**Ex.No-9**

**Aim:**

# Decision Tree

To implement Decision tree machine learning algorithm.

# Description:

1. Import Decision tree classifier through sklearn
2. Provide the necessary dataset through CSV file
3. As per the trained dataset, decision tree can be obtained.

# Program:

import pandas as pd

import matplotlib.pyplot as plt from sklearn import tree

from sklearn.tree import DecisionTreeClassifier # Load Data

df = pd.read\_csv('DT1.csv') print(df)

# Prepare Data

d = {"A":0,"B":1,"C":2}

df['catalyst'] = df['catalyst'].map(d)

d = {"yes":0,"no":1}

df['requirement'] = df['requirement'].map(d)

features = ['temperature','pressure','catalyst','reaction\_time','yield'] x = df[features]

y = df['requirement']

dtree = DecisionTreeClassifier() dtree = dtree.fit(x,y)

tree.plot\_tree(dtree,feature\_names=features) plt.show()

# Output:

