

```
In [1]: weather=['Sunny','Sunny','Overcast','Rainy','Rainy','Rainy','Overcast','Sunny','Sunny',  
               'Rainy','Sunny','Overcast','Overcast','Rainy']
```

```
In [2]: temp=['Hot','Hot','Hot','Mild','Cool','Cool','Cool','Mild','Cool','Mild','Mild','Mild','Hot','Mild']
```

```
In [3]: play=['No','No','Yes','Yes','Yes','No','Yes','No','Yes','Yes','Yes','Yes','Yes','No']
```

```
In [4]: from sklearn import preprocessing
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```
In [5]: le = preprocessing.LabelEncoder()
```

```
In [6]: le
```

```
Out[6]: LabelEncoder()
```

```
In [7]: wheather_encoded=le.fit_transform(weather)
```

```
In [8]: print(wheather_encoded)
```

```
[2 2 0 1 1 1 0 2 2 1 2 0 0 1]
```

```
In [9]: temp_encoded=le.fit_transform(temp)
```

```
In [10]: label=le.fit_transform(play)
```

```
In [11]: print("Temp:",temp_encoded)
```

```
Temp: [1 1 1 2 0 0 0 2 0 2 2 2 1 2]
```

```
In [12]: print("Play:",label)
```

```
Play: [0 0 1 1 1 0 1 0 1 1 1 1 1 0]
```

```
In [15]: features=list(zip(wheather_encoded,temp_encoded))
```

```
In [16]: features
```

```
Out[16]: [(2, 1),
          (2, 1),
          (0, 1),
          (1, 2),
          (1, 0),
          (1, 0),
          (0, 0),
          (2, 2),
          (2, 0),
          (1, 2),
          (2, 2),
          (0, 2),
          (0, 1),
          (1, 2)]
```

```
In [17]: from sklearn.naive_bayes import GaussianNB
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```
In [18]: model = GaussianNB()
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```
In [19]: model.fit(features, label)
```

```
Out[19]: GaussianNB()
```

```
In [20]: predicted= model.predict([[0,2]]) # 0:Overcast, 2:Mild
```

```
In [21]: print("Predicted Value:", predicted)
```

```
Predicted Value: [1]
```

```
In [ ]:
```