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

In [3]:

In [4]:
```python
dftrain=pd.read_csv(r"C:\USERS\user\Downloads\C2_train.gender_submission - C2_
```

Out[4]:

	PassengerId	Survived	Pclass	Name	Sex	Age	SibSp	Parch	Ticket	Fare
0	1	0	3	Braund, Mr. Owen Harris	male	22.0	1	0	A/5 21171	7.2500
1	2	1	1	Cumings, Mrs. John Bradley (Florence Briggs Th...	female	38.0	1	0	PC 17599	71.2833
2	3	1	3	Heikkinen, Miss. Laina	female	26.0	0	0	STON/O2. 3101282	7.9250
3	4	1	1	Futrelle, Mrs. Jacques Heath (Lily May Peel)	female	35.0	1	0	113803	53.1000
4	5	0	3	Allen, Mr. William Henry	male	35.0	0	0	373450	8.0500
...	...	...	...	...	...	...	...	...	...	...
886	887	0	2	Montvila, Rev. Juozas	male	27.0	0	0	211536	13.0000
887	888	1	1	Graham, Miss. Margaret Edith	female	19.0	0	0	112053	30.0000
888	889	0	3	Johnston, Miss. Catherine Helen "Carrie"	female	NaN	1	2	W./C. 6607	23.4500
889	890	1	1	Behr, Mr. Karl Howell	male	26.0	0	0	111369	30.0000
890	891	0	3	Dooley, Mr. Patrick	male	32.0	0	0	370376	7.7500

891 rows × 12 columns

In [5]:

Out[5]: Index(['PassengerId', 'Survived', 'Pclass', 'Name', 'Sex', 'Age', 'SibSp',
              'Parch', 'Ticket', 'Fare', 'Cabin', 'Embarked'],
             dtype='object')

In [6]: a=dftrain[['PassengerId','Pclass','Age','SibSp','Parch','Fare']]

Out[6]:

	PassengerId	Pclass	Age	SibSp	Parch	Fare
0	1	3	22.0	1	0	7.2500
1	2	1	38.0	1	0	71.2833
2	3	3	26.0	0	0	7.9250
3	4	1	35.0	1	0	53.1000
4	5	3	35.0	0	0	8.0500
...	...	...	...	...	...	...
886	887	2	27.0	0	0	13.0000
887	888	1	19.0	0	0	30.0000
888	889	3	NaN	1	2	23.4500
889	890	1	26.0	0	0	30.0000
890	891	3	32.0	0	0	7.7500

891 rows × 6 columns

In [7]: `b=dftrain.head(10)`

Out[7]:

	PassengerId	Survived	Pclass	Name	Sex	Age	SibSp	Parch	Ticket	Fare	Ca
0	1	0	3	Braund, Mr. Owen Harris	male	22.0	1	0	A/5 21171	7.2500	N
1	2	1	1	Cumings, Mrs. John Bradley (Florence Briggs Th...	female	38.0	1	0	PC 17599	71.2833	(
2	3	1	3	Heikkinen, Miss. Laina	female	26.0	0	0	STON/O2. 3101282	7.9250	N
3	4	1	1	Futrelle, Mrs. Jacques Heath (Lily May Peel)	female	35.0	1	0	113803	53.1000	C
4	5	0	3	Allen, Mr. William Henry	male	35.0	0	0	373450	8.0500	N
5	6	0	3	Moran, Mr. James	male	NaN	0	0	330877	8.4583	N
6	7	0	1	McCarthy, Mr. Timothy J	male	54.0	0	0	17463	51.8625	I
7	8	0	3	Palsson, Master. Gosta Leonard	male	2.0	3	1	349909	21.0750	N
8	9	1	3	Johnson, Mrs. Oscar W (Elisabeth Vilhelmina Berg)	female	27.0	0	2	347742	11.1333	N
9	10	1	2	Nasser, Mrs. Nicholas (Adele Achem)	female	14.0	1	0	237736	30.0708	N

In [16]: `a=b[['PassengerId','Survived','Pclass','SibSp','Parch','Fare']]`

Out[16]:

	PassengerId	Survived	Pclass	SibSp	Parch	Fare
0	1	0	3	1	0	7.2500
1	2	1	1	1	0	71.2833
2	3	1	3	0	0	7.9250
3	4	1	1	1	0	53.1000
4	5	0	3	0	0	8.0500
5	6	0	3	0	0	8.4583
6	7	0	1	0	0	51.8625
7	8	0	3	3	1	21.0750
8	9	1	3	0	2	11.1333
9	10	1	2	1	0	30.0708

In [17]: `c=a.iloc[:,0:6]`

In [18]:

Out[18]: `(10, 6)`

In [19]:

Out[19]: `(10,)`

In [20]:

In [21]:

In [22]: `logr=LogisticRegression()`

Out[22]: `LogisticRegression()`

In [23]:

In [24]: `prediction=logr.predict(observation)`

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

In [25]:

Out[25]: `array(['C', 'Q', 'S'], dtype=object)`

In [26]:

Out[26]: `0.9812272295950463`

```
In [27]: import re
         from sklearn.datasets import load_digits
         import numpy as np
         import pandas as pd
         import matplotlib.pyplot as plt
         import seaborn as sns
         from sklearn.linear_model import LogisticRegression
```

```
In [28]: digits=load_digits()
```

```
Out[28]: {'data': array([[ 0.,  0.,  5., ...,  0.,  0.,  0.],
                 [ 0.,  0.,  0., ..., 10.,  0.,  0.],
                 [ 0.,  0.,  0., ..., 16.,  9.,  0.],
                 ...,
                 [ 0.,  0.,  1., ...,  6.,  0.,  0.],
                 [ 0.,  0.,  2., ..., 12.,  0.,  0.],
                 [ 0.,  0., 10., ..., 12.,  1.,  0.]]),
          'target': array([0, 1, 2, ..., 8, 9, 8]),
          'frame': None,
          'feature_names': ['pixel_0_0',
           'pixel_0_1',
           'pixel_0_2',
           'pixel_0_3',
           'pixel_0_4',
           'pixel_0_5',
           'pixel_0_6',
           'pixel_0_7',
           'pixel_1_0',
           'pixel_1_1',
```

```
In [29]: plt.figure(figsize=(20,4))
         for index,(image,label) in enumerate(zip(digits.data[0:5],digits.target[0:5]))
             plt.subplot(1,5,index+1)
             plt.imshow(np.reshape(image,(8,8)),cmap=plt.cm.gray)
```
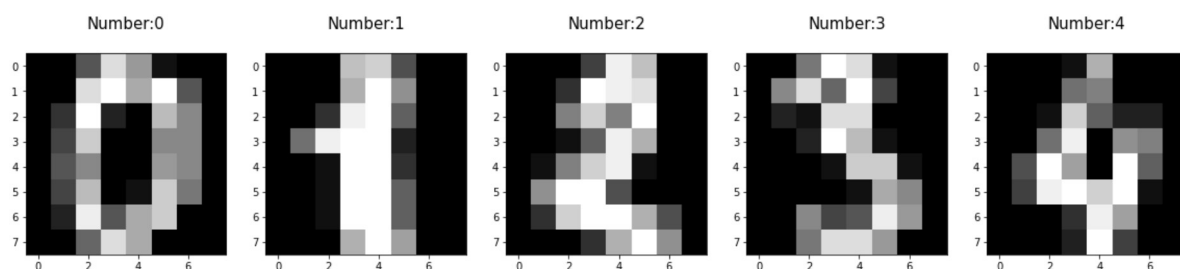


```
In [30]:
```

```
In [31]: print(x_train.shape)
         print(x_test.shape)
         print(y_train.shape)

         (1257, 64)
         (540, 64)
         (1257,)
         (540,)
```

In [32]:
```python
logre=LogisticRegression(max_iter=10000)
```

Out[32]: LogisticRegression(max_iter=10000)

In [33]:

```
[1 0 5 6 0 9 2 9 0 1 8 0 4 3 6 5 9 1 8 0 7 8 3 0 0 4 6 9 1 7 8 6 2 2 8 7 3
 8 7 7 5 5 6 2 5 5 8 6 2 2 2 1 8 1 9 6 9 2 2 5 5 0 6 2 8 6 5 2 1 5 8 1 2 4
 7 4 5 5 9 9 0 3 7 7 4 0 8 5 0 1 6 3 6 1 1 1 3 9 2 5 9 9 4 6 0 6 6 7 7 3 4
 6 6 3 5 5 5 8 8 0 7 3 8 4 8 7 7 4 5 1 1 4 2 9 9 8 8 5 0 1 2 1 9 9 2 9 5 3
 7 7 8 2 2 2 3 4 9 8 4 7 1 5 5 7 0 1 9 5 2 3 7 0 2 2 7 0 4 0 8 5 0 1 3 3 4
 5 7 9 4 5 6 2 9 7 1 8 5 3 3 3 2 9 6 5 2 4 3 2 1 0 1 4 8 3 4 9 2 5 3 2 5 3
 1 3 3 4 7 5 6 5 8 9 2 1 7 9 1 8 7 7 5 5 9 5 3 3 6 5 8 0 5 9 1 3 7 2 8 9 1
 7 8 9 1 1 2 3 9 8 2 7 1 2 3 1 6 9 5 7 6 2 1 0 6 8 4 3 3 3 5 9 1 0 8 7 8 3
 6 9 7 4 0 2 1 7 9 3 7 1 4 4 2 4 1 4 0 7 3 3 8 8 4 8 6 3 7 3 0 3 9 6 4 8 8
 4 7 1 3 3 4 6 5 9 2 0 8 2 2 5 1 6 4 7 6 6 9 6 7 4 7 3 6 0 7 5 1 3 3 1 0 9
 7 8 3 9 2 0 2 0 4 9 8 5 8 7 2 1 0 5 7 6 8 4 2 7 6 9 8 2 2 6 0 6 2 9 2 9 0
 3 4 7 0 7 6 8 7 7 6 7 0 7 7 0 5 7 7 8 0 6 7 1 5 0 0 1 3 8 4 3 5 9 2 0 9 8
 9 0 0 7 0 7 2 9 4 0 8 9 7 5 6 6 0 8 0 6 6 3 9 9 0 4 8 3 2 4 6 9 5 0 6 8 6
 7 5 5 6 7 6 7 7 9 3 0 2 9 6 4 6 9 9 3 1 2 8 4 6 1 8 0 2 3 0 4 5 0 1 4 0 9
 8 7 5 0 0 7 5 5 2 7 9 4 0 5 6 4 5 3 9 6 3 4]
```

In [34]:

```
0.9648148148148148
```

In [ ]: