```
import pandas as pd
In [1]:
         stats = pd.read_csv(r'E:\Nareshit\2.October Data Science\16 oct Pandas Dataframe
In [2]:
In [3]:
         stats
Out[3]:
                                                                                    Unnamed:
              CountryName CountryCode BirthRate InternetUsers IncomeGroup
           0
                      Aruba
                                      ABW
                                               10.244
                                                                78.9
                                                                       High income
                                                                                      808.2516
                 Afghanistan
                                      AFG
                                               35.253
                                                                 5.9
                                                                        Low income
                                                                                      207.9927
                                                                      Upper middle
           2
                     Angola
                                      AGO
                                               45.985
                                                                19.1
                                                                                      878.3135
                                                                           income
                                                                      Upper middle
           3
                     Albania
                                                                                      736.5644
                                       ALB
                                               12.877
                                                                57.2
                                                                            income
                 United Arab
                                      ARE
                                               11.044
                                                                88.0
                                                                       High income
                                                                                      971.8720
                    Emirates
                                                                      Lower middle
         190
                 Yemen, Rep.
                                      YEM
                                               32.947
                                                                20.0
                                                                                      658.9400
                                                                           income
                                                                      Upper middle
                 South Africa
                                                                46.5
                                                                                      969.5250
         191
                                      ZAF
                                               20.850
                                                                            income
                Congo, Dem.
         192
                                      COD
                                               42.394
                                                                 2.2
                                                                        Low income
                                                                                       93.2668
                        Rep.
                                                                      Lower middle
         193
                     Zambia
                                                                15.4
                                                                                      623.2534
                                      ZMB
                                               40.471
                                                                            income
         194
                  Zimbabwe
                                      ZWE
                                               35.715
                                                                18.5
                                                                        Low income
                                                                                      660.7275
        195 rows × 6 columns
In [5]:
         stats.columns
Out[5]: Index(['CountryName', 'CountryCode', 'BirthRate', 'InternetUsers',
                 'IncomeGroup', 'Unnamed: 5'],
                dtype='object')
In [6]:
         len(stats.columns)
Out[6]: 6
         stats.head()
In [7]:
```

Out[7]:		CountryName (	CountryCode	BirthRate	InternetUsers	IncomeGroup	Unnamed: 5
	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 [8]:	ctat	s.tail()					
TII [O].	Stat	S. Lall()					
	Scac	.,	CountryCode	BirthRate	InternetUsers	IncomeGroup	Unnamed: 5
	190	.,	<b>CountryCode</b> YEM			Lower middle	658 9400
		CountryName		32.947	20.0	Lower middle income	658.9400 969.5250
	190	CountryName  Yemen, Rep.	YEM	32.947 20.850	20.0	Lower middle income Upper middle income	658.9400 969.5250
Out[8]:	190	Yemen, Rep.  South Africa Congo, Dem.	YEM ZAF	32.947 20.850 42.394	20.0 46.5 . 2.2	Lower middle income Upper middle income Low income	658.9400 969.5250 93.2668

In [9]: stats.tail(10)

Out[9]:

	CountryName	CountryCode	BirthRate	InternetUsers	IncomeGroup	Unnamed: 5
185	Virgin Islands (U.S.)	VIR	10.700	45.3	High income	484.7100
186	Vietnam	VNM	15.537	43.9	Lower middle income	682.0743
187	Vanuatu	VUT	26.739	11.3	Lower middle income	302.1507
188	West Bank and Gaza	PSE	30.394	46.6	Lower middle income	1416.3604
189	Samoa	WSM	26.172	15.3	Lower middle income	400.4316
190	Yemen, Rep.	YEM	32.947	20.0	Lower middle income	658.9400
191	South Africa	ZAF	20.850	46.5	Upper middle income	969.5250
192	Congo, Dem. Rep.	COD	42.394	2.2	Low income	93.2668
193	Zambia	ZMB	40.471	15.4	Lower middle income	623.2534
194	Zimbabwe	ZWE	35.715	18.5	Low income	660.7275

## In [10]: stats.info()

<class 'pandas.core.frame.DataFrame'>
RangeIndex: 195 entries, 0 to 194
Data columns (total 6 columns):

Ducu	COTAMILIS (COCAT	0 001411113).	
#	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
5	Unnamed: 5	195 non-null	float64

dtypes: float64(3), object(3)

memory usage: 9.3+ KB

In [11]: stats.describe()

Out[11]:		BirthF	Rate Ir	nternetUsers	Unnamed:	5			
	count	195.000	0000	195.000000	195.00000	0			
	mean	21.469	928	42.076471	653.55900	9			
	std	10.605	467	29.030788	351.55352	1			
	min	7.900	0000	0.900000	28.99040	0			
	25%	12.120	500	14.520000	361.26330	0			
	50%	19.680	0000	41.000000	682.07430	0			
	75%	29.759	500	66.225000	892.69017	0			
	max	49.661	000	96.546800	1552.58950	0			
In [12]:	stats.	describ	e().tr	anspose()					
Out[12]:			count	mean	std	min	25%	50%	75%
	Bir	thRate	195.0	21.469928	10.605467	7.9000	12.1205	19.6800	29.75950
	Interne	etUsers	195.0	42.076471	29.030788	0.9000	14.5200	41.0000	66.22500
	Unna	med: 5	195.0	653.559009	351.553521	28.9904	361.2633	682.0743	892.69017 1!
	4								•
In [13]:	stats.	transno	50()						
		ci anspo	36()						
Out[13]:		er unspo	36()	0	1	2	3 4	4	5 6
		yName		<b>0</b> uba Afghanis			United	d o Argentin	
	Countr		Aru	ıba Afghanis		a Albar	United nia Arak	d o Argentin s	a Armenia
	Countr	yName	Aru	ıba Afghanis BW <i>A</i>	tan Ango	a Albar O A	United nia Arak Emirate: LB ARI	d o Argentin s E ARG	a Armenia G ARM
	Countr Count Bir	yName ryCode	Aru AE 10.2	aba Afghanis BW A	tan Angol	a Albar O A 5 12.8	United nia Arak Emirate: LB ARI	d Argentin s Argentin E ARG	a Armenia G ARM 6 13.308
	Countr Count Bir	yName ryCode rthRate	Aru AE 10.2	aba Afghanis BW A 244 35.2 8.9	tan Angol AFG AG 253 45.98 5.9 19 .ow Uppe	a Albar  O A  5 12.8  1 57  er Upp e midd	United Emirate:  LB ARI  77 11.044  7.2 88.0  er High income	d Argentin s ARG	a Armenia G ARM 6 13.308 9 41.9 h Lower middle
	Countr Count Bir Interno	yName ryCode rthRate etUsers	Aru AE 10.2 78 Hi incor	aba Afghanis BW A 244 35.2 8.9 igh L me inco	tan Angol AFG AG 253 45.98 5.9 19 ow Middl incom	a Albar  O A  5 12.8  1 57  er Upp e midd	United Emirate:  LB ARI 77 11.044 7.2 88.0  eer High income	d Argentin s  E ARG 4 17.71 0 59.  h High incom	a Armenia G ARM 6 13.308 9 41.9 h Lower middle income
Out[13]:	Countr Count Bir Interno	yName ryCode rthRate etUsers eGroup	Aru AE 10.2 76 Hi incor	aba Afghanis BW A 244 35.2 8.9 igh L me inco	tan Angol AFG AG 253 45.98 5.9 19 ow Middl incom	a Albar  O A  5 12.8  1 57  er Upp e midde e incom	United Emirate:  LB ARI 77 11.044 7.2 88.0  eer High income	d Argentin s  E ARG 4 17.71 0 59.  h High incom	a Armenia G ARM 6 13.308 9 41.9 h Lower middle income
Out[13]:	Countr Count Bin Interna Income	yName ryCode rthRate etUsers eGroup	Aru AE 10.2 76 Hi incor	aba Afghanis BW A 244 35.2 8.9 igh L me inco	tan Angol AFG AG 253 45.98 5.9 19 ow Middl incom	a Albar  O A  5 12.8  1 57  er Upp e midde e incom	United Emirate:  LB ARI 77 11.044 7.2 88.0  eer High income	d Argentin s  E ARG 4 17.71 0 59.  h High incom	a Armenia G ARM 6 13.308 9 41.9 h Lower middle income
Out[13]:	Countr  Count  Bit  Interne  Income  Unna	yName ryCode rthRate etUsers eGroup	Aru AE 10.2 78 Hi incor 808.25	aba Afghanis BW A 244 35.2 8.9 igh L me inco	tan Angol AFG AG 253 45.98 5.9 19 ow Middl incom	a Albar  O A  5 12.8  1 57  er Upp e midde e incom	United Emirate:  LB ARI 77 11.044 7.2 88.0  eer High income	d Argentin s  E ARG 4 17.71 0 59.  h High incom	a Armenia G ARM 6 13.308 9 41.9 h Lower middle income
Out[13]:	Countr  Count  Bit  Interne  Income  Unna  6 rows >	yName ryCode rthRate etUsers eGroup nmed: 5 × 195 co	Aru AE 10.2 76 Hi incor 808.25 Jumns	aba Afghanis  3W A  244 35.2  8.9  igh L inco  516 207.99	tan Angolaria Argolaria Ar	a Albar O A 5 12.8 1 57 er Upp e midde e incon 5 736.56	United Emirate: LB ARI 77 11.044 7.2 88.0 eer High income 144 971.872	d Argentin s ARG	a Armenia G ARM 6 13.308 9 41.9 h Lower middle income

```
stats.head()
Out[17]:
                                                 d
                                                                                f
                              a
                                    b
                                            C
                                                                      е
                                 ABW 10.244 78.9
          0
                          Aruba
                                                            High income 808.2516
          1
                     Afghanistan
                                  AFG
                                      35.253
                                                5.9
                                                             Low income 207.9927
                                                     Upper middle income 878.3135
          2
                         Angola
                                  AGO
                                       45.985 19.1
          3
                         Albania
                                       12.877 57.2 Upper middle income 736.5644
             United Arab Emirates
                                  ARE
                                      11.044 88.0
                                                            High income 971.8720
In [18]:
          stats.columns
          Index(['a', 'b', 'c', 'd', 'e', 'f'], dtype='object')
Out[18]:
          stats.columns = ['CountryName', 'CountryCode', 'BirthRate', 'InternetUsers',
In [19]:
                  'IncomeGroup', 'Unnamed: 5']
In [20]:
          stats.columns
          Index(['CountryName', 'CountryCode', 'BirthRate', 'InternetUsers',
Out[20]:
                  'IncomeGroup', 'Unnamed: 5'],
                 dtype='object')
 In [ ]:
In [21]:
          stats[21:26]
Out[21]:
                                                                                   Unnamed:
              CountryName CountryCode BirthRate InternetUsers IncomeGroup
                                                                                           5
                                                                     Upper middle
                      Belize
                                      BLZ
                                              23.092
                                                              33.60
                                                                                   775.89120
          21
                                                                          income
          22
                    Bermuda
                                     BMU
                                              10.400
                                                             95.30
                                                                      High income
                                                                                   991.12000
                                                                     Lower middle
                                                             36.94
          23
                      Bolivia
                                      BOL
                                              24.236
                                                                                   895.27784
                                                                          income
                                                                     Upper middle
                                                              51.04
          24
                      Brazil
                                      BRA
                                              14.931
                                                                                   762.07824
                                                                          income
          25
                   Barbados
                                      BRB
                                              12.188
                                                              73.00
                                                                      High income
                                                                                   889.72400
In [22]: stats[:]
```

Out[22]:

	CountryName	CountryCode	BirthRate	InternetUsers	IncomeGroup	Unnamed: 5
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
•••						
190	Yemen, Rep.	YEM	32.947	20.0	Lower middle income	658.9400
191	South Africa	ZAF	20.850	46.5	Upper middle income	969.5250
192	Congo, Dem. Rep.	COD	42.394	2.2	Low income	93.2668
193	Zambia	ZMB	40.471	15.4	Lower middle income	623.2534
194	Zimbabwe	ZWE	35.715	18.5	Low income	660.7275

195 rows × 6 columns

In [23]: stats[:10]

Out[23]:

	CountryName	CountryCode	BirthRate	InternetUsers	IncomeGroup	Unnamed: 5
0	Aruba	ABW	10.244	78.9000	High income	808.25160
1	Afghanistan	AFG	35.253	5.9000	Low income	207.99270
2	Angola	AGO	45.985	19.1000	Upper middle income	878.31350
3	Albania	ALB	12.877	57.2000	Upper middle income	736.56440
4	United Arab Emirates	ARE	11.044	88.0000	High income	971.87200
5	Argentina	ARG	17.716	59.9000	High income	1061.18840
6	Armenia	ARM	13.308	41.9000	Lower middle income	557.60520
7	Antigua and Barbuda	ATG	16.447	63.4000	High income	1042.73980
8	Australia	AUS	13.200	83.0000	High income	1095.60000
9	Austria	AUT	9.400	80.6188	High income	757.81672

In [24]: stats[::-1]

Out[24]:

	CountryName	CountryCode	BirthRate	InternetUsers	IncomeGroup	Unnamed: 5
194	Zimbabwe	ZWE	35.715	18.5	Low income	660.7275
193	Zambia	ZMB	40.471	15.4	Lower middle income	623.2534
192	Congo, Dem. Rep.	COD	42.394	2.2	Low income	93.2668
191	South Africa	ZAF	20.850	46.5	Upper middle income	969.5250
190	Yemen, Rep.	YEM	32.947	20.0	Lower middle income	658.9400
•••						
4	United Arab Emirates	ARE	11.044	88.0	High income	971.8720
3	Albania	ALB	12.877	57.2	Upper middle income	736.5644
2	Angola	AGO	45.985	19.1	Upper middle income	878.3135
1	Afghanistan	AFG	35.253	5.9	Low income	207.9927
0	Aruba	ABW	10.244	78.9	High income	808.2516

195 rows × 6 columns

In [25]: stats

Out[25]:

	CountryName	CountryCode	BirthRate	InternetUsers	IncomeGroup	Unnamed: 5
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
•••						
190	Yemen, Rep.	YEM	32.947	20.0	Lower middle income	658.9400
191	South Africa	ZAF	20.850	46.5	Upper middle income	969.5250
192	Congo, Dem. Rep.	COD	42.394	2.2	Low income	93.2668
193	Zambia	ZMB	40.471	15.4	Lower middle income	623.2534
194	Zimbabwe	ZWE	35.715	18.5	Low income	660.7275
195 r	ows × 6 columns	:				

195 rows × 6 columns

In [26]: stats[::20]

Out[26]:		CountryName	CountryCode	BirthRate	InternetUsers	IncomeGroup	Unnamed: 5
	0	Aruba	ABW	10.244	78.9000	High income	808.25160
	20	Belarus	BLR	12.500	54.1700	Upper middle income	677.12500
	40	Costa Rica	CRI	15.022	45.9600	Upper middle income	690.41112
	60	Gabon	GAB	30.555	9.2000	Upper middle income	281.10600
	80	India	IND	20.291	15.1000	Lower middle income	306.39410
	100	Libya	LBY	21.425	16.5000	Upper middle income	353.51250
	120	Mozambique	MOZ	39.705	5.4000	Low income	214.40700
	140	Poland	POL	9.600	62.8492	High income	603.35232
	160	Suriname	SUR	18.455	37.4000	Upper middle income	690.21700
	180	Uruguay	URY	14.374	57.6900	High income	829.23606
In [27]:	stats	s['CountryName'	].head()				
Out[27]:	0 1 2 3 4 Name	_		t			
In [37]:	stat	s[['CountryName	e','BirthRate	']].head()			
Out[37]:		CountryNam	ne BirthRate				
	0	Arub	oa 10.244				
	1	Afghanista	an 35.253				
	2	Ango	la 45.985				
	3	Alban	ia 12.877				
	<b>4</b> U	nited Arab Emirate	es 11.044				
In [38]:	stats	s['BirthRate']					

```
Out[38]: 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
In [42]:
          stats[4:8][['CountryName','BirthRate']]
Out[42]:
                   CountryName BirthRate
             United Arab Emirates
                                    11.044
          5
                       Argentina
                                    17.716
          6
                                    13.308
                        Armenia
          7 Antigua and Barbuda
                                    16.447
In [43]:
          stats [['CountryName', 'BirthRate']][4:8]
Out[43]:
                  CountryName BirthRate
             United Arab Emirates
                                    11.044
          5
                       Argentina
                                    17.716
          6
                        Armenia
                                    13.308
          7 Antigua and Barbuda
                                    16.447
         df1 = stats [['CountryName','BirthRate']][4:8]
In [45]:
Out[45]:
                   CountryName
                                 BirthRate
             United Arab Emirates
                                    11.044
          5
                       Argentina
                                    17.716
          6
                        Armenia
                                    13.308
          7 Antigua and Barbuda
                                    16.447
         df1 = stats [['CountryName', 'BirthRate']]
          df1
In [47]:
```

Out[47]:		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 [48]: df2 = stats[4:8]

In [49]: df2

Out[49]:

	CountryName	CountryCode	BirthRate	InternetUsers	IncomeGroup	Unnamed: 5
4	United Arab Emirates	ARE	11.044	88.0	High income	971.8720
5	Argentina	ARG	17.716	59.9	High income	1061.1884
6	Armenia	ARM	13.308	41.9	Lower middle income	557.6052
7	Antigua and Barbuda	ATG	16.447	63.4	High income	1042.7398

In [50]: stats[['CountryName', 'BirthRate', 'InternetUsers']][4:8]

Out[50]:

	CountryName	BirthRate	InternetUsers
4	United Arab Emirates	11.044	88.0
5	Argentina	17.716	59.9
6	Armenia	13.308	41.9
7	Antigua and Barbuda	16.447	63.4

In [51]: stats.BirthRate \* stats.InternetUsers

```
Out[51]: 0
                  808.2516
          1
                  207.9927
          2
                  878.3135
          3
                  736.5644
          4
                  971.8720
          190
                  658.9400
          191
                  969.5250
          192
                  93.2668
                  623.2534
          193
          194
                  660.7275
          Length: 195, dtype: float64
In [52]:
          stats['mycalc'] = stats.BirthRate * stats.InternetUsers
In [53]:
          stats.head()
Out[53]:
                                                                                  Unnamed:
             CountryName CountryCode BirthRate InternetUsers IncomeGroup
                                                                                              m
          0
                     Aruba
                                    ABW
                                             10.244
                                                             78.9
                                                                    High income
                                                                                   808.2516
                                                                                             308
          1
                Afghanistan
                                    AFG
                                             35.253
                                                              5.9
                                                                     Low income
                                                                                   207.9927
                                                                                             207
                                                                    Upper middle
          2
                    Angola
                                    AGO
                                             45.985
                                                             19.1
                                                                                   878.3135 878
                                                                         income
                                                                    Upper middle
          3
                    Albania
                                     ALB
                                             12.877
                                                             57.2
                                                                                   736.5644
                                                                                            736
                                                                         income
                United Arab
          4
                                     ARE
                                                             88.0
                                                                    High income
                                             11.044
                                                                                             971
                                                                                   971.8720
                   Emirates
In [54]: stats.drop('Unnamed: 5', axis=1)
```

Out[54]:		CountryName	CountryCode	BirthRate	InternetUsers	IncomeGroup	mycalc	
	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	
	•••	•••		•••				
	190	Yemen, Rep.	YEM	32.947	20.0	Lower middle income	658.9400	
	191	South Africa	ZAF	20.850	46.5	Upper middle income	969.5250	
	192	Congo, Dem. Rep.	COD	42.394	2.2	Low income	93.2668	
	193	Zambia	ZMB	40.471	15.4	Lower middle income	623.2534	
	194	Zimbabwe	ZWE	35.715	18.5	Low income	660.7275	
		ows × 6 columns						
n [55]:	stats	columns[2]						
ut[55]:	'Bir	thRate'						
n [56]:	stats	.InternetUser	s <b>&lt;</b> 2					
Out[56]:								
n [57]:	Filte	er = stats.Int	ernetUsers<2					
in [59]:	Filte	er						

```
Out[59]: 0
                False
          1
                False
          2
                False
          3
                False
          4
                False
                 . . .
          190
                False
                False
          191
                False
          192
                False
          193
          194
                False
```

Name: InternetUsers, Length: 195, dtype: bool

## In [60]: stats[3:7]

## Out[60]:

	CountryName	CountryCode	BirthRate	InternetUsers	IncomeGroup	Unnamed: 5	I
3	Albania	ALB	12.877	57.2	Upper middle income	736.5644	73
4	United Arab Emirates	ARE	11.044	88.0	High income	971.8720	97
5	Argentina	ARG	17.716	59.9	High income	1061.1884	106
6	Armenia	ARM	13.308	41.9	Lower middle income	557.6052	55

## In [61]: stats[Filter]

Out[61]:

	CountryName	CountryCode	BirthRate	InternetUsers	IncomeGroup	Unnamed: 5	
11	Burundi	BDI	44.151	1.3	Low income	57.3963	Ē
52	Eritrea	ERI	34.800	0.9	Low income	31.3200	Ξ
55	Ethiopia	ETH	32.925	1.9	Low income	62.5575	(
64	Guinea	GIN	37.337	1.6	Low income	59.7392	Ē
117	Myanmar	MMR	18.119	1.6	Lower middle income	28.9904	Ź
127	Niger	NER	49.661	1.7	Low income	84.4237	8
154	Sierra Leone	SLE	36.729	1.7	Low income	62.4393	(
156	Somalia	SOM	43.891	1.5	Low income	65.8365	(
172	Timor-Leste	TLS	35.755	1.1	Lower middle income	39.3305	Ξ

In [62]: stats.BirthRate>40

```
Out[62]: 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 [63]: Filter2 = stats.BirthRate>40
In [64]: Filter2
Out[64]: 0
                False
                False
         1
         2
                 True
         3
                False
         4
                False
         190
               False
         191
              False
         192
                True
         193
                True
         194
                False
         Name: BirthRate, Length: 195, dtype: bool
In [65]: stats[Filter2]
```

Out[65]:		CountryName	CountryCode	BirthRate	InternetUsers	IncomeGroup	Unnamed: 5
	2	Angola	AGO	45.985	19.1	Upper middle income	878.3135
	11	Burundi	BDI	44.151	1.3	Low income	57.3963
	14	Burkina Faso	BFA	40.551	9.1	Low income	369.0141
	65	Gambia, The	GMB	42.525	14.0	Low income	595.3500
	115	Mali	MLI	44.138	3.5	Low income	154.4830
	127	Niger	NER	49.661	1.7	Low income	84.4237
	128	Nigeria	NGA	40.045	38.0	Lower middle income	1521.7100 1
	156	Somalia	SOM	43.891	1.5	Low income	65.8365
	167	Chad	TCD	45.745	2.3	Low income	105.2135
	178	Uganda	UGA	43.474	16.2	Low income	704.2788
	192	Congo, Dem. Rep.	COD	42.394	2.2	Low income	93.2668
	193	Zambia	ZMB	40.471	15.4	Lower middle income	623.2534
	4						•
In [66]:	Filt	er & Filter2					
Out[66]:	0 1 2 3 4	False False False False False					
	190 191 192 193 194 Leng	False False False False False False False	e: bool				
In [67]:	stat	s[Filter & Fil	ter2]				
Out[67]:		CountryName	CountryCode	BirthRate	InternetUsers	IncomeGroup	Unnamed: 5
	11	Burundi	BDI	44.151	1.3	Low income	57.3963 5
	127	Niger	NER	49.661	1.7	Low income	84.4237 {
	156	Somalia	SOM	43.891	1.5	Low income	65.8365 €
	4						-
In [68]:	stat	s[(stats.Birth	Rate>40) & (s	tats.Inter	netUsers <2)]		

Out[68]:		CountryName	CountryCode	BirthRate	e InternetUser	s IncomeGroup	Unname	d: 5
	<ul><li>11 Burundi</li><li>127 Niger</li><li>156 Somalia</li></ul>		BDI	44.151	1.	3 Low income	e 57.396	3 5
			NER	49.661	1.	7 Low income	e 84.423	37 8
			SOM 43.89		1.	5 Low income	e 65.836	55 E
	4							
In [69]:	stat	s.head()						
Out[69]:	C	CountryName C	ountryCode	BirthRate	InternetUsers	IncomeGroup	Unnamed: 5	n
	0	Aruba	ABW	10.244	78.9	High income	808.2516	308
	1	Afghanistan	AFG	35.253	5.9	Low income	207.9927	207
	2	Angola	AGO	45.985	19.1	Upper middle income	878.3135	878
	3	Albania	ALB	12.877	57.2	Upper middle income	736.5644	736
	4	United Arab Emirates	ARE	11.044	88.0	High income	971.8720	971
	4							
In [70]:	stat	s[stats.Income	Group == 'Lo	w income']				

Out[70]:

	CountryName	CountryCode	BirthRate	InternetUsers	IncomeGroup	Unnamed: 5	
1	Afghanistan	AFG	35.253	5.90	Low income	207.99270	2
11	Burundi	BDI	44.151	1.30	Low income	57.39630	
13	Benin	BEN	36.440	4.90	Low income	178.55600	1
14	Burkina Faso	BFA	40.551	9.10	Low income	369.01410	3
29	Central African Republic	CAF	34.076	3.50	Low income	119.26600	1
38	Comoros	СОМ	34.326	6.50	Low income	223.11900	2
52	Eritrea	ERI	34.800	0.90	Low income	31.32000	
55	Ethiopia	ETH	32.925	1.90	Low income	62.55750	
64	Guinea	GIN	37.337	1.60	Low income	59.73920	
65	Gambia, The	GMB	42.525	14.00	Low income	595.35000	Ē
66	Guinea-Bissau	GNB	37.503	3.10	Low income	116.25930	1
77	Haiti	HTI	25.345	10.60	Low income	268.65700	2
93	Cambodia	KHM	24.462	6.80	Low income	166.34160	1
99	Liberia	LBR	35.521	3.20	Low income	113.66720	1
111	Madagascar	MDG	34.686	3.00	Low income	104.05800	1
115	Mali	MLI	44.138	3.50	Low income	154.48300	1
120	Mozambique	MOZ	39.705	5.40	Low income	214.40700	2
123	Malawi	MWI	39.459	5.05	Low income	199.26795	1
127	Niger	NER	49.661	1.70	Low income	84.42370	
132	Nepal	NPL	20.923	13.30	Low income	278.27590	2
148	Rwanda	RWA	32.689	9.00	Low income	294.20100	2
154	Sierra Leone	SLE	36.729	1.70	Low income	62.43930	
156	Somalia	SOM	43.891	1.50	Low income	65.83650	
158	South Sudan	SSD	37.126	14.10	Low income	523.47660	Ē
167	Chad	TCD	45.745	2.30	Low income	105.21350	1
168	Togo	TGO	36.080	4.50	Low income	162.36000	1
177	Tanzania	TZA	39.518	4.40	Low income	173.87920	1
178	Uganda	UGA	43.474	16.20	Low income	704.27880	7
192	Congo, Dem. Rep.	COD	42.394	2.20	Low income	93.26680	
194	Zimbabwe	ZWE	35.715	18.50	Low income	660.72750	(

```
In [71]:
          stats.IncomeGroup.unique()
Out[71]: array(['High income', 'Low income', 'Upper middle income',
                  'Lower middle income'], dtype=object)
         filter2 = stats.IncomeGroup=='Low income'
In [74]:
In [75]:
          filter2
Out[75]:
          0
                  True
          1
                  True
          2
                  True
          3
                  True
          4
                  True
          190
                  True
          191
                  True
          192
                  True
          193
                  True
          194
                  True
          Name: IncomeGroup, Length: 195, dtype: bool
 In [ ]:
          stats.drop('mycalc', axis=1)
In [78]:
Out[78]:
                                                                                    Unnamed:
                CountryName CountryCode BirthRate InternetUsers IncomeGroup
                                                                                             5
            0
                       Aruba
                                      ABW
                                                10.244
                                                                78.9
                                                                        Low income
                                                                                      808.2516
             1
                                                                 5.9
                  Afghanistan
                                       AFG
                                                35.253
                                                                        Low income
                                                                                      207.9927
            2
                                                                19.1
                                                                        Low income
                      Angola
                                       AGO
                                                45.985
                                                                                      878.3135
            3
                      Albania
                                       ALB
                                                12.877
                                                                57.2
                                                                        Low income
                                                                                      736.5644
                  United Arab
                                       ARE
                                                11.044
                                                                0.88
                                                                        Low income
                                                                                      971.8720
                     Emirates
          190
                  Yemen, Rep.
                                       YEM
                                                32.947
                                                                20.0
                                                                        Low income
                                                                                      658.9400
          191
                  South Africa
                                       ZAF
                                                20.850
                                                                46.5
                                                                        Low income
                                                                                      969.5250
                 Congo, Dem.
          192
                                       COD
                                                42.394
                                                                 2.2
                                                                                       93.2668
                                                                        Low income
                         Rep.
          193
                      Zambia
                                       ZMB
                                                40.471
                                                                15.4
                                                                        Low income
                                                                                      623.2534
          194
                   Zimbabwe
                                       ZWE
                                                35.715
                                                                18.5
                                                                        Low income
                                                                                      660.7275
         195 rows × 6 columns
In [79]:
          stats.columns
Out[79]: Index(['CountryName', 'CountryCode', 'BirthRate', 'InternetUsers',
                  'IncomeGroup', 'Unnamed: 5', 'mycalc'],
                 dtype='object')
```

```
stats = stats.drop('mycalc', axis=1)
In [81]:
         stats.head()
Out[81]:
                                                                                 Unnamed:
              CountryName CountryCode BirthRate InternetUsers IncomeGroup
                                                                                          5
          0
                     Aruba
                                    ABW
                                             10.244
                                                             78.9
                                                                     Low income
                                                                                   808.2516
          1
                Afghanistan
                                     AFG
                                             35.253
                                                              5.9
                                                                     Low income
                                                                                   207.9927
          2
                    Angola
                                    AGO
                                             45.985
                                                             19.1
                                                                     Low income
                                                                                   878.3135
          3
                    Albania
                                     ALB
                                             12.877
                                                             57.2
                                                                     Low income
                                                                                   736.5644
                United Arab
                                     ARE
                                                             0.88
                                             11.044
                                                                     Low income
                                                                                   971.8720
                   Emirates
         stats.columns
In [82]:
Out[82]: Index(['CountryName', 'CountryCode', 'BirthRate', 'InternetUsers',
                  'IncomeGroup', 'Unnamed: 5'],
                dtype='object')
 In [ ]:
```