

```
In [72]: import pandas as pd
import numpy as np
import sklearn

In [73]: df=pd.read_csv(r"C:\Users\91809\Desktop\titanic.csv")

In [74]: df.head()

Out[74]:
```

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

```
In [75]: df=df.drop(['Name'],axis=1)

In [76]: df.head()

Out[76]:
```

	PassengerId	Survived	Pclass	Sex	Age	SibSp	Parch	Ticket	Fare	Cabin	Embarked
0	1	0	3	male	22.0	1	0	A/5 21171	7.2500	NaN	S
1	2	1	1	female	38.0	1	0	PC 17599	71.2833	C85	C
2	3	1	3	female	26.0	0	0	STON/O2. 3101282	7.9250	NaN	S
3	4	1	1	female	35.0	1	0	113803	53.1000	C123	S
4	5	0	3	male	35.0	0	0	373450	8.0500	NaN	S

```
In [77]: df=df.drop(['Ticket'],axis=1)

In [78]: df=df.drop(['Cabin'],axis=1)

In [79]: from sklearn.preprocessing import LabelEncoder
number=LabelEncoder()
df.keys()
df['Sex']=number.fit_transform(df['Sex'].astype('str'))

In [80]: df['Embarked']=number.fit_transform(df['Embarked'].astype('str'))

In [81]: df.head()

Out[81]:
```

	PassengerId	Survived	Pclass	Sex	Age	SibSp	Parch	Fare	Embarked
0	1	0	3	1	22.0	1	0	7.2500	2
1	2	1	1	0	38.0	1	0	71.2833	0
2	3	1	3	0	26.0	0	0	7.9250	2
3	4	1	1	0	35.0	1	0	53.1000	2
4	5	0	3	1	35.0	0	0	8.0500	2

```
In [82]: df.isna().any()

Out[82]: PassengerId    False
Survived         False
Pclass           False
Sex              False
Age              True
SibSp            False
Parch           False
Fare             False
Embarked        False
dtype: bool

In [83]: df=df.dropna()

In [84]: df.isna().any()

Out[84]: PassengerId    False
Survived         False
Pclass           False
Sex              False
Age              False
SibSp            False
Parch           False
Fare             False
Embarked        False
dtype: bool

In [88]: df.shape

Out[88]: (714, 9)

In [86]: x=df.drop(['Survived'],axis=1)

In [87]: y=df['Survived']

In [89]: df.describe()

Out[89]:
```

	PassengerId	Survived	Pclass	Sex	Age	SibSp	Parch	Fare	Embarked
count	714.000000	714.000000	714.000000	714.000000	714.000000	714.000000	714.000000	714.000000	714.000000
mean	448.582633	0.406162	2.236695	0.634454	29.699118	0.512605	0.431373	34.694514	1.599440
std	259.119524	0.491460	0.838250	0.481921	14.526497	0.929783	0.853289	52.918930	0.781483
min	1.000000	0.000000	1.000000	0.000000	0.420000	0.000000	0.000000	0.000000	0.000000
25%	222.250000	0.000000	1.000000	0.000000	20.125000	0.000000	0.000000	8.050000	2.000000
50%	445.000000	0.000000	2.000000	1.000000	28.000000	0.000000	0.000000	15.741700	2.000000
75%	677.750000	1.000000	3.000000	1.000000	38.000000	1.000000	1.000000	33.375000	2.000000
max	891.000000	1.000000	3.000000	1.000000	80.000000	5.000000	6.000000	512.329200	3.000000

```
In [90]: from sklearn.model_selection import train_test_split

In [91]: X_train, X_test, y_train, y_test = train_test_split(x, y, test_size = 0.20)

In [92]: from sklearn.linear_model import LogisticRegression

In [97]: model=LogisticRegression(C=1.0,solver='liblinear').fit(X_train,y_train)

In [99]: print(model.score(X_test, y_test))

0.7832167832167832

In [101]: y_pred = model.predict(X_test)

In [103]: from sklearn.metrics import accuracy_score

In [104]: acc=accuracy_score(y_test,y_pred)

In [105]: acc

Out[105]: 0.7832167832167832

In [106]: dfs=pd.DataFrame({'y_test':y_test,'y_pred':y_pred})

In [107]: dfs.head()

Out[107]:
```

	y_test	y_pred
501	0	1
114	0	1
587	1	0
305	1	1
761	0	0

```
In [108]: dfs

Out[108]:
```

	y_test	y_pred
501	0	1
114	0	1
587	1	0
305	1	1
761	0	0
...
889	1	1
506	1	1
393	1	1
665	0	0
50	0	0

143 rows x 2 columns

```
In [109]: pip install nbconvert

Requirement already satisfied: nbconvert in c:\users\91809\anaconda3\lib\site-packages (5.6.1)
Requirement already satisfied: Jinja2>=2.4 in c:\users\91809\anaconda3\lib\site-packages (from nbconvert) (2.11.1)
Requirement already satisfied: testpath in c:\users\91809\anaconda3\lib\site-packages (from nbconvert) (0.4.4)
Requirement already satisfied: pandocfilters>=1.4.1 in c:\users\91809\anaconda3\lib\site-packages (from nbconvert) (1.4.2)
Requirement already satisfied: entrypoints>=0.2.2 in c:\users\91809\anaconda3\lib\site-packages (from nbconvert) (0.3)
Requirement already satisfied: defusedxml in c:\users\91809\anaconda3\lib\site-packages (from nbconvert) (0.6.0)
Requirement already satisfied: jupyter-core in c:\users\91809\anaconda3\lib\site-packages (from nbconvert) (4.6.1)
Requirement already satisfied: mistune<2,>=0.8.1 in c:\users\91809\anaconda3\lib\site-packages (from nbconvert) (0.8.4)
Requirement already satisfied: nbformat>=4.4 in c:\users\91809\anaconda3\lib\site-packages (from nbconvert) (5.0.4)
Requirement already satisfied: bleach in c:\users\91809\anaconda3\lib\site-packages (from nbconvert) (3.1.0)
Requirement already satisfied: traitlets>=4.2 in c:\users\91809\anaconda3\lib\site-packages (from nbconvert) (4.3.3)
Requirement already satisfied: pygments in c:\users\91809\anaconda3\lib\site-packages (from nbconvert) (2.5.2)
Requirement already satisfied: MarkupSafe>=0.23 in c:\users\91809\anaconda3\lib\site-packages (from Jinja2>=2.4->nbconvert) (1.1.1)
Requirement already satisfied: pywin32>=1.0; sys_platform == "win32" in c:\users\91809\anaconda3\lib\site-packages (from jupyter-core->nbconvert) (227)
Requirement already satisfied: jsonschema!=2.5.0,>=2.4 in c:\users\91809\anaconda3\lib\site-packages (from nbformat>=4.4->nbconvert) (3.2.0)
Requirement already satisfied: ipython-genutils in c:\users\91809\anaconda3\lib\site-packages (from nbformat>=4.4->nbconvert) (0.2.0)
Requirement already satisfied: six>=1.9.0 in c:\users\91809\anaconda3\lib\site-packages (from bleach->nbconvert) (1.14.0)
Requirement already satisfied: webencodings in c:\users\91809\anaconda3\lib\site-packages (from bleach->nbconvert) (0.5.1)
Requirement already satisfied: decorator in c:\users\91809\anaconda3\lib\site-packages (from traitlets>=4.2->nbconvert) (4.4.1)
Requirement already satisfied: attrs>=17.4.0 in c:\users\91809\anaconda3\lib\site-packages (from jsonschema!=2.5.0,>=2.4->nbformat>=4.4->nbconvert) (19.3.0)
Requirement already satisfied: pyrsistent>=0.14.0 in c:\users\91809\anaconda3\lib\site-packages (from jsonschema!=2.5.0,>=2.4->nbformat>=4.4->nbconvert) (0.15.7)
Requirement already satisfied: setuptools in c:\users\91809\anaconda3\lib\site-packages (from jsonschema!=2.5.0,>=2.4->nbformat>=4.4->nbconvert) (45.2.0.post20200210)
Requirement already satisfied: importlib-metadata; python_version < "3.8" in c:\users\91809\anaconda3\lib\site-packages (from importlib-metadata; python_version < "3.8"->jsonschema!=2.5.0,>=2.4->nbformat>=4.4->nbconvert) (2.2.0)
Note: you may need to restart the kernel to use updated packages.

In [112]: pip install -U notebook-as-pdf

Collecting notebook-as-pdf
  Downloading notebook_as_pdf-0.3.1-py3-none-any.whl (6.2 kB)
Collecting PyPDF2
  Downloading PyPDF2-1.26.0.tar.gz (77 kB)
Collecting pypeteer
  Downloading pypeteer-0.2.2-py3-none-any.whl (145 kB)
Requirement already satisfied, skipping upgrade: nbconvert in c:\users\91809\anaconda3\lib\site-packages (from notebook-as-pdf) (5.6.1)
Collecting appdirs<2.0.0,>=1.4.3
  Downloading appdirs-1.4.4-py2.py3-none-any.whl (9.6 kB)
Requirement already satisfied, skipping upgrade: tqdm<5.0.0,>=4.42.1 in c:\users\91809\anaconda3\lib\site-packages (from pypeteer->notebook-as-pdf) (4.42.1)
Collecting pyee<8.0.0,>=7.0.1
  Downloading pyee-7.0.2-py2.py3-none-any.whl (12 kB)
Requirement already satisfied, skipping upgrade: urllib3<2.0.0,>=1.25.8 in c:\users\91809\anaconda3\lib\site-packages (from pypeteer->notebook-as-pdf) (1.25.8)
Collecting websockets<9.0,>=8.1
  Downloading websockets-8.1-cp37m-win_amd64.whl (66 kB)
Requirement already satisfied, skipping upgrade: defusedxml in c:\users\91809\anaconda3\lib\site-packages (from nbconvert->notebook-as-pdf) (0.6.0)
Requirement already satisfied, skipping upgrade: Jinja2>=2.4 in c:\users\91809\anaconda3\lib\site-packages (from nbconvert->notebook-as-pdf) (2.11.1)
Requirement already satisfied, skipping upgrade: mistune<2,>=0.8.1 in c:\users\91809\anaconda3\lib\site-packages (from nbconvert->notebook-as-pdf) (0.8.4)
Requirement already satisfied, skipping upgrade: bleach in c:\users\91809\anaconda3\lib\site-packages (from nbconvert->notebook-as-pdf) (3.1.0)
Requirement already satisfied, skipping upgrade: pandocfilters>=1.4.1 in c:\users\91809\anaconda3\lib\site-packages (from nbconvert->notebook-as-pdf) (1.4.2)
Requirement already satisfied, skipping upgrade: pygments in c:\users\91809\anaconda3\lib\site-packages (from nbconvert->notebook-as-pdf) (2.5.2)
Requirement already satisfied, skipping upgrade: traitlets>=4.2 in c:\users\91809\anaconda3\lib\site-packages (from nbconvert->notebook-as-pdf) (4.3.3)
Requirement already satisfied, skipping upgrade: testpath in c:\users\91809\anaconda3\lib\site-packages (from nbconvert->notebook-as-pdf) (0.4.4)
Requirement already satisfied, skipping upgrade: jupyter-core in c:\users\91809\anaconda3\lib\site-packages (from nbconvert->notebook-as-pdf) (4.6.1)
Requirement already satisfied, skipping upgrade: MarkupSafe>=0.23 in c:\users\91809\anaconda3\lib\site-packages (from Jinja2>=2.4->nbconvert->notebook-as-pdf) (1.1.1)
Requirement already satisfied, skipping upgrade: six>=1.9.0 in c:\users\91809\anaconda3\lib\site-packages (from bleach->nbconvert->notebook-as-pdf) (1.14.0)
Requirement already satisfied, skipping upgrade: webencodings in c:\users\91809\anaconda3\lib\site-packages (from bleach->nbconvert->notebook-as-pdf) (0.5.1)
Requirement already satisfied, skipping upgrade: ipython-genutils in c:\users\91809\anaconda3\lib\site-packages (from traitlets>=4.2->nbconvert->notebook-as-pdf) (0.2.0)
Requirement already satisfied, skipping upgrade: decorator in c:\users\91809\anaconda3\lib\site-packages (from traitlets>=4.2->nbconvert->notebook-as-pdf) (4.4.1)
Requirement already satisfied, skipping upgrade: jsonschema!=2.5.0,>=2.4 in c:\users\91809\anaconda3\lib\site-packages (from nbformat>=4.4->nbconvert->notebook-as-pdf) (3.2.0)
Requirement already satisfied, skipping upgrade: pywin32>=1.0; sys_platform == "win32" in c:\users\91809\anaconda3\lib\site-packages (from jupyter-core->nbconvert->notebook-as-pdf) (227)
Requirement already satisfied, skipping upgrade: importlib-metadata; python_version < "3.8" in c:\users\91809\anaconda3\lib\site-packages (from importlib-metadata; python_version < "3.8"->jsonschema!=2.5.0,>=2.4->nbformat>=4.4->nbconvert->notebook-as-pdf) (2.2.0)
Requirement already satisfied, skipping upgrade: attrs>=17.4.0 in c:\users\91809\anaconda3\lib\site-packages (from jsonschema!=2.5.0,>=2.4->nbformat>=4.4->nbconvert->notebook-as-pdf) (19.3.0)
Requirement already satisfied, skipping upgrade: setuptools in c:\users\91809\anaconda3\lib\site-packages (from jsonschema!=2.5.0,>=2.4->nbformat>=4.4->nbconvert->notebook-as-pdf) (45.2.0.post20200210)
Requirement already satisfied, skipping upgrade: pyrsistent>=0.14.0 in c:\users\91809\anaconda3\lib\site-packages (from jsonschema!=2.5.0,>=2.4->nbformat>=4.4->nbconvert->notebook-as-pdf) (0.15.7)
Requirement already satisfied, skipping upgrade: zipp>=0.5 in c:\users\91809\anaconda3\lib\site-packages (from importlib-metadata; python_version < "3.8"->jsonschema!=2.5.0,>=2.4->nbformat>=4.4->nbconvert->notebook-as-pdf) (2.2.0)
Requirement already satisfied, skipping upgrade: packages: PyPDF2
  Building wheel for PyPDF2 (setup.py): started
  Building wheel for PyPDF2 (setup.py): finished with status 'done'
  Created wheel for PyPDF2: filename=PyPDF2-1.26.0-py3-none-any.whl size=61087 sha256=a6df0150e02d58f5a6a4f2fa87af77f2e38c76df9f915a9e886d5fd21871c7c
  Stored in directory: c:\users\91809\appdata\local\pip\cache\wheels\80\1a\24\648467ade3a77ed20f35cfdb2badd32134e96dd25ca81e64b3
Successfully built PyPDF2
Installing collected packages: PyPDF2, appdirs, pyee, websockets, pypeteer, notebook-as-pdf
Successfully installed PyPDF2-1.26.0 appdirs-1.4.4 notebook-as-pdf-0.3.1 pyee-7.0.2 pypeteer-0.2.2 websockets-8.1
Note: you may need to restart the kernel to use updated packages.

In [ ]:
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