

① Decision Tree Implementation Steps:-

① Data Pre-processing -

```
from sklearn.model_selection import train_test_split
```

```
data = pd.read_csv('___')
```

- Null value treatment

- Remove Duplicates

- Handle categorical data

```
x = data.drop('target', axis=1)
```

```
y = data['target']
```

```
train_test_split(x, y).
```



② Training the Model -

```
sklearn.tree ⇒ DecisionTreeClassifier
```

```
classifier = DecisionTreeClassifier(criterion = 'entropy')
```

```
model = classifier.fit(x_train, y_train)
```



③ Predict Result -

```
y_pred = classifier.predict(x_test)
```



④ Model Evaluation -

```
classification_report(y_test, y_pred)
```

```
accuracy_score(y_test, y_pred)
```

```
confusion_matrix(y_test, y_pred)
```



⑤ Plot the Tree -

```
from sklearn import tree
```

```
plt.figure(figsize = (15,10))
```

```
tree.plot_tree(model, filled=True)
```