In [1]:
```
import wbgapi as wb
```

In [2]:
```
#Environment indicators
indicator_ids1 = ['EG.ELC.ACCS.ZS','NY.ADJ.SVNG.GN.ZS','AG.LND.FRST.ZS','EN.POP.EL5M
country_codes = ['IDN','IND','CHN','JPN','NZL','THA','GBR','IRL','CAN','USA']
my_dataframe1  = wb.data.DataFrame(indicator_ids1, country_codes, mrv=10)
print(my_dataframe1)
#Lofe Expetancy indicators
indicator_ids1 = ['NY.GDP.PCAP.CD','SP.POP.TOTL','SP.RUR.TOTL','SH.DYN.MORT']
country_codes = ['IDN','IND','CHN','JPN','NZL','THA','GBR','IRL','CAN','USA']
my_dataframe2  = wb.data.DataFrame(indicator_ids1, country_codes, mrv=10)
print(my_dataframe2)
```

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                              YR2011      YR2012      YR2013      YR2014  \
economy series
CAN     AG.LND.FRST.ZS      38.734864   38.730258   38.725651   38.721045
        EG.ELC.ACCS.ZS     100.000000  100.000000  100.000000  100.000000
        EN.POP.EL5M.ZS            NaN         NaN         NaN         NaN
        NY.ADJ.SVNG.GN.ZS    8.342276    8.340341    8.859439    9.406506
CHN     AG.LND.FRST.ZS      21.491096   21.696596   21.902095   22.107595
        EG.ELC.ACCS.ZS      99.848724   99.961929   99.996445  100.000000
        EN.POP.EL5M.ZS            NaN         NaN         NaN         NaN
        NY.ADJ.SVNG.GN.ZS   22.158194   22.983467   21.444654   21.572950
GBR     AG.LND.FRST.ZS      12.723515   12.802877   12.882239   12.961600
        EG.ELC.ACCS.ZS     100.000000  100.000000  100.000000  100.000000
        EN.POP.EL5M.ZS            NaN         NaN         NaN         NaN
        NY.ADJ.SVNG.GN.ZS    2.812373    1.470649    1.124057    2.496376
IDN     AG.LND.FRST.ZS      54.501311   53.990009   53.478706   52.967404
        EG.ELC.ACCS.ZS      94.830002   96.000000   96.464256   97.010002
        EN.POP.EL5M.ZS            NaN         NaN         NaN         NaN
        NY.ADJ.SVNG.GN.ZS   10.674356   10.748264   10.434531    9.994016
IND     AG.LND.FRST.ZS      23.463822   23.553422   23.643023   23.732624
        EG.ELC.ACCS.ZS      67.599998   79.900002   81.999329   83.872498
        EN.POP.EL5M.ZS            NaN         NaN         NaN         NaN
        NY.ADJ.SVNG.GN.ZS   21.020069   21.264448   20.340398   19.744058
IRL     AG.LND.FRST.ZS      10.556510   10.656060   10.755610   10.855160
        EG.ELC.ACCS.ZS     100.000000  100.000000  100.000000  100.000000
        EN.POP.EL5M.ZS            NaN         NaN         NaN         NaN
        NY.ADJ.SVNG.GN.ZS    7.746756    7.643628   12.080806   15.353967
JPN     AG.LND.FRST.ZS      68.481756   68.469684   68.457613   68.445542
        EG.ELC.ACCS.ZS     100.000000  100.000000  100.000000  100.000000
        EN.POP.EL5M.ZS            NaN         NaN         NaN         NaN
        NY.ADJ.SVNG.GN.ZS    1.857585    1.786423    2.090591    2.419756
NZL     AG.LND.FRST.ZS      37.400091   37.398944   37.397797   37.396650
        EG.ELC.ACCS.ZS     100.000000  100.000000  100.000000  100.000000
        EN.POP.EL5M.ZS            NaN         NaN         NaN         NaN
        NY.ADJ.SVNG.GN.ZS    8.753716    9.161711   12.170549   12.163502
THA     AG.LND.FRST.ZS      39.285560   39.280863   39.276165   39.271467
        EG.ELC.ACCS.ZS      99.351837   99.108627   99.440575   99.461945
        EN.POP.EL5M.ZS            NaN         NaN         NaN         NaN
        NY.ADJ.SVNG.GN.ZS   16.326107   13.294385   11.274691   10.251607
USA     AG.LND.FRST.ZS      33.779470   33.809533   33.839596   33.869659
        EG.ELC.ACCS.ZS     100.000000  100.000000  100.000000  100.000000
        EN.POP.EL5M.ZS            NaN         NaN         NaN         NaN
        NY.ADJ.SVNG.GN.ZS    3.835027    5.841183    6.054380    7.074765

                              YR2015      YR2016      YR2017      YR2018  \
economy series
CAN     AG.LND.FRST.ZS      38.716438   38.712013   38.707888   38.703763
        EG.ELC.ACCS.ZS     100.000000  100.000000  100.000000  100.000000
        EN.POP.EL5M.ZS            NaN         NaN         NaN         NaN
```

	NY.ADJ.SVNG.GN.ZS	5.885359	5.080294	6.551514	5.951371
CHN	AG.LND.FRST.ZS	22.313094	22.542877	22.742310	22.941735
	EG.ELC.ACCS.ZS	100.000000	100.000000	100.000000	100.000000
	EN.POP.EL5M.ZS	NaN	NaN	NaN	NaN
	NY.ADJ.SVNG.GN.ZS	19.736655	18.828267	19.476726	18.014997
GBR	AG.LND.FRST.ZS	13.040962	13.057496	13.078163	13.115364
	EG.ELC.ACCS.ZS	100.000000	100.000000	100.000000	100.000000
	EN.POP.EL5M.ZS	NaN	NaN	NaN	NaN
	NY.ADJ.SVNG.GN.ZS	2.661398	2.491511	4.220832	3.384952
IDN	AG.LND.FRST.ZS	52.456102	50.743455	50.039334	49.716818
	EG.ELC.ACCS.ZS	97.537369	97.620003	98.139999	98.510002
	EN.POP.EL5M.ZS	NaN	NaN	NaN	NaN
	NY.ADJ.SVNG.GN.ZS	11.264938	13.383161	14.376296	14.707042
IND	AG.LND.FRST.ZS	23.822225	23.911825	24.001426	24.091027
	EG.ELC.ACCS.ZS	88.000000	89.217796	92.124947	95.699997
	EN.POP.EL5M.ZS	NaN	NaN	NaN	NaN
	NY.ADJ.SVNG.GN.ZS	19.518428	18.455529	19.324805	18.334680
IRL	AG.LND.FRST.ZS	10.954710	11.066192	11.177529	11.235593
	EG.ELC.ACCS.ZS	100.000000	100.000000	100.000000	100.000000
	EN.POP.EL5M.ZS	NaN	NaN	NaN	NaN
	NY.ADJ.SVNG.GN.ZS	15.089355	15.873776	16.091583	16.362734
JPN	AG.LND.FRST.ZS	68.433471	68.422497	68.408779	68.408779
	EG.ELC.ACCS.ZS	100.000000	100.000000	100.000000	100.000000
	EN.POP.EL5M.ZS	NaN	NaN	NaN	NaN
	NY.ADJ.SVNG.GN.ZS	4.774316	5.152794	5.991476	5.110039
NZL	AG.LND.FRST.ZS	37.395503	37.396035	37.411606	37.427937
	EG.ELC.ACCS.ZS	100.000000	100.000000	100.000000	100.000000
	EN.POP.EL5M.ZS	NaN	NaN	NaN	NaN
	NY.ADJ.SVNG.GN.ZS	13.030619	13.205119	13.812649	12.164824
THA	AG.LND.FRST.ZS	39.266770	39.180646	39.110180	39.039715
	EG.ELC.ACCS.ZS	99.599998	99.849960	99.900002	99.820000
	EN.POP.EL5M.ZS	NaN	NaN	NaN	NaN
	NY.ADJ.SVNG.GN.ZS	10.948272	13.525768	15.594256	15.001658
USA	AG.LND.FRST.ZS	33.899723	33.899723	33.866926	33.866926
	EG.ELC.ACCS.ZS	100.000000	100.000000	100.000000	100.000000
	EN.POP.EL5M.ZS	NaN	NaN	NaN	NaN
	NY.ADJ.SVNG.GN.ZS	7.469010	6.209233	6.682844	6.654895

		YR2019	YR2020
economy	series		
CAN	AG.LND.FRST.ZS	38.699637	38.695513
	EG.ELC.ACCS.ZS	100.000000	100.000000
	EN.POP.EL5M.ZS	NaN	NaN
	NY.ADJ.SVNG.GN.ZS	6.489533	3.557826
CHN	AG.LND.FRST.ZS	23.141166	23.340596
	EG.ELC.ACCS.ZS	100.000000	100.000000
	EN.POP.EL5M.ZS	NaN	NaN
	NY.ADJ.SVNG.GN.ZS	16.315655	16.172412
GBR	AG.LND.FRST.ZS	13.152565	13.185632
	EG.ELC.ACCS.ZS	100.000000	100.000000
	EN.POP.EL5M.ZS	NaN	NaN
	NY.ADJ.SVNG.GN.ZS	NaN	NaN
IDN	AG.LND.FRST.ZS	49.394296	49.071780
	EG.ELC.ACCS.ZS	98.849998	96.949997
	EN.POP.EL5M.ZS	NaN	NaN
	NY.ADJ.SVNG.GN.ZS	14.006968	12.547036
IND	AG.LND.FRST.ZS	24.180628	24.270228
	EG.ELC.ACCS.ZS	97.308266	99.000000
	EN.POP.EL5M.ZS	NaN	NaN
	NY.ADJ.SVNG.GN.ZS	16.879421	17.140410
IRL	AG.LND.FRST.ZS	11.293657	11.351720
	EG.ELC.ACCS.ZS	100.000000	100.000000
	EN.POP.EL5M.ZS	NaN	NaN
	NY.ADJ.SVNG.GN.ZS	17.775664	16.591608

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JPN     AG.LND.FRST.ZS      68.408779   68.408779
        EG.ELC.ACCS.ZS     100.000000  100.000000
        EN.POP.EL5M.ZS            NaN         NaN
        NY.ADJ.SVNG.GN.ZS    5.205787    4.623558
NZL     AG.LND.FRST.ZS      37.467320   37.570126
        EG.ELC.ACCS.ZS     100.000000  100.000000
        EN.POP.EL5M.ZS            NaN         NaN
        NY.ADJ.SVNG.GN.ZS   13.072596    9.392199
THA     AG.LND.FRST.ZS      38.969250   38.898784
        EG.ELC.ACCS.ZS      99.900002  100.000000
        EN.POP.EL5M.ZS            NaN         NaN
        NY.ADJ.SVNG.GN.ZS   15.057999   11.755967
USA     AG.LND.FRST.ZS      33.866926   33.866926
        EG.ELC.ACCS.ZS     100.000000  100.000000
        EN.POP.EL5M.ZS            NaN         NaN
        NY.ADJ.SVNG.GN.ZS    6.441869    5.321657
                              YR2011        YR2012        YR2013  \
economy series
CAN     NY.GDP.PCAP.CD  5.222370e+04  5.266909e+04  5.263517e+04
        SH.DYN.MORT     5.700000e+00  5.600000e+00  5.500000e+00
        SP.POP.TOTL     3.433933e+07  3.471422e+07  3.508295e+07
        SP.RUR.TOTL     6.491507e+06  6.548144e+06  6.603314e+06
CHN     NY.GDP.PCAP.CD  5.614352e+03  6.300615e+03  7.020338e+03
        SH.DYN.MORT     1.460000e+01  1.350000e+01  1.250000e+01
        SP.POP.TOTL     1.345035e+09  1.354190e+09  1.363240e+09
        SP.RUR.TOTL     6.656444e+08  6.531935e+08  6.405456e+08
GBR     NY.GDP.PCAP.CD  4.228488e+04  4.268680e+04  4.371381e+04
        SH.DYN.MORT     5.000000e+00  4.800000e+00  4.700000e+00
        SP.POP.TOTL     6.325881e+07  6.370022e+07  6.412827e+07
        SP.RUR.TOTL     1.165860e+07  1.156987e+07  1.147768e+07
IDN     NY.GDP.PCAP.CD  3.643047e+03  3.694359e+03  3.623927e+03
        SH.DYN.MORT     3.250000e+01  3.120000e+01  3.000000e+01
        SP.POP.TOTL     2.451160e+08  2.484517e+08  2.518053e+08
        SP.RUR.TOTL     1.210996e+08  1.210556e+08  1.209799e+08
IND     NY.GDP.PCAP.CD  1.458104e+03  1.443882e+03  1.449610e+03
        SH.DYN.MORT     5.500000e+01  5.200000e+01  4.900000e+01
        SP.POP.TOTL     1.250288e+09  1.265780e+09  1.280842e+09
        SP.RUR.TOTL     8.592479e+08  8.653633e+08  8.709342e+08
IRL     NY.GDP.PCAP.CD  5.217711e+04  4.902602e+04  5.153303e+04
        SH.DYN.MORT     4.100000e+00  4.000000e+00  3.900000e+00
        SP.POP.TOTL     4.580084e+06  4.599533e+06  4.623816e+06
        SP.RUR.TOTL     1.752249e+06  1.750490e+06  1.750530e+06
JPN     NY.GDP.PCAP.CD  4.876008e+04  4.914528e+04  4.089865e+04
        SH.DYN.MORT     3.200000e+00  3.000000e+00  2.900000e+00
        SP.POP.TOTL     1.278330e+08  1.276290e+08  1.274450e+08
        SP.RUR.TOTL     1.141676e+07  1.129772e+07  1.118202e+07
NZL     NY.GDP.PCAP.CD  3.838763e+04  3.997338e+04  4.297665e+04
        SH.DYN.MORT     6.000000e+00  5.900000e+00  5.800000e+00
        SP.POP.TOTL     4.384000e+06  4.408100e+06  4.442100e+06
        SP.RUR.TOTL     6.093760e+05  6.100370e+05  6.120770e+05
THA     NY.GDP.PCAP.CD  5.492121e+03  5.860581e+03  6.168261e+03
        SH.DYN.MORT     1.300000e+01  1.240000e+01  1.180000e+01
        SP.POP.TOTL     6.751838e+07  6.783597e+07  6.814452e+07
        SP.RUR.TOTL     3.733901e+07  3.700791e+07  3.666652e+07
USA     NY.GDP.PCAP.CD  4.988256e+04  5.160293e+04  5.310654e+04
        SH.DYN.MORT     7.200000e+00  7.100000e+00  7.000000e+00
        SP.POP.TOTL     3.115835e+08  3.138777e+08  3.160599e+08
        SP.RUR.TOTL     5.937535e+07  5.926324e+07  5.910637e+07

                              YR2014        YR2015        YR2016  \
economy series
CAN     NY.GDP.PCAP.CD  5.095600e+04  4.359614e+04  4.231560e+04
        SH.DYN.MORT     5.400000e+00  5.400000e+00  5.300000e+00
        SP.POP.TOTL     3.543744e+07  3.570291e+07  3.610949e+07
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	SP.RUR.TOTL	6.655859e+06	6.691082e+06	6.752474e+06
CHN	NY.GDP.PCAP.CD	7.636117e+03	8.016431e+03	8.094363e+03
	SH.DYN.MORT	1.160000e+01	1.070000e+01	9.900000e+00
	SP.POP.TOTL	1.371860e+09	1.379860e+09	1.387790e+09
	SP.RUR.TOTL	6.275025e+08	6.140377e+08	6.004135e+08
GBR	NY.GDP.PCAP.CD	4.778724e+04	4.540457e+04	4.149956e+04
	SH.DYN.MORT	4.500000e+00	4.500000e+00	4.400000e+00
	SP.POP.TOTL	6.460230e+07	6.511622e+07	6.561159e+07
	SP.RUR.TOTL	1.139262e+07	1.131329e+07	1.122877e+07
IDN	NY.GDP.PCAP.CD	3.491637e+03	3.331695e+03	3.562816e+03
	SH.DYN.MORT	2.880000e+01	2.770000e+01	2.660000e+01
	SP.POP.TOTL	2.551281e+08	2.583833e+08	2.615564e+08
	SP.RUR.TOTL	1.208414e+08	1.206314e+08	1.203447e+08
IND	NY.GDP.PCAP.CD	1.573886e+03	1.605605e+03	1.732554e+03
	SH.DYN.MORT	4.620000e+01	4.350000e+01	4.100000e+01
	SP.POP.TOTL	1.295601e+09	1.310152e+09	1.324517e+09
	SP.RUR.TOTL	8.760334e+08	8.807237e+08	8.850159e+08
IRL	NY.GDP.PCAP.CD	5.559985e+04	6.201248e+04	6.286164e+04
	SH.DYN.MORT	3.800000e+00	3.700000e+00	3.600000e+00
	SP.POP.TOTL	4.657740e+06	4.701957e+06	4.755335e+06
	SP.RUR.TOTL	1.754105e+06	1.761447e+06	1.771980e+06
JPN	NY.GDP.PCAP.CD	3.847540e+04	3.496064e+04	3.940074e+04
	SH.DYN.MORT	2.800000e+00	2.700000e+00	2.700000e+00
	SP.POP.TOTL	1.272760e+08	1.271410e+08	1.269945e+08
	SP.RUR.TOTL	1.106792e+07	1.095828e+07	1.084914e+07
NZL	NY.GDP.PCAP.CD	4.457290e+04	3.863073e+04	4.008049e+04
	SH.DYN.MORT	5.700000e+00	5.500000e+00	5.400000e+00
	SP.POP.TOTL	4.516500e+06	4.609400e+06	4.714100e+06
	SP.RUR.TOTL	6.196190e+05	6.295980e+05	6.411180e+05
THA	NY.GDP.PCAP.CD	5.951883e+03	5.840053e+03	5.993306e+03
	SH.DYN.MORT	1.130000e+01	1.080000e+01	1.030000e+01
	SP.POP.TOTL	6.843875e+07	6.871452e+07	6.897131e+07
	SP.RUR.TOTL	3.631155e+07	3.594182e+07	3.555609e+07
USA	NY.GDP.PCAP.CD	5.504999e+04	5.686337e+04	5.802140e+04
	SH.DYN.MORT	6.900000e+00	6.800000e+00	6.700000e+00
	SP.POP.TOTL	3.183863e+08	3.207390e+08	3.230718e+08
	SP.RUR.TOTL	5.895560e+07	5.878825e+07	5.859876e+07

		YR2017	YR2018	YR2019	YR2020
economy	series				
CAN	NY.GDP.PCAP.CD	4.512943e+04	4.654864e+04	4.632867e+04	4.325826e+04
	SH.DYN.MORT	5.200000e+00	5.100000e+00	5.100000e+00	5.000000e+00
	SP.POP.TOTL	3.654524e+07	3.706508e+07	3.760123e+07	3.803720e+07
	SP.RUR.TOTL	6.815687e+06	6.890028e+06	6.962996e+06	7.013300e+06
CHN	NY.GDP.PCAP.CD	8.816987e+03	9.905342e+03	1.014384e+04	1.043478e+04
	SH.DYN.MORT	9.200000e+00	8.500000e+00	7.900000e+00	7.300000e+00
	SP.POP.TOTL	1.396215e+09	1.402760e+09	1.407745e+09	1.410929e+09
	SP.RUR.TOTL	5.869688e+08	5.729994e+08	5.587621e+08	5.442237e+08
GBR	NY.GDP.PCAP.CD	4.085776e+04	4.364695e+04	4.307050e+04	4.105917e+04
	SH.DYN.MORT	4.400000e+00	4.300000e+00	4.300000e+00	4.200000e+00
	SP.POP.TOTL	6.605886e+07	6.646034e+07	6.683633e+07	6.721529e+07
	SP.RUR.TOTL	1.113554e+07	1.103375e+07	1.092640e+07	1.081965e+07
IDN	NY.GDP.PCAP.CD	3.837578e+03	3.893860e+03	4.135202e+03	3.869588e+03
	SH.DYN.MORT	2.560000e+01	2.460000e+01	2.380000e+01	2.300000e+01
	SP.POP.TOTL	2.646510e+08	2.676705e+08	2.706256e+08	2.735236e+08
	SP.RUR.TOTL	1.199954e+08	1.195818e+08	1.191158e+08	1.185971e+08
IND	NY.GDP.PCAP.CD	1.980667e+03	1.996915e+03	2.100751e+03	1.927708e+03
	SH.DYN.MORT	3.860000e+01	3.630000e+01	3.440000e+01	3.260000e+01
	SP.POP.TOTL	1.338677e+09	1.352642e+09	1.366418e+09	1.380004e+09
	SP.RUR.TOTL	8.888814e+08	8.923381e+08	8.953862e+08	8.980241e+08
IRL	NY.GDP.PCAP.CD	6.977403e+04	7.910760e+04	8.088662e+04	8.542254e+04
	SH.DYN.MORT	3.400000e+00	3.300000e+00	3.200000e+00	3.000000e+00
	SP.POP.TOTL	4.807388e+06	4.867316e+06	4.934340e+06	4.985674e+06
	SP.RUR.TOTL	1.781281e+06	1.792632e+06	1.805722e+06	1.812143e+06

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JPN     NY.GDP.PCAP.CD  3.889109e+04  3.980817e+04  4.077761e+04  4.019325e+04
        SH.DYN.MORT     2.600000e+00  2.600000e+00  2.500000e+00  2.500000e+00
        SP.POP.TOTL     1.267858e+08  1.265291e+08  1.262649e+08  1.258360e+08
        SP.RUR.TOTL     1.073242e+07  1.060820e+07  1.048252e+07  1.034120e+07
NZL     NY.GDP.PCAP.CD  4.299290e+04  4.330607e+04  4.275522e+04  4.144147e+04
        SH.DYN.MORT     5.200000e+00  5.000000e+00  4.900000e+00  4.700000e+00
        SP.POP.TOTL     4.813600e+06  4.900600e+06  4.979300e+06  5.084300e+06
        SP.RUR.TOTL     6.514730e+05  6.597190e+05  6.664790e+05  6.762630e+05
THA     NY.GDP.PCAP.CD  6.593818e+03  7.296880e+03  7.817010e+03  7.186874e+03
        SH.DYN.MORT     9.900000e+00  9.400000e+00  9.000000e+00  8.700000e+00
        SP.POP.TOTL     6.920982e+07  6.942845e+07  6.962558e+07  6.979998e+07
        SP.RUR.TOTL     3.515859e+07  3.474964e+07  3.433098e+07  3.390185e+07
USA     NY.GDP.PCAP.CD  6.010966e+04  6.306442e+04  6.527953e+04  6.320652e+04
        SH.DYN.MORT     6.600000e+00  6.500000e+00  6.400000e+00  6.300000e+00
        SP.POP.TOTL     3.251221e+08  3.268382e+08  3.283300e+08  3.315011e+08
        SP.RUR.TOTL     5.833341e+07  5.799417e+07  5.759236e+07  5.746903e+07
```
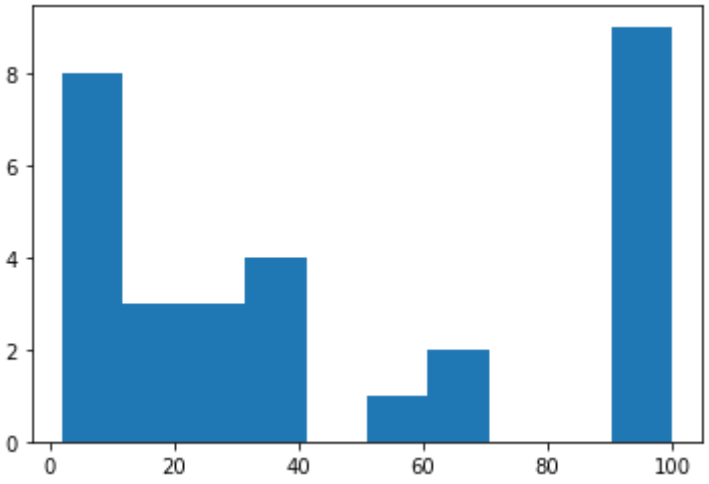

In [5]:

```
#Now we are visualizng each of the year values for all indicators of all countries i
import matplotlib.pyplot as plt
x = my_dataframe1['YR2011']
plt.hist(x)
```

Out[5]:

```
(array([8., 3., 3., 4., 0., 1., 2., 0., 0., 9.]),
 array([  1.85758545,  11.67182691,  21.48606836,  31.30030982,
         41.11455127,  50.92879273,  60.74303418,  70.55727564,
         80.37151709,  90.18575855, 100.        ]),
 <BarContainer object of 10 artists>)
```



In [3]:

```
#Applying max values
my_dataframe2.groupby('economy').apply(lambda x: x.astype(float).max())
```

Out[3]:

economy	YR2011	YR2012	YR2013	YR2014	YR2015	YR2016	
CAN	3.433933e+07	3.471422e+07	3.508295e+07	3.543744e+07	3.570291e+07	3.610949e+07	3.6
CHN	1.345035e+09	1.354190e+09	1.363240e+09	1.371860e+09	1.379860e+09	1.387790e+09	1.3
GBR	6.325881e+07	6.370022e+07	6.412827e+07	6.460230e+07	6.511622e+07	6.561159e+07	6.6
IDN	2.451160e+08	2.484517e+08	2.518053e+08	2.551281e+08	2.583833e+08	2.615564e+08	2.6
IND	1.250288e+09	1.265780e+09	1.280842e+09	1.295601e+09	1.310152e+09	1.324517e+09	1.3
IRL	4.580084e+06	4.599533e+06	4.623816e+06	4.657740e+06	4.701957e+06	4.755335e+06	4.8
JPN	1.278330e+08	1.276290e+08	1.274450e+08	1.272760e+08	1.271410e+08	1.269945e+08	1.2

economy	YR2011	YR2012	YR2013	YR2014	YR2015	YR2016	
NZL	4.384000e+06	4.408100e+06	4.442100e+06	4.516500e+06	4.609400e+06	4.714100e+06	4.8
THA	6.751838e+07	6.783597e+07	6.814452e+07	6.843875e+07	6.871452e+07	6.897131e+07	6.9
USA	3.115835e+08	3.138777e+08	3.160599e+08	3.183863e+08	3.207390e+08	3.230718e+08	3.2

In [4]:
```
#Replacing or transforming the data based on mean values
my_dataframe1.groupby('economy').transform(lambda x : x.mean())
```

Out[4]:

economy	series	YR2011	YR2012	YR2013	YR2014	YR2015	YR2016	
CAN	AG.LND.FRST.ZS	49.047279	49.036533	49.209172	49.398446	48.192754	47.926904	48
	EG.ELC.ACCS.ZS	49.047279	49.036533	49.209172	49.398446	48.192754	47.926904	48
	EN.POP.EL5M.ZS	49.047279	49.036533	49.209172	49.398446	48.192754	47.926904	48
	NY.ADJ.SVNG.GN.ZS	49.047279	49.036533	49.209172	49.398446	48.192754	47.926904	48
CHN	AG.LND.FRST.ZS	49.028208	49.527731	49.314486	49.466785	49.110536	49.148935	49
	EG.ELC.ACCS.ZS	49.028208	49.527731	49.314486	49.466785	49.110536	49.148935	49
	EN.POP.EL5M.ZS	49.028208	49.527731	49.314486	49.466785	49.110536	49.148935	49
	NY.ADJ.SVNG.GN.ZS	49.028208	49.527731	49.314486	49.466785	49.110536	49.148935	49
GBR	AG.LND.FRST.ZS	38.548177	38.121451	37.971516	38.547833	38.670588	38.444123	38
	EG.ELC.ACCS.ZS	38.548177	38.121451	37.971516	38.547833	38.670588	38.444123	38
	EN.POP.EL5M.ZS	38.548177	38.121451	37.971516	38.547833	38.670588	38.444123	38
	NY.ADJ.SVNG.GN.ZS	38.548177	38.121451	37.971516	38.547833	38.670588	38.444123	38
IDN	AG.LND.FRST.ZS	53.385302	53.545386	53.504180	53.477790	53.720431	53.820472	54
	EG.ELC.ACCS.ZS	53.385302	53.545386	53.504180	53.477790	53.720431	53.820472	54
	EN.POP.EL5M.ZS	53.385302	53.545386	53.504180	53.477790	53.720431	53.820472	54
	NY.ADJ.SVNG.GN.ZS	53.385302	53.545386	53.504180	53.477790	53.720431	53.820472	54
IND	AG.LND.FRST.ZS	37.335409	41.522815	41.574764	42.298334	43.696497	43.852483	45
	EG.ELC.ACCS.ZS	37.335409	41.522815	41.574764	42.298334	43.696497	43.852483	45
	EN.POP.EL5M.ZS	37.335409	41.522815	41.574764	42.298334	43.696497	43.852483	45
	NY.ADJ.SVNG.GN.ZS	37.335409	41.522815	41.574764	42.298334	43.696497	43.852483	45
IRL	AG.LND.FRST.ZS	39.592374	39.542502	41.037189	42.221888	42.158616	42.497253	42
	EG.ELC.ACCS.ZS	39.592374	39.542502	41.037189	42.221888	42.158616	42.497253	42
	EN.POP.EL5M.ZS	39.592374	39.542502	41.037189	42.221888	42.158616	42.497253	42
	NY.ADJ.SVNG.GN.ZS	39.592374	39.542502	41.037189	42.221888	42.158616	42.497253	42
JPN	AG.LND.FRST.ZS	57.124686	57.096859	57.234991	57.361565	58.209164	58.370036	58
	EG.ELC.ACCS.ZS	57.124686	57.096859	57.234991	57.361565	58.209164	58.370036	58

economy	series	YR2011	YR2012	YR2013	YR2014	YR2015	YR2016	
	EN.POP.EL5M.ZS	57.124686	57.096859	57.234991	57.361565	58.209164	58.370036	58
	NY.ADJ.SVNG.GN.ZS	57.124686	57.096859	57.234991	57.361565	58.209164	58.370036	58
NZL	AG.LND.FRST.ZS	48.690380	48.773998	49.804093	49.805360	50.124441	50.231232	50
	EG.ELC.ACCS.ZS	48.690380	48.773998	49.804093	49.805360	50.124441	50.231232	50
	EN.POP.EL5M.ZS	48.690380	48.773998	49.804093	49.805360	50.124441	50.231232	50
	NY.ADJ.SVNG.GN.ZS	48.690380	48.773998	49.804093	49.805360	50.124441	50.231232	50
THA	AG.LND.FRST.ZS	51.448417	50.367034	49.794381	49.593865	49.899494	50.799399	51
	EG.ELC.ACCS.ZS	51.448417	50.367034	49.794381	49.593865	49.899494	50.799399	51
	EN.POP.EL5M.ZS	51.448417	50.367034	49.794381	49.593865	49.899494	50.799399	51
	NY.ADJ.SVNG.GN.ZS	51.448417	50.367034	49.794381	49.593865	49.899494	50.799399	51
USA	AG.LND.FRST.ZS	45.964747	46.611144	46.696594	47.058757	47.146371	46.635374	46
	EG.ELC.ACCS.ZS	45.964747	46.611144	46.696594	47.058757	47.146371	46.635374	46
	EN.POP.EL5M.ZS	45.964747	46.611144	46.696594	47.058757	47.146371	46.635374	46
	NY.ADJ.SVNG.GN.ZS	45.964747	46.611144	46.696594	47.058757	47.146371	46.635374	46

In [5]:
```
#Pandas groupby function
my_dataframe2.groupby('economy')['YR2014'].mean()
```

Out[5]:
```
economy
CAN    1.053606e+07
CHN    4.998425e+08
GBR    1.901068e+07
IDN    9.399325e+07
IND    5.429090e+08
IRL    1.616844e+06
JPN    3.459560e+07
NZL    1.295174e+06
THA    2.618906e+07
USA    9.434925e+07
Name: YR2014, dtype: float64
```

In [6]:
```
#Creation of  a pivot table with pandas
import numpy as np
x= my_dataframe2.pivot_table(index=['series'],aggfunc={'YR2020':np.mean})
y = my_dataframe2.pivot_table(index=['series'],aggfunc={'YR2020':np.median})
print(x,y)
```

```
                   YR2020
series
NY.GDP.PCAP.CD  3.382687e+04
SH.DYN.MORT     9.730000e+00
SP.POP.TOTL     3.704877e+08
SP.RUR.TOTL     1.682526e+08                    YR2020
series
NY.GDP.PCAP.CD  4.062621e+04
SH.DYN.MORT     5.650000e+00
```

```
SP.POP.TOTL      9.781800e+07
SP.RUR.TOTL      2.236075e+07
```

In [8]:

```
#Filtering the data
my_dataframe1.groupby('economy').filter(lambda x : x['YR2017'].mean() >= 20)
```

Out[8]:

economy	series	YR2011	YR2012	YR2013	YR2014	YR2015	YR20
CAN	AG.LND.FRST.ZS	38.734864	38.730258	38.725651	38.721045	38.716438	38.7120
	EG.ELC.ACCS.ZS	100.000000	100.000000	100.000000	100.000000	100.000000	100.0000
	EN.POP.EL5M.ZS	NaN	NaN	NaN	NaN	NaN	Na
	NY.ADJ.SVNG.GN.ZS	8.406973	8.379341	8.901865	9.474293	5.861823	5.0686
CHN	AG.LND.FRST.ZS	21.491096	21.696596	21.902095	22.107595	22.313094	22.5428
	EG.ELC.ACCS.ZS	99.857224	99.964874	99.997009	100.000000	100.000000	100.0000
	EN.POP.EL5M.ZS	NaN	NaN	NaN	NaN	NaN	Na
	NY.ADJ.SVNG.GN.ZS	25.736305	26.921722	26.044353	26.292762	25.018515	24.9039
GBR	AG.LND.FRST.ZS	12.723515	12.802877	12.882239	12.961600	13.040962	13.0574
	EG.ELC.ACCS.ZS	100.000000	100.000000	100.000000	100.000000	100.000000	100.0000
	EN.POP.EL5M.ZS	NaN	NaN	NaN	NaN	NaN	Na
	NY.ADJ.SVNG.GN.ZS	2.921017	1.561475	1.032310	2.681899	2.970802	2.2748
IDN	AG.LND.FRST.ZS	54.501311	53.990009	53.478706	52.967404	52.456102	50.7434
	EG.ELC.ACCS.ZS	94.830000	96.000000	96.464258	97.010000	97.537367	97.6200
	EN.POP.EL5M.ZS	NaN	NaN	NaN	NaN	NaN	Na
	NY.ADJ.SVNG.GN.ZS	10.824596	10.646149	10.569574	10.455967	11.167824	13.0979
IND	AG.LND.FRST.ZS	23.463822	23.553422	23.643023	23.732624	23.822225	23.9118
	EG.ELC.ACCS.ZS	67.600000	79.900000	80.738045	83.585213	88.000000	89.5348
	EN.POP.EL5M.ZS	NaN	NaN	NaN	NaN	NaN	Na
	NY.ADJ.SVNG.GN.ZS	20.942406	21.115022	20.343225	19.577164	19.267267	18.1107
IRL	AG.LND.FRST.ZS	10.556510	10.656060	10.755610	10.855160	10.954710	11.0661
	EG.ELC.ACCS.ZS	100.000000	100.000000	100.000000	100.000000	100.000000	100.0000
	EN.POP.EL5M.ZS	NaN	NaN	NaN	NaN	NaN	Na
	NY.ADJ.SVNG.GN.ZS	8.220613	7.971447	12.355957	15.810503	15.521138	16.4255
JPN	AG.LND.FRST.ZS	68.481756	68.469684	68.457613	68.445542	68.433471	68.4224
	EG.ELC.ACCS.ZS	100.000000	100.000000	100.000000	100.000000	100.000000	100.0000
	EN.POP.EL5M.ZS	NaN	NaN	NaN	NaN	NaN	Na
	NY.ADJ.SVNG.GN.ZS	2.892303	2.820892	3.247360	3.639153	6.194021	6.6876
NZL	AG.LND.FRST.ZS	37.400091	37.398944	37.397797	37.396650	37.395503	37.3960
	EG.ELC.ACCS.ZS	100.000000	100.000000	100.000000	100.000000	100.000000	100.0000
	EN.POP.EL5M.ZS	NaN	NaN	NaN	NaN	NaN	Na

economy	series	YR2011	YR2012	YR2013	YR2014	YR2015	YR20
	NY.ADJ.SVNG.GN.ZS	8.671047	8.923050	12.014480	12.019429	12.977818	13.2976
THA	AG.LND.FRST.ZS	39.285560	39.280863	39.276165	39.271467	39.266770	39.1806
	EG.ELC.ACCS.ZS	99.359283	99.108624	99.427063	99.483643	99.600000	99.8521
	EN.POP.EL5M.ZS	NaN	NaN	NaN	NaN	NaN	Na
	NY.ADJ.SVNG.GN.ZS	15.700406	12.711615	10.679914	10.026486	10.831713	13.3654
USA	AG.LND.FRST.ZS	33.779470	33.809533	33.839596	33.869659	33.899723	33.8997
	EG.ELC.ACCS.ZS	100.000000	100.000000	100.000000	100.000000	100.000000	100.0000
	EN.POP.EL5M.ZS	NaN	NaN	NaN	NaN	NaN	Na
	NY.ADJ.SVNG.GN.ZS	4.114772	6.023898	6.250187	7.306611	7.539389	6.0064

STORY OF THE ANALYSIS

This assignemnt is generally about use of pandas operation. But, first i have used WBGAPI to download the data from world bank data website into Juypter Notebook. I have used 4 indicators of two categories which are environment and life expectancy. I have used mrw=10 which means the data of recent 10 years on the website. I have used 10 countries which are Canada, China, Great Britian, Indonesia, India, Ireland, Japan, New Zealand, Thailand and USA. A histogram have also been created in this assignment which tells us about the distribution of all of the years based on countries and indicators. I have used apply operation on maximum condition. Data transformation has been done on mean condition. I have also filtered the data, and also created a pivot table.

In [6]:
```
my_dataframe1.to_csv(r'C:\Users\Lenovo\Student-77.csv', index=False)
my_dataframe2.to_csv(r'C:\Users\Lenovo\Student-77.csv', index=False)
```