaccuracy
```

```
0.7094017094017094
```

```
# showing the confusion matrix
RFcm=confusion_matrix(RFpred, ytest)
RFcm
```

```
array([[77, 22],
       [12,  6]], dtype=int64)
```

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As we can see that the accuracy_score of the Support vector machine is higher compare to KNN and Random forest algorithms, we are proceeding with the support vector machine model.

Model Evaluation

In [4]:
```
model = ensemble.RandomForestClassifier()
model.fit(X_train, y_train) #Put X_Train.values while running The app.py---
y_pred = model.predict(X_test)
print('Accuracy : {}'.format(accuracy_score(y_test, y_pred)))

clf_report = classification_report(y_test, y_pred)
print('Classification report')
print("---------------------")
print(clf_report)
print("_____________________")
```

```
Accuracy : 1.0
Classification report
---------------------
              precision    recall  f1-score   support

           1       1.00      1.00      1.00      2038
           2       1.00      1.00      1.00       836

    accuracy                           1.00      2874
   macro avg       1.00      1.00      1.00      2874
weighted avg       1.00      1.00      1.00      2874

_____________________
```