In [1]:
```
import pandas as pd
cancer=pd.read_csv('https://github.com/YBI-Foundation/Dataset/raw/main/Cancer.csv')
```

In [2]:
```
cancer.head()
```

Out[2]:

	id	diagnosis	radius_mean	texture_mean	perimeter_mean	area_mean	smoothness_mean
0	842302	M	17.99	10.38	122.80	1001.0	0.11840
1	842517	M	20.57	17.77	132.90	1326.0	0.08474
2	84300903	M	19.69	21.25	130.00	1203.0	0.10960
3	84348301	M	11.42	20.38	77.58	386.1	0.14250
4	84358402	M	20.29	14.34	135.10	1297.0	0.10030

5 rows × 33 columns

In [3]:
```
cancer.columns
```

Out[3]:
```
Index(['id', 'diagnosis', 'radius_mean', 'texture_mean', 'perimeter_mean',
       'area_mean', 'smoothness_mean', 'compactness_mean', 'concavity_mean',
       'concave points_mean', 'symmetry_mean', 'fractal_dimension_mean',
       'radius_se', 'texture_se', 'perimeter_se', 'area_se', 'smoothness_se',
       'compactness_se', 'concavity_se', 'concave points_se', 'symmetry_se',
       'fractal_dimension_se', 'radius_worst', 'texture_worst',
       'perimeter_worst', 'area_worst', 'smoothness_worst',
       'compactness_worst', 'concavity_worst', 'concave points_worst',
       'symmetry_worst', 'fractal_dimension_worst', 'Unnamed: 32'],
      dtype='object')
```

In [12]:
```
y=cancer['diagnosis']
x=cancer[[ 'radius_mean', 'texture_mean', 'perimeter_mean',
       'area_mean', 'smoothness_mean', 'compactness_mean', 'concavity_mean',
       'concave points_mean', 'symmetry_mean', 'fractal_dimension_mean',
       'radius_se', 'texture_se', 'perimeter_se', 'area_se', 'smoothness_se',
       'compactness_se', 'concavity_se', 'concave points_se', 'symmetry_se',
       'fractal_dimension_se', 'radius_worst', 'texture_worst',
       'perimeter_worst', 'area_worst', 'smoothness_worst',
       'compactness_worst', 'concavity_worst', 'concave points_worst',
       'symmetry_worst', 'fractal_dimension_worst']]
```

In [13]:
```
from sklearn.model_selection import train_test_split
x_train,x_test,y_train,y_test=train_test_split(x,y,random_state=2529)
```

In [20]:
```
from sklearn.linear_model import LogisticRegression
model=LogisticRegression(max_iter=5000)
```

In [21]:
```
model.fit(x_train,y_train)
```

Out[21]:
```
LogisticRegression(max_iter=5000)
```

In [22]:
```
y_pred=model.predict(x_test)
y_pred
```

Out[22]:
```
array(['B', 'M', 'M', 'B', 'M', 'B', 'M', 'B', 'M', 'B', 'B', 'M', 'B',
       'M', 'B', 'B', 'M', 'B', 'M', 'B', 'B', 'B', 'B', 'B', 'B', 'M',
       'B', 'B', 'M', 'B', 'M', 'B', 'B', 'B', 'B', 'M', 'B', 'B', 'B',
       'M', 'M', 'M', 'M', 'M', 'B', 'B', 'M', 'M', 'M', 'B', 'B', 'B',
       'B', 'B', 'B', 'B', 'B', 'M', 'M', 'M', 'B', 'M', 'B', 'M', 'M',
       'M', 'M', 'B', 'M', 'M', 'B', 'M', 'B', 'M', 'B', 'M', 'B', 'B',
       'M', 'M', 'M', 'B', 'B', 'M', 'M', 'M', 'B', 'B', 'B', 'B', 'M',
       'B', 'B', 'B', 'M', 'B', 'M', 'B', 'B', 'M', 'B', 'M', 'B', 'B',
       'B', 'M', 'B', 'B', 'M', 'B', 'B', 'B', 'M', 'B', 'B', 'B', 'B',
       'M', 'B', 'B', 'M', 'B', 'M', 'B', 'M', 'M', 'B', 'B', 'B', 'M',
       'M', 'B', 'M', 'M', 'M', 'B', 'B', 'M', 'B', 'M', 'B', 'M', 'B'],
      dtype=object)
```

In [27]:
```
from sklearn.metrics import accuracy_score,confusion_matrix,classification_report
accuracy_score(y_test,y_pred)
```

Out[27]:
```
0.965034965034965
```

In [28]:
```
confusion_matrix(y_test,y_pred)
```

Out[28]:
```
array([[80,  3],
       [ 2, 58]], dtype=int64)
```

In [30]:
```
print(classification_report(y_test,y_pred))
```

```
              precision    recall  f1-score   support

           B       0.98      0.96      0.97        83
           M       0.95      0.97      0.96        60

    accuracy                           0.97       143
   macro avg       0.96      0.97      0.96       143
weighted avg       0.97      0.97      0.97       143
```

In [ ]:
```

```