```python
import pandas as pd                              # for data manipulation
import matplotlib.pyplot as plt                  # for data visualization
import seaborn as sns                            # for data visualization
import numpy as np
from sklearn.preprocessing import StandardScaler
from sklearn.model_selection import train_test_split
from sklearn.linear_model import LogisticRegression
from sklearn.tree import DecisionTreeClassifier
from sklearn.ensemble import RandomForestClassifier
from sklearn.svm import SVC
from sklearn.model_selection import GridSearchCV, ShuffleSplit
from sklearn.model_selection import cross_val_score
from sklearn.metrics import accuracy_score, confusion_matrix, classification_report


%matplotlib inline
sns.set_style("whitegrid")
plt.style.use("fivethirtyeight")


from google.colab import files
uploaded = files.upload()
```

⇥▾ | Choose Files | No file chosen   Upload widget is only available when the cell has been
executed in the current browser session. Please rerun this cell to enable.
Saving heart.csv to heart.csv

```python
import pandas as pd
data = pd.read_csv("heart.csv")
```

```python
# Display basic information about the data
print(data.shape)
```

⇥▾ (303, 14)

```python
print(data.head())
```

⇥▾
```
    age  sex  cp  trestbps  chol  fbs  restecg  thalach  exang  oldpeak  slope  \
0   63    1   3       145   233    1        0      150      0      2.3      0
1   37    1   2       130   250    0        1      187      0      3.5      0
2   41    0   1       130   204    0        0      172      0      1.4      2
3   56    1   1       120   236    0        1      178      0      0.8      2
4   57    0   0       120   354    0        1      163      1      0.6      2

    ca  thal  target
0    0     1       1
1    0     2       1
2    0     2       1
3    0     2       1
```