





```
import numpy as np
import pandas as pd
df=pd.read_csv('/content/lung_cancer_examples.csv')
df
```

```
df.drop(['Name','Surname'],axis=1,inplace=True)
```

```
df.head()
```

	Age	Smokes	AreaQ	Alkhol	Result	
0	35	3	5	4	1	
1	27	20	2	5	1	
2	30	0	5	2	0	
3	28	0	8	1	0	
4	68	4	5	6	1	

```
df.tail()
```

	Age	Smokes	AreaQ	Alkhol	Result	
54	26	13	6	1	0	
55	77	20	5	4	1	
56	75	15	3	5	1	
57	43	30	3	8	1	
58	51	25	9	0	0	

```
df.dtypes
```

```
Age      int64
Smokes   int64
AreaQ     int64
Alkhol    int64
Result    int64
dtype: object
```

```
df.isna().sum()
```

```
Age      0
Smokes   0
AreaQ     0
Alkhol    0
Result    0
dtype: int64
```

```
x=df.iloc[:, :-1].values
```

```
x
```

```
[27, 20, 2, 5],
[30, 0, 5, 2],
[28, 0, 8, 1],
[68, 4, 5, 6],
[34, 0, 10, 0],
[58, 15, 10, 0],
[22, 12, 5, 2],
```

```
[52, 18, 4, 5],
[33, 4, 8, 0],
[18, 10, 6, 3],
[25, 2, 5, 1],
[28, 20, 2, 8],
[34, 25, 4, 8],
[39, 18, 8, 1],
[42, 22, 3, 5],
[19, 12, 8, 0],
[62, 5, 4, 3],
[73, 10, 7, 6],
[55, 15, 1, 3],
[33, 8, 8, 1],
[22, 20, 6, 2],
[44, 5, 8, 1],
[77, 3, 2, 6],
[21, 20, 5, 3],
[37, 15, 6, 2],
[34, 12, 8, 0],
[55, 20, 1, 4],
[40, 20, 2, 7],
[36, 13, 5, 2],
[56, 20, 3, 3],
[47, 15, 1, 8],
[62, 25, 3, 4],
[26, 10, 7, 2],
[25, 20, 8, 2],
[59, 20, 3, 4],
[62, 15, 5, 5],
[33, 25, 8, 2],
[37, 10, 5, 3],
[50, 20, 2, 4],
[47, 12, 8, 0],
[69, 20, 5, 4],
[63, 20, 4, 5],
[39, 15, 7, 2],
[21, 20, 8, 3],
[31, 20, 9, 4],
[28, 10, 4, 1],
[53, 20, 6, 3],
[62, 20, 5, 6],
[42, 12, 6, 2],
[44, 30, 1, 6],
[26, 34, 1, 8],
[35, 20, 5, 1],
[26, 13, 6, 1],
[77, 20, 5, 4],
[75, 15, 3, 5],
[43, 30, 3, 8],
[51, 25, 9, 0]])
```

```
y=df.iloc[:, -1].values
y
```

```
array([1, 1, 0, 0, 1, 0, 0, 0, 0, 1, 0, 0, 0, 1, 1, 0, 1, 0, 1, 1, 1, 0,
       0, 0, 1, 0, 0, 0, 1, 1, 0, 1, 1, 1, 0, 0, 1, 1, 0, 0, 1, 0, 1, 1,
       0, 0, 0, 0, 1, 1, 0, 1, 1, 0, 0, 1, 1, 1, 0])
```

```
from sklearn.model_selection import train_test_split
x_train,x_test,y_train,y_test=train_test_split(x,y,test_size=0.30,random_state=1)
x_train
```

```
x_test
```

```
from sklearn.preprocessing import StandardScaler
scale=StandardScaler()
scale.fit(x_train)
x_train=scale.transform(x_train)
x_test=scale.transform(x_test)
```

```
x_train
```

```
x_test
```

```
from sklearn.naive_bayes import GaussianNB
model=GaussianNB()
model.fit(x_train,y_train)
y_pred=model.predict(x_test)
y_pred

array([1, 0, 0, 0, 0, 0, 0, 1, 0, 1, 0, 0, 1, 1, 1, 0, 1, 0])
```

```
y_test
```

```
array([1, 0, 0, 0, 0, 0, 0, 1, 0, 1, 0, 0, 1, 1, 1, 0, 1, 0])

from sklearn.metrics import confusion_matrix,accuracy_score
conf_matr=confusion_matrix(y_test,y_pred)
print(conf_matr)
```

```
[[11  0]
 [ 0  7]]
```

```
score=accuracy_score(y_test,y_pred)
score
```

```
1.0
```