

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

```
In [2]: pd.__version__
```

```
Out[2]: '2.2.3'
```

```
In [4]: df = pd.read_csv(r"C:\Users\urooj\Downloads\data.csv")
```

```
In [7]: print (df)
```

	CountryName	CountryCode	BirthRate	InternetUsers	\
0	Aruba	ABW	10.244	78.9	
1	Afghanistan	AFG	35.253	5.9	
2	Angola	AGO	45.985	19.1	
3	Albania	ALB	12.877	57.2	
4	United Arab Emirates	ARE	11.044	88.0	
..	
190	Yemen, Rep.	YEM	32.947	20.0	
191	South Africa	ZAF	20.850	46.5	
192	Congo, Dem. Rep.	COD	42.394	2.2	
193	Zambia	ZMB	40.471	15.4	
194	Zimbabwe	ZWE	35.715	18.5	

	IncomeGroup
0	High income
1	Low income
2	Upper middle income
3	Upper middle income
4	High income
..	...
190	Lower middle income
191	Upper middle income
192	Low income
193	Lower middle income
194	Low income

```
[195 rows x 5 columns]
```

```
In [8]: df.info()
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 195 entries, 0 to 194
Data columns (total 5 columns):
#   Column          Non-Null Count  Dtype
---  -
0   CountryName     195 non-null   object
1   CountryCode     195 non-null   object
2   BirthRate       195 non-null   float64
3   InternetUsers   195 non-null   float64
4   IncomeGroup     195 non-null   object
dtypes: float64(2), object(3)
memory usage: 7.7+ KB
```

```
In [9]: len(df) #Gives the records
```

```
Out[9]: 195
```

```
In [10]: id(df)
```

Out[10]: 2085690922992

In [11]: `df.shape` *#GIVES THE NUMBER OF ROWS AND COLUMNS*

Out[11]: (195, 5)

In [12]: `df.columns`

Out[12]: Index(['CountryName', 'CountryCode', 'BirthRate', 'InternetUsers',
 'IncomeGroup'],
 dtype='object')

In [13]: `len(df.columns)`

Out[13]: 5

In [14]: `df.isnull()`

Out[14]:

	CountryName	CountryCode	BirthRate	InternetUsers	IncomeGroup
0	False	False	False	False	False
1	False	False	False	False	False
2	False	False	False	False	False
3	False	False	False	False	False
4	False	False	False	False	False
...
190	False	False	False	False	False
191	False	False	False	False	False
192	False	False	False	False	False
193	False	False	False	False	False
194	False	False	False	False	False

195 rows × 5 columns

In [16]: `df.isnull().sum()` *#Sum() gives the integer values*

Out[16]: CountryName 0
CountryCode 0
BirthRate 0
InternetUsers 0
IncomeGroup 0
dtype: int64

In [17]: `df.info()`

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 195 entries, 0 to 194
Data columns (total 5 columns):
#   Column          Non-Null Count  Dtype
---  -
0   CountryName     195 non-null   object
1   CountryCode     195 non-null   object
2   BirthRate       195 non-null   float64
3   InternetUsers   195 non-null   float64
4   IncomeGroup     195 non-null   object
dtypes: float64(2), object(3)
memory usage: 7.7+ KB
```

In []: