Name: Srinivasan JP Reg No: 21MIS1044 Naive Bayes classifier implementation

In [ ]:
```
import numpy as np
import pandas as pd
import matplotlib.pyplot as plt
```

In [ ]:
```
diabetes=pd.read_csv('./Diabetes_RF.csv')
print(diabetes.head())
```

```
    Number of times pregnant   Plasma glucose concentration  \
0                          6                            148
1                          1                             85
2                          8                            183
3                          1                             89
4                          0                            137

    Diastolic blood pressure   Triceps skin fold thickness  \
0                         72                            35
1                         66                            29
2                         64                             0
3                         66                            23
4                         40                            35

    2-Hour serum insulin   Body mass index   Diabetes pedigree function  \
0                      0              33.6                        0.627
1                      0              26.6                        0.351
2                      0              23.3                        0.672
3                     94              28.1                        0.167
4                    168              43.1                        2.288

    Age (years)  Class variable
0            50             YES
1            31              NO
2            32             YES
3            21              NO
4            33             YES
```

In [ ]:
```
col_names=list(diabetes.columns)
predictors=col_names[0:8]
target=col_names[8]
```

In [ ]:
```
from sklearn.model_selection import train_test_split
train,test=train_test_split(diabetes,test_size=0.3,random_state=0)
```

In [ ]:
```
from sklearn.naive_bayes import GaussianNB
Gmodel=GaussianNB()
train_pred_gau=Gmodel.fit(train[predictors],train[target]).predict(train[pre
test_pred_gau=Gmodel.fit(train[predictors],train[target]).predict(test[predi

train_acc_gau=np.mean(train_pred_gau==train[target])
test_acc_gau=np.mean(test_pred_gau==test[target])
print(train_acc_gau)
print(test_acc_gau)
```

```
0.7672253258845437
0.7619047619047619
```