```
In [1]:
          import pandas as pd
          df = pd.read_csv(r'C:\Users\rohit\OneDrive\Desktop\FSDS & GEN-AI 25TH-NOV-024.NO
 In [3]:
 In [5]:
          df
 Out[5]:
                                  CountryCode
                                                 BirthRate InternetUsers
                    CountryName
                                                                                IncomeGroup
            0
                            Aruba
                                           ABW
                                                     10.244
                                                                     78.9
                                                                                  High income
                       Afghanistan
                                            AFG
                                                     35.253
                                                                       5.9
                                                                                   Low income
                                                                                 Upper middle
            2
                           Angola
                                           AGO
                                                     45.985
                                                                     19.1
                                                                                       income
                                                                                 Upper middle
            3
                           Albania
                                            ALB
                                                     12.877
                                                                     57.2
                                                                                       income
                       United Arab
                                            ARE
                                                     11.044
                                                                     88.0
                                                                                  High income
             4
                          Emirates
                                                                                 Lower middle
          190
                       Yemen, Rep.
                                            YEM
                                                     32.947
                                                                     20.0
                                                                                       income
                                                                                 Upper middle
          191
                       South Africa
                                            ZAF
                                                     20.850
                                                                     46.5
                                                                                       income
          192
                  Congo, Dem. Rep.
                                            COD
                                                     42.394
                                                                      2.2
                                                                                   Low income
                                                                                 Lower middle
          193
                           Zambia
                                            ZMB
                                                     40.471
                                                                     15.4
                                                                                       income
                        Zimbabwe
                                                                                   Low income
          194
                                            ZWE
                                                     35.715
                                                                     18.5
         195 rows × 5 columns
 In [7]:
          len(df)
 Out[7]:
 In [9]:
          df.columns
          Index(['CountryName', 'CountryCode', 'BirthRate', 'InternetUsers',
 Out[9]:
                  'IncomeGroup'],
                 dtype='object')
In [11]:
          len(df.columns)
Out[11]:
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 [15]: df.head(2)

Out[15]:

	CountryName	CountryCode	BirthRate	InternetUsers	IncomeGroup
0	Aruba	ABW	10.244	78.9	High income
1	Afghanistan	AFG	35.253	5.9	Low income

In [17]: df.tail()

Out[17]:

	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 [19]: df.tail(3)

Out[19]:

	CountryName	CountryCode	BirthRate	InternetUsers	IncomeGroup
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 [21]: 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 [23]: df.describe()
```

96.546800

Out[23]:		BirthRate	InternetUsers
	count	195.000000	195.000000
	mean	21.469928	42.076471
	std	10.605467	29.030788
	min	7.900000	0.900000
	25%	12.120500	14.520000
	50%	19.680000	41.000000
	75%	29.759500	66.225000

49.661000

In [25]: df.describe().transpose()

max

Out[25]: std min 25% **50% 75**% count mean max **BirthRate** 195.0 21.469928 10.605467 19.68 29.7595 49.6610 7.9 12.1205 InternetUsers 195.0 42.076471 29.030788 0.9 14.5200 41.00 66.2250 96.5468

In [27]: df.head()

Out[27]:		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

ARE

11.044

88.0

High income

In [29]: df.columns

4 United Arab Emirates

In [31]: df.columns = ['a','b','c','d','e']
 df.head()

L1, 11.10						2 4.4	ano / analysis		
Out[31]:		a	b	С	d		е	_	
	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	Uppe	er middle income		
	3	Albania	ALB	12.877	57.2	Uppe	er middle income		
	4	United Arab Emirates	ARE	11.044	88.0		High income		
In [33]:	df	columns = ['Countr	yName'	, 'Coun	tryCo	de',	'BirthRate', '	<pre>InternetUsers', 'In</pre>	com
In [35]:	df	.head()							
Out[35]:		CountryName	Coun	tryCode	Birth	Rate	InternetUsers	IncomeGroup	
	0	Aruba		ABW	1	0.244	78.9	High income	
	1	Afghanistan		AFG	3	5.253	5.9	Low income	
	2	Angola		AGO	4	5.985	19.1	Upper middle income	
	3	Albania		ALB	1	2.877	57.2	Upper middle income	

ARE

11.044

88.0

High income

In [37]: df[21:26]

4 United Arab Emirates

		_			_	
$\cap$	14-	Г	2	7	1	0

	CountryName	CountryCode	BirthRate	InternetUsers	IncomeGroup
21	Belize	BLZ	23.092	33.60	Upper middle income
22	Bermuda	BMU	10.400	95.30	High income
23	Bolivia	BOL	24.236	36.94	Lower middle income
24	Brazil	BRA	14.931	51.04	Upper middle income
25	Barbados	BRB	12.188	73.00	High income

In [39]: **df[:** 

$\cap$	14-	$\Gamma \supset$	0.7	
U	иL	Γ >	7]	

	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 [41]: df[:10]

Out[41]:

	CountryName	CountryCode	BirthRate	InternetUsers	IncomeGroup
0	Aruba	ABW	10.244	78.9000	High income
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 [43]: df.head(10)

Out[43]:

	CountryName	CountryCode	BirthRate	InternetUsers	IncomeGroup
0	Aruba	ABW	10.244	78.9000	High income
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 [45]: df[::-1]

Out[45]:

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

195 rows × 5 columns

In [47]: **df** 

0		١
UUT	14/	1 .

	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 [51]: df[::20]

Out[51]:

	CountryName	CountryCode	BirthRate	InternetUsers	IncomeGroup
0	Aruba	ABW	10.244	78.9000	High income
20	Belarus	BLR	12.500	54.1700	Upper middle income
40	Costa Rica	CRI	15.022	45.9600	Upper middle income
60	Gabon	GAB	30.555	9.2000	Upper middle income
80	India	IND	20.291	15.1000	Lower middle income
100	Libya	LBY	21.425	16.5000	Upper middle income
120	Mozambique	MOZ	39.705	5.4000	Low income
140	Poland	POL	9.600	62.8492	High income
160	Suriname	SUR	18.455	37.4000	Upper middle income
180	Uruguay	URY	14.374	57.6900	High income

```
In [53]: df.columns
```

	f.head()					
Out[55]:	CountryName	CountryCode	BirthRate	InternetUsers	IncomeGroup	
0	) Aruba	ABW	10.244	78.9	High income	
1	Afghanistan	AFG	35.253	5.9	Low income	
2	<b>?</b> Angola	AGO	45.985	19.1	Upper middle income	
3	<b>B</b> Albania	ALB	12.877	57.2	Upper middle income	
4	United Arab Emirates	ARE	11.044	88.0	High income	
In [57]: d	f['CountryName'].hea	d()				
1 2 3 4	<pre>0 Aruba 1 Afghanistan 2 Angola 3 Albania 4 United Arab Emirates Name: CountryName, dtype: object</pre>					
In [59]: [	'CountryName','Birth	Rate']				
Out[59]: [	['CountryName', 'Birt	chRate']				
In [59]: <b>d</b>	<pre>df[['CountryName','BirthRate']].head()</pre>					
Out[59]:	CountryName	BirthRate				
0	) Aruba	10.244				
1	Afghanistan	35.253				
2	. Angola	45.985				
3	<b>A</b> lbania	12.877				
4	United Arab Emirates	11.044				
In [65]: <b>f</b>	d.head()					
Out[65]:	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	
2		ALB	12.877	57.2	Upper middle income	
3	<b>S</b> Albania	ALD			-  -  -  -  -  -  -  -  -  -  -  -  -  -	
		ARE	11.044	88.0	High income	

```
Out[61]: 0
                 10.244
          1
                 35.253
          2
                 45.985
          3
                 12.877
          4
                 11.044
          190
                 32.947
          191
                 20.850
          192
                 42.394
          193
                 40.471
          194
                 35.715
          Name: BirthRate, Length: 195, dtype: float64
         df[4:8][['CountryName','BirthRate']]
In [63]:
Out[63]:
                  CountryName BirthRate
             United Arab Emirates
                                    11.044
          4
          5
                       Argentina
                                    17.716
          6
                        Armenia
                                    13.308
          7 Antigua and Barbuda
                                    16.447
In [65]:
         df[['CountryName','BirthRate']][4:8]
Out[65]:
                  CountryName BirthRate
             United Arab Emirates
                                    11.044
          5
                       Argentina
                                    17.716
          6
                        Armenia
                                    13.308
          7 Antigua and Barbuda
                                    16.447
         df1 = df[['CountryName','BirthRate']]
In [69]: df1
```

Out[69]:		CountryName	BirthRate
	0	Aruba	10.244
	1	Afghanistan	35.253
	2	Angola	45.985
	3	Albania	12.877
	4	United Arab Emirates	11.044
	•••		
	190	Yemen, Rep.	32.947
	191	South Africa	20.850
	192	Congo, Dem. Rep.	42.394
	193	Zambia	40.471
	194	Zimbabwe	35.715

195 rows × 2 columns

In [71]: df2 = df[4:8]

In [73]: df2

Out[73]:

	CountryName	CountryCode	BirthRate	InternetUsers	IncomeGroup
4	United Arab Emirates	ARE	11.044	88.0	High income
5	Argentina	ARG	17.716	59.9	High income
6	Armenia	ARM	13.308	41.9	Lower middle income
7	Antigua and Barbuda	ATG	16.447	63.4	High income

In [75]: df.head()

Out[75]:

	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 [77]: df[['CountryCode','BirthRate','InternetUsers']][4:8]

Out[77]:		CountryCode	BirthRate	InternetUsers
	4	ARE	11.044	88.0
	5	ARG	17.716	59.9
	6	ARM	13.308	41.9
	7	ATG	16.447	63.4

In [79]: df.head()

Out[79]:		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 [81]: df.BirthRate \* df.InternetUsers

```
Out[81]: 0
               808.2516
        1
              207.9927
        2
             878.3135
        3
              736.5644
              971.8720
        190 658.9400
        191 969.5250
        192
              93.2668
        193
             623.2534
        194
             660.7275
        Length: 195, dtype: float64
```

In [83]: df['myCalc'] = df.BirthRate \* df.InternetUsers

In [85]: df.head()

Out[85]:

:		CountryName	CountryCode	BirthRate	InternetUsers	IncomeGroup	myCalc
C	0	Aruba	ABW	10.244	78.9	High income	808.2516
	1	Afghanistan	AFG	35.253	5.9	Low income	207.9927
	2	Angola	AGO	45.985	19.1	Upper middle income	878.3135
	3	Albania	ALB	12.877	57.2	Upper middle income	736.5644
	4	United Arab Emirates	ARE	11.044	88.0	High income	971.8720

In [87]: df.drop('myCalc', axis = 1)

Out[87]:		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 ro\	ws × 5 columns						
In [89]:	<pre>df = df.drop('myCalc',axis=1)</pre>							
In [91]:	: df.head()							
Out[91]:		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		
	<b>4</b> Un	ited Arab Emirates	ARE	11.044	88.0	High income		
In [93]:	df.co	lumns[2]						
Out[93]:	'Birt	hRate'						

df.InternetUsers<2

```
Out[95]: 0
                False
          1
                 False
           2
                 False
           3
                 False
           4
                 False
                  . . .
           190
                 False
           191
               False
                False
           192
           193
                 False
           194
                 False
           Name: InternetUsers, Length: 195, dtype: bool
In [97]: Filter = df.InternetUsers < 2</pre>
In [99]:
          Filter
Out[99]: 0
                  False
                  False
           1
           2
                 False
           3
                 False
                 False
           190
                 False
           191
               False
           192
               False
           193
                 False
           194
                 False
          Name: InternetUsers, Length: 195, dtype: bool
In [101...
          df[3:7]
Out[101...
```

	CountryName	CountryCode	BirthRate	InternetUsers	IncomeGroup
3	Albania	ALB	12.877	57.2	Upper middle income
4	United Arab Emirates	ARE	11.044	88.0	High income
5	Argentina	ARG	17.716	59.9	High income
6	Armenia	ARM	13.308	41.9	Lower middle income

In [103... df[30:40]

ut[103		CountryName	CountryCode	BirthRate	InternetUsers	IncomeGroup		
	30	Canada	CAN	10.900	85.80	High income		
	31	Switzerland	CHE	10.200	86.34	High income		
	32	Chile	CHL	13.385	66.50	High income		
	33	China	CHN	12.100	45.80	Upper middle income		
	34	Cote d'Ivoire	CIV	37.320	8.40	Lower middle income		
	35	Cameroon	CMR	37.236	6.40	Lower middle income		
	36	Congo, Rep.	COG	37.011	6.60	Lower middle income		
	37	Colombia	COL	16.076	51.70	Upper middle income		
	38	Comoros	COM	34.326	6.50	Low income		
	39	Cabo Verde	CPV	21.625	37.50	Lower middle income		
n [105	df[Filter]							
ut[105		CountryName	CountryCode	BirthRate	InternetUsers	IncomeGroup		
	11	Burundi	BDI	44.151	1.3	Low income		
	52	Eritrea	ERI	34.800	0.9	Low income		
	55	Ethiopia	ETH	32.925	1.9	Low income		
	64	Guinea	GIN	37.337	1.6	Low income		
	117	Myanmar	MMR	18.119	1.6	Lower middle income		
	127	Niger	NER	49.661	1.7	Low income		
	154	Sierra Leone	SLE	36.729	1.7	Low income		
	156	Somalia	SOM	43.891	1.5	Low income		
	172	Timor-Leste	TLS	35.755	1.1	Lower middle income		
n [107	df.B	irthRate>40						
ut[107	0 1 2 3 4 190 191 192 193	False False False False False False True True						

In [109...

Name: BirthRate, Length: 195, dtype: bool

Filter2 = df.BirthRate>40

```
In [111...
           Filter2
Out[111...
           0
                   False
           1
                   False
           2
                    True
           3
                   False
           4
                   False
                    . . .
           190
                   False
           191
                   False
           192
                    True
           193
                    True
           194
                   False
           Name: BirthRate, Length: 195, dtype: bool
In [113...
           df[Filter2]
Out[113...
                                   CountryCode BirthRate InternetUsers
                                                                                  IncomeGroup
                    CountryName
              2
                           Angola
                                           AGO
                                                     45.985
                                                                      19.1
                                                                           Upper middle income
             11
                          Burundi
                                            BDI
                                                     44.151
                                                                       1.3
                                                                                    Low income
             14
                      Burkina Faso
                                            BFA
                                                                       9.1
                                                                                    Low income
                                                     40.551
             65
                      Gambia, The
                                           GMB
                                                                      14.0
                                                                                    Low income
                                                     42.525
                                                                                    Low income
           115
                             Mali
                                            MLI
                                                     44.138
                                                                       3.5
           127
                            Niger
                                            NER
                                                     49.661
                                                                       1.7
                                                                                    Low income
                                                                           Lower middle income
           128
                          Nigeria
                                           NGA
                                                     40.045
                                                                      38.0
                          Somalia
                                           SOM
                                                                       1.5
                                                                                    Low income
           156
                                                     43.891
           167
                            Chad
                                            TCD
                                                     45.745
                                                                       2.3
                                                                                    Low income
           178
                          Uganda
                                            UGA
                                                     43.474
                                                                      16.2
                                                                                    Low income
           192
                 Congo, Dem. Rep.
                                           COD
                                                     42.394
                                                                       2.2
                                                                                    Low income
           193
                          Zambia
                                           ZMB
                                                     40.471
                                                                      15.4
                                                                            Lower middle income
In [135...
           Filter & Filter2
Out[135...
           0
                   False
           1
                   False
           2
                   False
           3
                   False
           4
                   False
           190
                   False
           191
                   False
           192
                   False
           193
                   False
           194
                   False
           Length: 195, dtype: bool
           df[Filter & Filter2]
In [115...
```

Out[115		CountryName Co	ountryCode B	irthRate I	nternetUsers	IncomeGroup	
	11	Burundi	BDI	44.151	1.3	Low income	
	127	Niger	NER	49.661	1.7	Low income	
	156	Somalia	SOM	43.891	1.5	Low income	
In [117	df[(d	f.BirthRate > 40	) & (df.Inte	rnetUsers	< 2)]		
Out[117		CountryName Co	ountryCode B	irthRate I	nternetUsers	IncomeGroup	
	11	Burundi	BDI	44.151	1.3	Low income	
	127	Niger	NER	49.661	1.7	Low income	
	156	Somalia	SOM	43.891	1.5	Low income	
In [119	df.he	ad()					
Out[119		CountryName	CountryCode	BirthRate	e InternetUse	ers Incoi	meGroup
	0	Aruba	ABW	10.244	1 78	3.9 Hig	h income
	1	Afghanistan	AFG	35.253	3 5	5.9 Lo	w income
	2	Angola	AGC	45.985	5 19	9.1 Upper middl	le income
	3	Albania	ALB	12.877	7 57	7.2 Upper middl	le income
	<b>4</b> Un	ited Arab Emirates	ARE	11.044	1 88	3.0 Hig	h income

Out[121...

	CountryName	CountryCode	BirthRate	InternetUsers	IncomeGroup
1	Afghanistan	AFG	35.253	5.90	Low income
11	Burundi	BDI	44.151	1.30	Low income
13	Benin	BEN	36.440	4.90	Low income
14	Burkina Faso	BFA	40.551	9.10	Low income
29	Central African Republic	CAF	34.076	3.50	Low income
38	Comoros	СОМ	34.326	6.50	Low income
52	Eritrea	ERI	34.800	0.90	Low income
55	Ethiopia	ETH	32.925	1.90	Low income
64	Guinea	GIN	37.337	1.60	Low income
65	Gambia, The	GMB	42.525	14.00	Low income
66	Guinea-Bissau	GNB	37.503	3.10	Low income
77	Haiti	HTI	25.345	10.60	Low income
93	Cambodia	KHM	24.462	6.80	Low income
99	Liberia	LBR	35.521	3.20	Low income
111	Madagascar	MDG	34.686	3.00	Low income
115	Mali	MLI	44.138	3.50	Low income
120	Mozambique	MOZ	39.705	5.40	Low income
123	Malawi	MWI	39.459	5.05	Low income
127	Niger	NER	49.661	1.70	Low income
132	Nepal	NPL	20.923	13.30	Low income
148	Rwanda	RWA	32.689	9.00	Low income
154	Sierra Leone	SLE	36.729	1.70	Low income
156	Somalia	SOM	43.891	1.50	Low income
158	South Sudan	SSD	37.126	14.10	Low income
167	Chad	TCD	45.745	2.30	Low income
168	Togo	TGO	36.080	4.50	Low income
177	Tanzania	TZA	39.518	4.40	Low income
178	Uganda	UGA	43.474	16.20	Low income
192	Congo, Dem. Rep.	COD	42.394	2.20	Low income
194	Zimbabwe	ZWE	35.715	18.50	Low income

In [123... df.I

df.IncomeGroup.unique()

Out[123... array(['High income', 'Low income', 'Upper middle income', 'Lower middle income'], dtype=object)

In [125...

df.head()

Out[125...

	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 [ ]: