

```
1 C:\Users\kavan\PyCharmMiscProject\venv\Scripts\python.exe "C:\Users\kavan\PyCharmMiscProject\AIML INTERNSHIP\task5.py"
```

```
2 Dataset loaded successfully!
```

```
3
4   age  sex  cp  trestbps  chol  fbs  ...  exang  oldpeak  slope  ca  thal  target
5   0   63   1   3   145  233  1  ...  0   2.3   0   0   1
6   1   37   1   2   130  250  0  ...  0   3.5   0   0   1
7   2   41   0   1   130  204  0  ...  0   1.4   2   0   1
8   3   56   1   1   120  236  0  ...  0   0.8   2   0   1
9   4   57   0   0   120  354  0  ...  1   0.6   2   0   1
10
11 [5 rows x 14 columns]
12
13 Features shape: (20, 13)
14 Target shape: (20, )
15
16 Training data size: (16, 13)
17 Testing data size: (4, 13)
18
19 Logistic Regression model trained successfully!
20
21 Model Evaluation Metrics:
22 Accuracy : 0.75
23 Precision: 1.0
24 Recall  : 0.75
25
26 Confusion Matrix:
```

```
27 [[0 0]
28 [1 3]
29
30 Confusion Matrix Explanation:
31 True Negatives : 0
32 False Positives: 0
33 False Negatives: 1
34 True Positives : 3
35
36 Interpretation:
37 - Accuracy shows overall correctness of the model.
38 - Precision shows how reliable positive predictions are.
39 - Recall shows how well the model detects heart disease cases.
40 - Confusion matrix explains prediction distribution.
41
42 Task 5 Completed Successfully!
43
44 Process finished with exit code 0
45
```