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**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:**

