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

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

Out[2]: '2.2.2'

In [3]:
```python
df = pd.read_csv(r"C:\Users\Lenovo\Downloads\dataset.csv")
```

In [4]:
```python
df
```

Out[4]:

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

195 rows × 5 columns

In [5]:
```python
id(df)
```

Out[5]: 2297742755888

In [6]:
```python
len(df)
```

Out[6]: 195

In [7]:
```python
df.columns
```

Out[7]: Index(['CountryName', 'CountryCode', 'BirthRate', 'InternetUsers',
       'IncomeGroup'],
      dtype='object')

In [8]:
```python
len(df.columns)
```

Out[8]: 5

In [9]: `df.isnull()`

Out[9]:

	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 [10]: `df.isna()`

Out[10]:

	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 [11]: `df.isnull().sum()`

Out[11]:   CountryName   0
            CountryCode   0
            BirthRate   0
            InternetUsers   0
            IncomeGroup   0
            dtype: int64

In [12]: `df.isna().sum()`

Out[12]:   CountryName   0
            CountryCode   0
            BirthRate   0
            InternetUsers   0
            IncomeGroup   0
            dtype: int64

In [13]: `df.head()`

Out[13]:

	CountryName	CountryCode	BirthRate	InternetUsers	IncomeGroup
0	Aruba	ABW	10.244	78.9	High income
1	Afghanistan	AFG	35.253	5.9	Low income
2	Angola	AGO	45.985	19.1	Upper middle income
3	Albania	ALB	12.877	57.2	Upper middle income
4	United Arab Emirates	ARE	11.044	88.0	High income

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

Out[14]:

	CountryName	CountryCode	BirthRate	InternetUsers	IncomeGroup
190	Yemen, Rep.	YEM	32.947	20.0	Lower middle income
191	South Africa	ZAF	20.850	46.5	Upper middle income
192	Congo, Dem. Rep.	COD	42.394	2.2	Low income
193	Zambia	ZMB	40.471	15.4	Lower middle income
194	Zimbabwe	ZWE	35.715	18.5	Low income

In [15]: `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 [16]: `df[:]`

Out[16]:

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

195 rows × 5 columns

In [17]:
```python
df[1:10]
```

Out[17]:

	CountryName	CountryCode	BirthRate	InternetUsers	IncomeGroup
1	Afghanistan	AFG	35.253	5.9000	Low income
2	Angola	AGO	45.985	19.1000	Upper middle income
3	Albania	ALB	12.877	57.2000	Upper middle income
4	United Arab Emirates	ARE	11.044	88.0000	High income
5	Argentina	ARG	17.716	59.9000	High income
6	Armenia	ARM	13.308	41.9000	Lower middle income
7	Antigua and Barbuda	ATG	16.447	63.4000	High income
8	Australia	AUS	13.200	83.0000	High income
9	Austria	AUT	9.400	80.6188	High income

In [18]:
```python
df[100:195]
```

Out[18]:

	CountryName	CountryCode	BirthRate	InternetUsers	IncomeGroup
100	Libya	LBY	21.425	16.5	Upper middle income
101	St. Lucia	LCA	15.430	46.2	Upper middle income
102	Liechtenstein	LIE	9.200	93.8	High income
103	Sri Lanka	LKA	17.863	21.9	Lower middle income
104	Lesotho	LSO	28.738	5.0	Lower middle income
...	...	...	...	...	...
190	Yemen, Rep.	YEM	32.947	20.0	Lower middle income
191	South Africa	ZAF	20.850	46.5	Upper middle income
192	Congo, Dem. Rep.	COD	42.394	2.2	Low income
193	Zambia	ZMB	40.471	15.4	Lower middle income
194	Zimbabwe	ZWE	35.715	18.5	Low income

95 rows × 5 columns

In [19]:
```
df[1:190:10]
```

Out[19]:

	CountryName	CountryCode	BirthRate	InternetUsers	IncomeGroup
1	Afghanistan	AFG	35.253	5.9000	Low income
11	Burundi	BDI	44.151	1.3000	Low income
21	Belize	BLZ	23.092	33.6000	Upper middle income
31	Switzerland	CHE	10.200	86.3400	High income
41	Cuba	CUB	10.400	27.9300	Upper middle income
51	Egypt, Arab Rep.	EGY	28.032	29.4000	Lower middle income
61	United Kingdom	GBR	12.200	89.8441	High income
71	Guatemala	GTM	27.465	19.7000	Lower middle income
81	Ireland	IRL	15.000	78.2477	High income
91	Kenya	KEN	35.194	39.0000	Lower middle income
101	St. Lucia	LCA	15.430	46.2000	Upper middle income
111	Madagascar	MDG	34.686	3.0000	Low income
121	Mauritania	MRT	33.801	6.2000	Lower middle income
131	Norway	NOR	11.600	95.0534	High income
141	Puerto Rico	PRI	10.800	73.9000	High income
151	Senegal	SEN	38.533	13.1000	Lower middle income
161	Slovak Republic	SVK	10.100	77.8826	High income
171	Turkmenistan	TKM	21.322	9.6000	Upper middle income
181	United States	USA	12.500	84.2000	High income

In [ ]: