Assignment 01 - Analyse GDP of Countries

September 5, 2021

1 Assignment 01: Evaluate the GDP Dataset

The comments/sections provided are your cues to perform the assignment. You don't need to limit yourself to the number of rows/cells provided. You can add additional rows in each section to add more lines of code.

If at any point in time you need help on solving this assignment, view our demo video to understand the different steps of the code.

Happy coding!

1: View and add the dataset

```python
[1]: #Import required library
     import numpy as np
     import pandas as pd
```

```python
[2]: #Manually add the dataset
     countries = np.
      ↪array(['Algeria','Angola','Argentina','Australia','Austria','Bahamas','Bangladesh','Belarus
      ↪Salvador','Estonia','Ethiopia','Fiji','Finland','France','Georgia','Ghana','Grenada','Guine
      ↪'South Korea','Liberia','Malaysia','Mexico', 'Morocco','Nepal','New␣
      ↪Zealand','Norway','Pakistan', 'Peru','Qatar','Russia','Singapore','South␣
      ↪Africa','Spain','Sweden','Switzerland','Thailand', 'United Arab␣
      ↪Emirates','United Kingdom','United␣
      ↪States','Uruguay','Venezuela','Vietnam','Zimbabwe'])
     gdp = np.array([2255.225482,629.9553062,11601.63022,25306.82494,27266.
      ↪40335,19466.99052,588.3691778,2890.345675,24733.62696,1445.760002,4803.
      ↪398244,2618.876037,590.4521124,665.7982328,7122.938458,2639.54156,3362.
      ↪4656,15378.16704,30860.12808,2579.115607,6525.541272,229.6769525,2242.
      ↪689259,27570.4852,23016.84778,1334.646773,402.6953275,6047.200797,394.
      ↪1156638,385.5793827,1414.072488,5745.981529,837.7464011,1206.991065,27715.
      ↪52837,18937.24998,39578.07441,478.2194906,16684.21278,279.2204061,5345.
      ↪213415,6288.25324,1908.304416,274.8728621,14646.42094,40034.85063,672.
      ↪1547506,3359.517402,36152.66676,3054.727742,33529.83052,3825.093781,15428.
      ↪32098,33630.24604,39170.41371,2699.123242,21058.43643,28272.40661,37691.
      ↪02733,9581.05659,5671.912202,757.4009286,347.7456605])
```

2: Find and print the name of the country with the highest GDP

```
[3]: #Use the argmax() method to find the highest GDP
     gdp[gdp.argmax()]
```

```
[3]: 40034.85063
```

```
[4]: #Print the name of the country
     countries[gdp.argmax()]
```

```
[4]: 'Norway'
```

3: Find and print the name of the country with the lowest GDP

```
[5]: #Use the argmin() method to find the lowest GDP
     gdp[gdp.argmin()]
```

```
[5]: 229.6769525
```

```
[6]: #Print the name of the country
     countries[gdp.argmin()]
```

```
[6]: 'Ethiopia'
```

4: Print out text ('evaluating country') and input value ('country name') iteratively

```
[7]: #Use a for loop to print the required output
     for i in countries:
         print("Evalueating Country:", i)
```

```
Evalueating Country: Algeria
Evalueating Country: Angola
Evalueating Country: Argentina
Evalueating Country: Australia
Evalueating Country: Austria
Evalueating Country: Bahamas
Evalueating Country: Bangladesh
Evalueating Country: Belarus
Evalueating Country: Belgium
Evalueating Country: Bhutan
Evalueating Country: Brazil
Evalueating Country: Bulgaria
Evalueating Country: Cambodia
Evalueating Country: Cameroon
Evalueating Country: Chile
Evalueating Country: China
Evalueating Country: Colombia
Evalueating Country: Cyprus
Evalueating Country: Denmark
Evalueating Country: El Salvador
Evalueating Country: Estonia
```

```
Evalueating Country: Ethiopia
Evalueating Country: Fiji
Evalueating Country: Finland
Evalueating Country: France
Evalueating Country: Georgia
Evalueating Country: Ghana
Evalueating Country: Grenada
Evalueating Country: Guinea
Evalueating Country: Haiti
Evalueating Country: Honduras
Evalueating Country: Hungary
Evalueating Country: India
Evalueating Country: Indonesia
Evalueating Country: Ireland
Evalueating Country: Italy
Evalueating Country: Japan
Evalueating Country: Kenya
Evalueating Country: South Korea
Evalueating Country: Liberia
Evalueating Country: Malaysia
Evalueating Country: Mexico
Evalueating Country: Morocco
Evalueating Country: Nepal
Evalueating Country: New Zealand
Evalueating Country: Norway
Evalueating Country: Pakistan
Evalueating Country: Peru
Evalueating Country: Qatar
Evalueating Country: Russia
Evalueating Country: Singapore
Evalueating Country: South Africa
Evalueating Country: Spain
Evalueating Country: Sweden
Evalueating Country: Switzerland
Evalueating Country: Thailand
Evalueating Country: United Arab Emirates
Evalueating Country: United Kingdom
Evalueating Country: United States
Evalueating Country: Uruguay
Evalueating Country: Venezuela
Evalueating Country: Vietnam
Evalueating Country: Zimbabwe
```

5: Print out the entire list of the countries with their GDPs

```python
[8]:  #Use a for loop to print the required list
      for i,j in zip(countries, gdp):
          print("Evalueating Country:", i, "\tGDP: ", j)
```

```
Evalueating Country: Algeria     GDP:   2255.225482
Evalueating Country: Angola      GDP:   629.9553062
Evalueating Country: Argentina   GDP:   11601.63022
Evalueating Country: Australia   GDP:   25306.82494
Evalueating Country: Austria     GDP:   27266.40335
Evalueating Country: Bahamas     GDP:   19466.99052
Evalueating Country: Bangladesh      GDP:   588.3691778
Evalueating Country: Belarus     GDP:   2890.345675
Evalueating Country: Belgium     GDP:   24733.62696
Evalueating Country: Bhutan      GDP:   1445.760002
Evalueating Country: Brazil      GDP:   4803.398244
Evalueating Country: Bulgaria    GDP:   2618.876037
Evalueating Country: Cambodia    GDP:   590.4521124
Evalueating Country: Cameroon    GDP:   665.7982328
Evalueating Country: Chile       GDP:   7122.938458
Evalueating Country: China       GDP:   2639.54156
Evalueating Country: Colombia    GDP:   3362.4656
Evalueating Country: Cyprus      GDP:   15378.16704
Evalueating Country: Denmark     GDP:   30860.12808
Evalueating Country: El Salvador     GDP:   2579.115607
Evalueating Country: Estonia     GDP:   6525.541272
Evalueating Country: Ethiopia    GDP:   229.6769525
Evalueating Country: Fiji        GDP:   2242.689259
Evalueating Country: Finland     GDP:   27570.4852
Evalueating Country: France      GDP:   23016.84778
Evalueating Country: Georgia     GDP:   1334.646773
Evalueating Country: Ghana       GDP:   402.6953275
Evalueating Country: Grenada     GDP:   6047.200797
Evalueating Country: Guinea      GDP:   394.1156638
Evalueating Country: Haiti       GDP:   385.5793827
Evalueating Country: Honduras    GDP:   1414.072488
Evalueating Country: Hungary     GDP:   5745.981529
Evalueating Country: India       GDP:   837.7464011
Evalueating Country: Indonesia   GDP:   1206.991065
Evalueating Country: Ireland     GDP:   27715.52837
Evalueating Country: Italy       GDP:   18937.24998
Evalueating Country: Japan       GDP:   39578.07441
Evalueating Country: Kenya       GDP:   478.2194906
Evalueating Country: South Korea     GDP:   16684.21278
Evalueating Country: Liberia     GDP:   279.2204061
Evalueating Country: Malaysia    GDP:   5345.213415
Evalueating Country: Mexico      GDP:   6288.25324
Evalueating Country: Morocco     GDP:   1908.304416
Evalueating Country: Nepal       GDP:   274.8728621
Evalueating Country: New Zealand     GDP:   14646.42094
Evalueating Country: Norway      GDP:   40034.85063
Evalueating Country: Pakistan    GDP:   672.1547506
Evalueating Country: Peru        GDP:   3359.517402
```

```
Evalueating Country: Qatar        GDP:  36152.66676
Evalueating Country: Russia       GDP:  3054.727742
Evalueating Country: Singapore  GDP:  33529.83052
Evalueating Country: South Africa      GDP:  3825.093781
Evalueating Country: Spain        GDP:  15428.32098
Evalueating Country: Sweden       GDP:  33630.24604
Evalueating Country: Switzerland        GDP:  39170.41371
Evalueating Country: Thailand   GDP:  2699.123242
Evalueating Country: United Arab Emirates        GDP:  21058.43643
Evalueating Country: United Kingdom     GDP:  28272.40661
Evalueating Country: United States      GDP:  37691.02733
Evalueating Country: Uruguay    GDP:  9581.05659
Evalueating Country: Venezuela  GDP:  5671.912202
Evalueating Country: Vietnam    GDP:  757.4009286
Evalueating Country: Zimbabwe   GDP:  347.7456605
```

6: Print the following:

1. Highest GPD value
2. Lowest GDP value
3. Mean GDP value
4. Standardized GDP value
5. Sum of all the GDPs

```python
[9]: print("Highest GPD value:", max(gdp))
     print("Lowest GDP value:", min(gdp))
     print("Mean GDP value: ", gdp.mean())
     print("Standardized GDP value:", gdp.std())
     print("Sum of all the GDPs:", gdp.sum())
```

```
Highest GPD value: 40034.85063
Lowest GDP value: 229.6769525
Mean GDP value:  11289.409271639683
Standardized GDP value: 12743.828910617945
Sum of all the GDPs: 711232.7841133
```