

**Ex.No-9****Decision Tree****Aim:**

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:

