```python
In [6]:  import pandas as pd
         import numpy as np
         from sklearn.datasets import load_digits
```

```python
In [7]:  digits=load_digits()
         dir(digits)
```

```
Out[7]: ['DESCR', 'data', 'feature_names', 'frame', 'images', 'target', 'target_names']
```

```python
In [20]: df=pd.DataFrame(digits.data,columns=digits.feature_names)
         df.head()
```

Out[20]:

	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	...	pixel_6_6	pixel_6_7	pixel_7_0
0	0.0	0.0	5.0	13.0	9.0	1.0	0.0	0.0	0.0	0.0	...	0.0	0.0	0.0
1	0.0	0.0	0.0	12.0	13.0	5.0	0.0	0.0	0.0	0.0	...	0.0	0.0	0.0
2	0.0	0.0	0.0	4.0	15.0	12.0	0.0	0.0	0.0	0.0	...	5.0	0.0	0.0
3	0.0	0.0	7.0	15.0	13.0	1.0	0.0	0.0	0.0	8.0	...	9.0	0.0	0.0
4	0.0	0.0	0.0	1.0	11.0	0.0	0.0	0.0	0.0	0.0	...	0.0	0.0	0.0

5 rows × 64 columns

```python
In [21]: df['target']=digits.target
```

```python
In [23]: df.head()
```

Out[23]:

	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	...	pixel_6_7	pixel_7_0	pixel_7_1
0	0.0	0.0	5.0	13.0	9.0	1.0	0.0	0.0	0.0	0.0	...	0.0	0.0	0.0
1	0.0	0.0	0.0	12.0	13.0	5.0	0.0	0.0	0.0	0.0	...	0.0	0.0	0.0
2	0.0	0.0	0.0	4.0	15.0	12.0	0.0	0.0	0.0	0.0	...	0.0	0.0	0.0
3	0.0	0.0	7.0	15.0	13.0	1.0	0.0	0.0	0.0	8.0	...	0.0	0.0	0.0
4	0.0	0.0	0.0	1.0	11.0	0.0	0.0	0.0	0.0	0.0	...	0.0	0.0	0.0

5 rows × 65 columns

```python
In [89]: X=df.drop(['target'],axis=1)
         y=digits.target
```

```python
In [90]: from sklearn.model_selection import train_test_split
         X_train,X_test,y_train,y_test= train_test_split(X,y,test_size=0.30)
```

```python
In [91]: X.shape
```

```
Out[91]: (1797, 64)
```

```python
In [92]: y.shape
```

```
Out[92]: (1797,)
```

```python
In [ ]:
```

```python
In [93]: from sklearn.svm import SVC
```

```python
In [99]: model=SVC(kernel='rbf')
```

```
In [101...   model.score(X_test,y_test)
```

Out[101...   0.9888888888888889

```
In [100...   model.fit(X_train,y_train)
```

Out[100...   SVC()

```
In [97]:   len(X_train)
```

Out[97]:   1257

```
In [83]:   len(X_test)
```

Out[83]:   540

```
In [ ]:
```

```
In [ ]:
```