

```
In [1]: import numpy as np
import pandas as pd
import matplotlib.pyplot as plt
```

```
In [3]: header_list = ("x1", "x2", "y")
df = pd.read_csv("./Student-University.csv", names = header_list);
df.head()
```

```
Out[3]:
```

	x1	x2	y
0	34.623660	78.024693	0
1	30.286711	43.894998	0
2	35.847409	72.902198	0
3	60.182599	86.308552	1
4	79.032736	75.344376	1

```
In [4]: df.tail()
```

```
Out[4]:
```

	x1	x2	y
95	83.489163	48.380286	1
96	42.261701	87.103851	1
97	99.315009	68.775409	1
98	55.340018	64.931938	1
99	74.775893	89.529813	1

```
In [5]: x=df.drop("y",axis=1);
y=df['y'];
```

```
In [6]: x.head()
```

```
Out[6]:
```

	x1	x2
0	34.623660	78.024693
1	30.286711	43.894998
2	35.847409	72.902198
3	60.182599	86.308552
4	79.032736	75.344376

```
In [7]: y.head()
```

```
Out[7]: 0    0  
        1    0  
        2    0  
        3    1  
        4    1  
        Name: y, dtype: int64
```

```
In [8]: from sklearn.model_selection import train_test_split  
x_train, x_test, y_train, y_test = train_test_split(x,y,test_size=0.2)
```

```
In [9]: from sklearn.linear_model import LogisticRegression
```

```
In [10]: model = LogisticRegression()
```

```
In [11]: model.fit(x_train, y_train)
```

```
Out[11]: LogisticRegression()
```

```
In [12]: y_preds = model.predict(x_test)
```

```
In [13]: model.score(x_test,y_test)
```

```
Out[13]: 0.8
```

```
In [14]: from sklearn.metrics import recall_score, f1_score, accuracy_score, precision_score
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In [15]: accuracy_score(y_test, y_preds)
```

```
Out[15]: 0.8
```

```
In [16]: recall_score(y_test, y_preds)
```

```
Out[16]: 0.9090909090909091
```

```
In [17]: precision_score(y_test,y_preds)
```

```
Out[17]: 0.7692307692307693
```

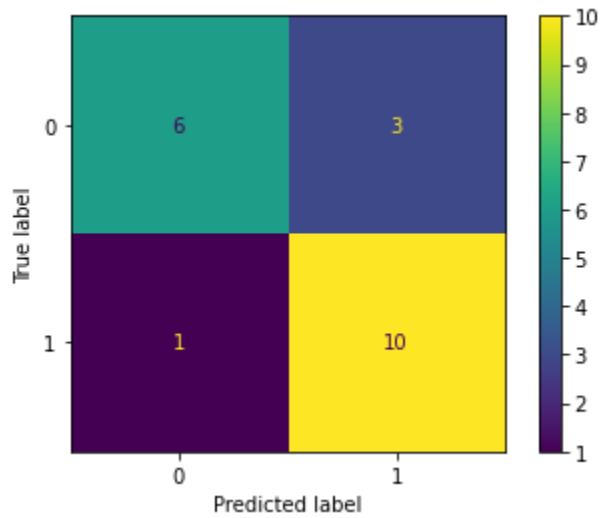
```
In [18]: from sklearn.metrics import confusion_matrix, plot_confusion_matrix
```

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In [19]: confusion_matrix(y_test, y_preds)
```

```
Out[19]: array([[ 6,  3],  
               [ 1, 10]], dtype=int64)
```

```
In [20]: plot_confusion_matrix(model,x_test,y_test)
```

```
Out[20]: <sklearn.metrics._plot.confusion_matrix.ConfusionMatrixDisplay at 0x1ac371fd6a0>
```



```
In [ ]:
```