DATA SCIENCE LAB

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Roll No:17

Batch: MCA-B

Date: 17-10-2022

Experiment No.: 9

Aim

Naïve bayes using golf dataset.

Procedure

```
import pandas as pd
import io
from sklearn.model_selection import train_test_split

df1 = pd.read_csv('/golf-dataset.csv')
print(df1)
df1.head(10)

X = df1.iloc[:, [0,1,2, 3]].values
y = df1.iloc[:, -1].values
print(X)
print(y)

X_train, X_test, y_train, y_test = train_test_split( X, y, test_size = 0.2,
 random_state=42)

print(X_test)
df1['Outlook'].replace(['Rainy'],[0], inplace=True)
df1['Outlook'].replace(['Overcast'],[1], inplace=True)
print(df1)
```

Output

```
Outlook  Temp Humidity  Windy Play Golf
0      Rainy   Hot     High  False        No
1      Rainy   Hot     High   True        No
2   Overcast   Hot     High  False       Yes
3      Sunny  Mild     High  False       Yes
4      Sunny  Cool   Normal  False       Yes
5      Sunny  Cool   Normal   True        No
6   Overcast  Cool   Normal   True       Yes
```

```
7      Rainy  Mild     High  False        No
8      Rainy  Cool   Normal  False       Yes
9      Sunny  Mild   Normal  False       Yes
10     Rainy  Mild   Normal   True       Yes
11  Overcast  Mild     High   True       Yes
12  Overcast   Hot   Normal  False       Yes
13     Sunny  Mild     High   True        No
```

```
[['Rainy' 'Hot' 'High' False]
 ['Rainy' 'Hot' 'High' True]
 ['Overcast' 'Hot' 'High' False]
 ['Sunny' 'Mild' 'High' False]
 ['Sunny' 'Cool' 'Normal' False]
 ['Sunny' 'Cool' 'Normal' True]
 ['Overcast' 'Cool' 'Normal' True]
 ['Rainy' 'Mild' 'High' False]
 ['Rainy' 'Cool' 'Normal' False]
 ['Sunny' 'Mild' 'Normal' False]
 ['Rainy' 'Mild' 'Normal' True]
 ['Overcast' 'Mild' 'High' True]
 ['Overcast' 'Hot' 'Normal' False]
 ['Sunny' 'Mild' 'High' True]]
['No' 'No' 'Yes' 'Yes' 'Yes' 'No' 'Yes' 'No' 'Yes' 'Yes' 'Yes' 'Yes' 'Yes'
 'No']
[['Sunny' 'Mild' 'Normal' False]
 ['Overcast' 'Mild' 'High' True]
 ['Rainy' 'Hot' 'High' False]]
```

```
 Outlook  Temp Humidity  Windy Play Golf
0        0   Hot     High  False        No
1        0   Hot     High   True        No
2        1   Hot     High  False       Yes
3    Sunny  Mild     High  False       Yes
```

4	Sunny	Cool	Normal	False	Yes
5	Sunny	Cool	Normal	True	No
6	1	Cool	Normal	True	Yes
7	0	Mild	High	False	No
8	0	Cool	Normal	False	Yes
9	Sunny	Mild	Normal	False	Yes
10	0	Mild	Normal	True	Yes
11	1	Mild	High	True	Yes
12	1	Hot	Normal	False	Yes
13	Sunny	Mild	High	True	No