Practical No.:-5.1

Practical Name:-Write a program to implement Decision tree using the

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import matplotlib.pyplot as plt

import pandas as pd

from sklearn.datasets import load\_iris # load\_iris

data\_b = load\_iris() # lo

#print(data\_b.DESCR)

df = pd.DataFrame(data\_b.data, columns=data\_b.feature\_names)

df['target'] = data\_b.target

# df['target']

print(df)

#print("Dataset Labels=", data\_b.target\_names)

from sklearn.tree import DecisionTreeClassifier

from sklearn import metrics

from sklearn.model\_selection import train\_test\_split

# import numpy as np

from sklearn import tree

X\_train, X\_test, Y\_train, y\_test = train\_test\_split(df[data\_b.feature\_names], df['target'], random\_state=1)

#print(X\_train)

#print(X\_test)

#print(Y\_train)

#print(y\_test)

clf = DecisionTreeClassifier(max\_depth=3, random\_state=1, criterion='entropy') # 'gini'/'entropy'

clf.fit(X\_train, Y\_train)

y\_pred = clf.predict(X\_test)

#print(y\_test, y\_pred)

print("Accuracy: ", metrics.accuracy\_score(y\_test, y\_pred))

tree.plot\_tree(clf)