In [1]:
```python
import pandas as pd
```

In [2]:
```python
df = pd.read_csv("titanic.csv")
df.head()
```

Out[2]:

	PassengerId	Name	Pclass	Sex	Age	SibSp	Parch	Ticket	Fare	Cabin	Embarked	Survived
0	1	Braund, Mr. Owen Harris	3	male	22.0	1	0	A/5 21171	7.2500	NaN	S	0
1	2	Cumings, Mrs. John Bradley (Florence Briggs Th...	1	female	38.0	1	0	PC 17599	71.2833	C85	C	1
2	3	Heikkinen, Miss. Laina	3	female	26.0	0	0	STON/O2. 3101282	7.9250	NaN	S	1
3	4	Futrelle, Mrs. Jacques Heath (Lily May Peel)	1	female	35.0	1	0	113803	53.1000	C123	S	1
4	5	Allen, Mr. William Henry	3	male	35.0	0	0	373450	8.0500	NaN	S	0

In [3]:
```python
df.drop(['PassengerId','Name','SibSp','Parch','Ticket','Cabin','Embarked'],axis='columns',inplace=True
```

In [4]:
```python
df.head()
```

Out[4]:

	Pclass	Sex	Age	Fare	Survived
0	3	male	22.0	7.2500	0
1	1	female	38.0	71.2833	1
2	3	female	26.0	7.9250	1
3	1	female	35.0	53.1000	1
4	3	male	35.0	8.0500	0

In [5]:
```python
inputs = df.drop('Survived',axis='columns')
target = df.Survived
```

In [6]:
```python
inputs.Sex = inputs.Sex.map({'male': 1, 'female': 2})
```

In [7]:
```python
inputs.Age[:10]
```

Out[7]:
```
0    22.0
1    38.0
2    26.0
3    35.0
4    35.0
5     NaN
6    54.0
7     2.0
8    27.0
9    14.0
Name: Age, dtype: float64
```

In [8]:
```python
inputs.Age = inputs.Age.fillna(inputs.Age.mean())
```

In [9]: `inputs.head()`

Out[9]:

	Pclass	Sex	Age	Fare
0	3	1	22.0	7.2500
1	1	2	38.0	71.2833
2	3	2	26.0	7.9250
3	1	2	35.0	53.1000
4	3	1	35.0	8.0500

In [10]:
```python
from sklearn.model_selection import train_test_split
```

In [11]:
```python
X_train, X_test, y_train, y_test = train_test_split(inputs,target,test_size=0.2)
```

In [12]:
```python
len(X_train)
```

Out[12]: 712

In [14]:
```python
len(X_test)
```

Out[14]: 179

In [15]:
```python
from sklearn import tree
model = tree.DecisionTreeClassifier()
```

In [16]:
```python
model.fit(X_train,y_train)
```

Out[16]:
```
▾ DecisionTreeClassifier
DecisionTreeClassifier()
```

In [17]:
```python
model.score(X_test,y_test)
```

Out[17]: 0.7541899441340782

In [ ]: