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In [1]: !import pandas as pd

In [2]: pd.__version__

Out [2]: '2.2.2'

In [3]: df = pd.read_csv(r"C:\Users\kareem_ashaik\Downloads\data.csv")

Out [3]:
   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 x 5 columns

In [4]: id(df)

Out [4]: 2638417836368

In [5]: len(df)

Out [5]: 195

In [6]: df.columns

Out [5]: Index(['CountryName', 'CountryCode', 'BirthRate', 'InternetUsers',
              'IncomeGroup'],
              dtype='object')

In [7]: len(df.columns)

Out [7]: 5

In [8]: df.isnull()

Out [8]:
   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 x 5 columns

In [9]: df.isna()

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 x 5 columns

In [10]: df.isnull().sum()

Out [10]: CountryName      0
CountryCode      0
BirthRate        0
InternetUsers    0
IncomeGroup      0
dtype: int64

In [11]: df.head()

Out [11]:
   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 [12]: df.tail()

Out [12]:
   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 [13]: 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 [14]: df[:1]

Out [14]:
   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 x 5 columns

In [15]: df[1:1]

Out [15]:
   CountryName CountryCode BirthRate InternetUsers IncomeGroup

In [16]: df[1:]

Out [16]:
   CountryName CountryCode BirthRate InternetUsers IncomeGroup
0           Aruba         ABW    10.244         78.9      High income

In [17]: df[1:-1]

Out [17]:
   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
...  ...  ...  ...  ...
189          Samoa         WSM    26.172        15.3  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 rows x 5 columns

In [18]: df[1:-5]

Out [18]:
   CountryName CountryCode BirthRate InternetUsers IncomeGroup
194          Zimbabwe         ZWE    35.715        18.5000      Low income
189          Samoa         WSM    26.172        15.3000  Lower middle income
184        Venezuela, RB         VEN    19.842        54.9000      High income
179          Ukraine         UKR    11.100        41.0000  Lower middle income
174        Trinidad and Tobago         TTO    14.590        63.8000      High income
169          Thailand         THA    11.041        28.9400  Upper middle income
164          Swaziland         SWZ    30.093        24.7000  Lower middle income
159        Sao Tome and Principe         STP    34.537        23.0000  Lower middle income
154          Sierra Leone         SLE    36.729         1.7000      Low income
149          Saudi Arabia         SAU    20.576        60.5000      High income
144          French Polynesia         PYF    16.393        56.8000      High income
139          Papua New Guinea         PNG    28.899         6.5000  Lower middle income
134          Oman         OMN    20.419        66.4500      High income
129          Nicaragua         NIC    20.788        15.5000  Lower middle income
124          Malaysia         MYS    16.805        66.9700  Upper middle income
119          Mongolia         MNG    24.275        20.0000  Upper middle income
114          Macedonia, FYR         MKD    11.222        65.2400  Upper middle income
109          Morocco         MAR    21.023        56.0000  Lower middle income
104          Lesotho         LSO    28.738         5.0000  Lower middle income
99          Liberia         LBR    35.521         3.2000      Low income
94          Kiribati         KIR    29.044        11.5000  Lower middle income
89          Japan         JPN         8.200        89.7100      High income
84          Iceland         ISL    13.400        96.5468      High income
79          Indonesia         IDN    20.297        14.9400  Lower middle income
74        Hong Kong SAR, China         HKG         7.900        74.2000      High income
69          Grenada         GRD    19.334        35.0000  Upper middle income
64          Guinea         GIN    37.337         1.6000      Low income
59          Micronesia, Fed. Sts.         FSM    23.511        27.8000  Lower middle income
54          Estonia         EST    10.300        79.4000      High income
49          Algeria         DZA    24.738        16.5000  Upper middle income
44          Czech Republic         CZE    10.200        74.1104      High income
39          Cabo Verde         CPV    21.625        37.5000  Lower middle income
34          Cote d'Ivoire         CIV    37.320         8.4000  Lower middle income
29        Central African Republic         CAF    34.076         3.5000      Low income
24          Brazil         BRA    14.931        51.0400  Upper middle income
19        Bosnia and Herzegovina         BIH         9.062        57.7900  Upper middle income
14          Burkina Faso         BFA    40.551         9.1000      Low income
9          Austria         AUT         9.400        80.6198      High income
4  United Arab Emirates         ARE    11.044        88.0000      High income

In [19]: df[1:7]

Out [19]:
   CountryName CountryCode BirthRate InternetUsers IncomeGroup
0           Aruba         ABW    10.244        78.9000      High income
7  Antigua and Barbuda         ATG    16.447        63.4000      High income
14          Burkina Faso         BFA    40.551         9.1000      Low income
21          Belize         BLZ    23.092        33.6000  Upper middle income
28          Botswana         BWA    25.267        15.0000  Upper middle income
35          Cameroon         CMR    37.236         6.4000  Upper middle income
42          Cayman Islands         CYM    12.500        74.1000      High income
49          Algeria         DZA    24.738        16.5000  Upper middle income
56          Finland         FIN    10.700        91.5144      High income
63          Ghana         GHA    33.131        12.3000  Lower middle income
70          Greenland         GRL    14.500        65.8000      High income
77          Haiti         HTI    25.345        10.6000      Low income
84          Iceland         ISL    13.400        96.5468      High income
91          Kenya         KEN    35.194        39.0000  Lower middle income
98          Lebanon         LBN    13.426        70.5000  Upper middle income
105          Lithuania         LTU    10.100        68.4529      High income
112          Maldives         MDV    21.447        44.1000  Upper middle income
119          Mongolia         MNG    24.275        20.0000  Upper middle income
126          New Caledonia         NCL    17.000        66.0000      High income
133          New Zealand         NZL    13.120        82.7800      High income
140          Poland         POL         9.600        62.8492      High income
147          Russian Federation         RUS    13.200        67.9700      High income
152          Sierra Leone         SLE    36.729         1.7000      Low income
161          Slovak Republic         SVK    10.100        77.8826      High income
168          Togo         TGO         36.080         4.5000      Low income
175          Tunisia         TUN    19.800        43.8000  Upper middle income
182          Uzbekistan         UZB    22.500        38.2000  Lower middle income
189          Samoa         WSM    26.172        15.3000  Lower middle income

In [20]: df[1:100:10]

Out [20]:
   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  Upper middle income
81          Ireland         IRL    15.000        76.2477      High income
91          Kenya         KEN    35.194        39.0000  Lower middle income

In [21]: df[0:100:10]

Out [21]:
   CountryName CountryCode BirthRate InternetUsers IncomeGroup
0           Aruba         ABW    10.244        78.900000      High income
10          Azerbaijan         AZE    18.300        58.700000  Upper middle income
20          Belarus         BLR    12.500        54.170000  Upper middle income
30          Canada         CAN    10.900        85.800000      High income
40          Costa Rica         CRI    15.022        45.960000  Upper middle income
50          Ecuador         ECU    21.070        40.353684  Upper middle income
60          Gabon         GAB    30.555         9.200000  Upper middle income
70          Greenland         GRL    14.500        65.800000      High income
80          India         IND    20.291        15.100000  Lower middle income
90          Kazakhstan         KAZ    22.730        54.000000  Upper middle income

In [22]: df[1:-2]

Out [22]:
   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
...  ...  ...  ...  ...
188  West Bank and Gaza         PSE    30.394         46.6  Lower middle income
189          Samoa         WSM    26.172        15.3  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 rows x 5 columns

In [23]: df[1:-2]

Out [23]:
   CountryName CountryCode BirthRate InternetUsers IncomeGroup
194          Zimbabwe         ZWE    35.715        18.5      Low income
192        Congo, Dem. Rep.         COD    42.394         2.2      Low income
190        Yemen, Rep.         YEM    32.947        20.0  Lower middle income
188  West Bank and Gaza         PSE    30.394         46.6  Lower middle income
186          Vietnam         VNM    15.537         43.9  Lower middle income
...  ...  ...  ...  ...
8          Australia         AUS    13.200        83.0      High income
6          Armenia         ARM    13.308         41.9  Lower middle income
4  United Arab Emirates         ARE    11.044        88.0      High income
2           Angola         AGO    45.985        19.1  Upper middle income
0           Aruba         ABW    10.244         78.9      High income
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