In [1]:
```
import pandas as pd
```

In [3]:
```
df= pd.read_csv('PlayTennis.csv')
df
```

Out[3]:

	outlook	temp	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
5	rainy	cool	normal	True	no
6	overcast	cool	normal	True	yes
7	sunny	mild	high	False	no
8	sunny	cool	normal	False	yes
9	rainy	mild	normal	False	yes
10	sunny	mild	normal	True	yes
11	overcast	mild	high	True	yes
12	overcast	hot	normal	False	yes
13	rainy	mild	high	True	no

In [4]:
```
from sklearn.preprocessing import LabelEncoder
```

In [5]:
```
le = LabelEncoder()
```

In [25]:
```
df = df.apply(le.fit_transform)
x= df.iloc[:,:4]
y= df.iloc[:,-1]
df
```

Out[25]:

	outlook	temp	humidity	windy	play
0	2	1	0	0	0
1	2	1	0	1	0
2	0	1	0	0	1
3	1	2	0	0	1
4	1	0	1	0	1
5	1	0	1	1	0
6	0	0	1	1	1
7	2	2	0	0	0
8	2	0	1	0	1
9	1	2	1	0	1
10	2	2	1	1	1
11	0	2	0	1	1
12	0	1	1	0	1
13	1	2	0	1	0

In [35]:
```
from sklearn.naive_bayes import BernoulliNB
nb_ber = BernoulliNB()
nb_ber.fit(x,y)
nb_ber.predict([[1,2,0,1]])

nb_ber.predict_proba([[1,2,0,1]])
```

```
/Users/mujtabashaikh/opt/anaconda3/lib/python3.9/site-packages/sklearn/base.p
y:450: UserWarning: X does not have valid feature names, but BernoulliNB was
fitted with feature names
  warnings.warn(
/Users/mujtabashaikh/opt/anaconda3/lib/python3.9/site-packages/sklearn/base.p
y:450: UserWarning: X does not have valid feature names, but BernoulliNB was
fitted with feature names
  warnings.warn(
```

Out[35]:
```
array([[0.75153675, 0.24846325]])
```