In [1]:

```
#Roll NO-33238
import numpy as np # linear algebra
import pandas as pd # data processing, CSV file I/O (e.g. pd.read_csv)
import matplotlib.pyplot as plt
```

In [2]:

```
data=pd.read_csv('Admission_Predict.csv')
```

In [4]:

```
data.isnull().sum()
```

Out[4]:

```
Serial No.           0
GRE Score            0
TOEFL Score          0
University Rating    0
SOP                  0
LOR                  0
CGPA                 0
Research             0
Chance of Admit      0
dtype: int64
```

In [5]:

```
data.columns
```

Out[5]:

```
Index(['Serial No.', 'GRE Score', 'TOEFL Score', 'University Rating',
'SOP',
       'LOR ', 'CGPA', 'Research', 'Chance of Admit '],
      dtype='object')
```

In [7]:

```
data.head
```

```
1             2        324          107                  4  4.0   4.
5  8.87
2             3        316          104                  3  3.0   3.
5  8.00
3             4        322          110                  3  3.5   2.
5  8.67
4             5        314          103                  2  2.0   3.
0  8.21
..          ...        ...          ...                ...  ...
...   ...
395         396        324          110                  3  3.5   3.
5  9.04
396         397        325          107                  3  3.0   3.
5  9.11
397         398        330          116                  4  5.0   4.
5  9.45
398         399        312          103                  3  3.5   4.
0  8.78
399         400        333          117                  4  5.0   4.
0  9.66
```

In [8]:

```
#updating the chance of admission as 1 and 0
#if chance>0.8 then 1 , else 0
data.loc[data['Chance of Admit '] < 0.8, 'Chance of Admit '] = 0
data.loc[data['Chance of Admit '] >= 0.8, 'Chance of Admit '] = 1
```

In [13]:

```
#initialising variables
X = data.drop(['Chance of Admit ','Serial No.'],axis=1)
y = data['Chance of Admit ']
```

In [20]:

```
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=12
```

In [21]:

```
#importing required libraries
from sklearn.tree import DecisionTreeClassifier
from sklearn import metrics
```

In [22]:

```
#creating decision tree classifier object
clf = DecisionTreeClassifier()
```

In [23]:

```
#trainig decision tree classifier
clf = clf.fit(X_train, Y_train)
```

In [24]:

```
#predicting for the test data
y_pred = clf.predict(X_test)
```

In [25]:

```
#confusion matrix
print("Confusion Matrix: \n")
print(metrics.confusion_matrix(Y_test,y_pred))
```

```
Confusion Matrix: 

[[62  5]
 [ 7 26]]
```

In [26]:

```
print("1. Accuracy Score:", metrics.accuracy_score(Y_test,y_pred))
print("2. Precision Score:", metrics.precision_score(Y_test,y_pred))
print("3. Recall Score:", metrics.recall_score(Y_test,y_pred))
print("4. F1 Score:", metrics.f1_score(Y_test,y_pred))
```

```
1. Accuracy Score: 0.88
2. Precision Score: 0.8387096774193549
3. Recall Score: 0.7878787878787878
4. F1 Score: 0.8125
```

In [ ]:

```

```