**11. To Implement decision tree for a data set.**

import numpy as np

import matplotlib.pyplot as mtp

import pandas as pd

data\_set = pd.read\_csv('/content/User\_Data (1).csv')

data\_set

x = data\_set.iloc[:, [2,3]].values

y = data\_set.iloc[:, 4].values

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 = 0)

from sklearn.preprocessing import StandardScaler

st\_x = StandardScaler()

x\_train = st\_x.fit\_transform(x\_train)

x\_test = st\_x.transform(x\_test)

from sklearn.tree import DecisionTreeClassifier

classifier = DecisionTreeClassifier(criterion='entropy', random\_state=0)

classifier.fit(x\_train, y\_train)

y\_pred = classifier.predict(x\_test)

#creating the confusion matrix

from sklearn.metrics import confusion\_matrix

cm = confusion\_matrix(y\_test, y\_pred)

cm