In [3]:

```
import pandas as pd
df=pd.read_csv('weather.csv',
              names=['Outlook','temperature','humidity','windy','play'])
df.head()
```

Out[3]:

	Outlook	temperature	humidity	windy	play
0	sunny	hot	high	False	no
1	sunny	hot	high	True	no
2	overcast	hot	high	False	yes
3	rainy	mild	high	False	yes
4	rainy	cool	normal	False	yes

In [4]:

```
inputs = df.drop('play',axis=1)
target= df['play']
```

In [9]:

```
from sklearn.preprocessing import LabelEncoder
```

In [10]:

```
le_outlook= LabelEncoder();
le_temp= LabelEncoder();
le_humidity= LabelEncoder();
le_windy= LabelEncoder();
```

In [22]:

```
inputs['outlook_n'] = le_outlook.fit_transform(inputs['Outlook']);
inputs['tempn'] = le_outlook.fit_transform(inputs['temperature']);
inputs['humidity_n'] = le_outlook.fit_transform(inputs['humidity']);
inputs['windy_n'] = le_outlook.fit_transform(inputs['windy']);
```

In [24]:

```
inputs.head()
```

Out[24]:

	Outlook	temperature	humidity	windy	outlook_n	tempn	humidity_n	windy_n
0	sunny	hot	high	False	2	1	0	0
1	sunny	hot	high	True	2	1	0	1
2	overcast	hot	high	False	0	1	0	0
3	rainy	mild	high	False	1	2	0	0
4	rainy	cool	normal	False	1	0	1	0

In [26]:
```
inputs_n= inputs.drop(['Outlook','temperature','humidity','windy'],
axis=1)
inputs_n.head()
```

Out[26]:

	outlook_n	tempn	humidity_n	windy_n
0	2	1	0	0
1	2	1	0	1
2	0	1	0	0
3	1	2	0	0
4	1	0	1	0

In [27]:
```
from sklearn import tree
```

In [28]:
```
model =tree.DecisionTreeClassifier()
```

In [29]:
```
model.fit(inputs_n,target)
```

Out[29]:
```
DecisionTreeClassifier(class_weight=None, criterion='gini', max_de
pth=None,
                       max_features=None, max_leaf_nodes=None,
                       min_impurity_decrease=0.0, min_impurity_spl
it=None,
                       min_samples_leaf=1, min_samples_split=2,
                       min_weight_fraction_leaf=0.0, presort=False
,
                       random_state=None, splitter='best')
```

In [30]:
```
model.score(inputs_n,target)
```

Out[30]:
```
1.0
```

In [33]:
```
model.predict([[1,2,0,0]])
```

Out[33]:
```
array(['yes'], dtype=object)
```

In [ ]: