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

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In [2]: from sklearn.linear_model import LogisticRegression
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```
In [3]: df = pd.read_csv(r"C:\Users\user\Downloads\C6_bmi.csv")
df
```

Out[3]:

	Gender	Height	Weight	Index
0	Male	174	96	4
1	Male	189	87	2
2	Female	185	110	4
3	Female	195	104	3
4	Male	149	61	3
...
495	Female	150	153	5
496	Female	184	121	4
497	Female	141	136	5
498	Male	150	95	5
499	Male	173	131	5

500 rows × 4 columns

```
In [4]: df.columns
```

Out[4]: Index(['Gender', 'Height', 'Weight', 'Index'], dtype='object')

```
In [17]: feature_matrix = df.iloc[:,1:4]
target_vector = df.iloc[:,0]
```

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In [18]: feature_matrix.shape
```

Out[18]: (500, 3)

```
In [19]: from sklearn.preprocessing import StandardScaler
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In [20]: fs = StandardScaler().fit_transform(feature_matrix)
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```
In [21]: logs = LogisticRegression()
logs.fit(fs,target_vector)
```

Out[21]: LogisticRegression()

```
In [22]: observation = [[1.4,1.5,1.6]]  
         prediction = logs.predict(observation)
```

```
In [23]: print(prediction)  
  
         ['Male']
```

```
In [24]: logs.classes_
```

```
Out[24]: array(['Female', 'Male'], dtype=object)
```

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In [25]: logs.predict_proba(observation)[0][0]
```

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Out[25]: 0.47902071890582076
```

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In [ ]:
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