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

```
#Import required library
import numpy as np

#Manually add the dataset
countries =
np.array(['Algeria','Angola','Argentina','Australia','Austria','Bahama
s','Bangladesh','Belarus','Belgium','Bhutan','Brazil','Bulgaria','Camb
odia','Cameroon','Chile','China','Colombia','Cyprus','Denmark','El
Salvador','Estonia','Ethiopia','Fiji','Finland','France','Georgia','Gh
ana','Grenada','Guinea','Haiti','Honduras','Hungary','India','Indonesi
a','Ireland','Italy','Japan','Kenya', '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_each_country =
np.array([2255.225482,629.9553062,11601.63022,25306.82494,27266.40335,
19466.99052,588.3691778,2890.345675,24733.62696,1445.760002,4803.39824
4,2618.876037,590.4521124,665.7982328,7122.938458,2639.54156,3362.4656
,15378.16704,30860.12808,2579.115607,6525.541272,229.6769525,2242.6892
59,27570.4852,23016.84778,1334.646773,402.6953275,6047.200797,394.1156
638,385.5793827,1414.072488,5745.981529,837.7464011,1206.991065,27715.
52837,18937.24998,39578.07441,478.2194906,16684.21278,279.2204061,5345
.213415,6288.25324,1908.304416,274.8728621,14646.42094,40034.85063,672
.1547506,3359.517402,36152.66676,3054.727742,33529.83052,3825.093781,1
5428.32098,33630.24604,39170.41371,2699.123242,21058.43643,28272.40661
,37691.02733,9581.05659,5671.912202,757.4009286,347.7456605])
```

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

```
#Use the argmax() method to find the highest GDP
h_GDP = np.argmax(GDP_each_country)
print(GDP_each_country[h_GDP])
```

```
40034.85063
```

```
#Print the name of the country
print(countries[h_GDP:h_GDP+1])
```

```
['Norway']
```

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

```
#Use the argmin() method to find the lowest GDP
l_GDP = np.argmin(GDP_each_country)
print(GDP_each_country[l_GDP])
```

```
229.6769525
```

```
#Print the name of the country
print(countries[l_GDP:l_GDP+1])
```

```
['Ethiopia']
```

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

```
#Use a for loop to print the required output
for country in countries :
    print('Current evaluating country {} ',format(country))
```

```
Current evaluating country {}  Algeria
Current evaluating country {}  Angola
Current evaluating country {}  Argentina
Current evaluating country {}  Australia
Current evaluating country {}  Austria
Current evaluating country {}  Bahamas
Current evaluating country {}  Bangladesh
Current evaluating country {}  Belarus
Current evaluating country {}  Belgium
Current evaluating country {}  Bhutan
Current evaluating country {}  Brazil
Current evaluating country {}  Bulgaria
Current evaluating country {}  Cambodia
Current evaluating country {}  Cameroon
Current evaluating country {}  Chile
Current evaluating country {}  China
Current evaluating country {}  Colombia
Current evaluating country {}  Cyprus
Current evaluating country {}  Denmark
Current evaluating country {}  El Salvador
Current evaluating country {}  Estonia
Current evaluating country {}  Ethiopia
Current evaluating country {}  Fiji
```

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

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

```
#Use a for loop to print the required list
print("Country","\t","\t","GDP")
l = len(countries)
for i in range(0,l,1) :
    print(countries[i:i+1],"\t","\t",GDP_each_country[i:i+1])
```

```
Country          GDP
['Algeria']           [2255.225482]
```

['Angola']   [629.9553062]
['Argentina']   [11601.63022]
['Australia']   [25306.82494]
['Austria']   [27266.40335]
['Bahamas']   [19466.99052]
['Bangladesh']   [588.3691778]
['Belarus']   [2890.345675]
['Belgium']   [24733.62696]
['Bhutan']   [1445.760002]
['Brazil']   [4803.398244]
['Bulgaria']   [2618.876037]
['Cambodia']   [590.4521124]
['Cameroon']   [665.7982328]
['Chile']   [7122.938458]
['China']   [2639.54156]
['Colombia']   [3362.4656]
['Cyprus']   [15378.16704]
['Denmark']   [30860.12808]
['El Salvador']   [2579.115607]
['Estonia']   [6525.541272]
['Ethiopia']   [229.6769525]
['Fiji']   [2242.689259]
['Finland']   [27570.4852]
['France']   [23016.84778]
['Georgia']   [1334.646773]
['Ghana']   [402.6953275]
['Grenada']   [6047.200797]
['Guinea']   [394.1156638]
['Haiti']   [385.5793827]
['Honduras']   [1414.072488]
['Hungary']   [5745.981529]
['India']   [837.7464011]
['Indonesia']   [1206.991065]
['Ireland']   [27715.52837]
['Italy']   [18937.24998]
['Japan']   [39578.07441]
['Kenya']   [478.2194906]
['South Korea']   [16684.21278]
['Liberia']   [279.2204061]
['Malaysia']   [5345.213415]
['Mexico']   [6288.25324]
['Morocco']   [1908.304416]
['Nepal']   [274.8728621]
['New Zealand']   [14646.42094]
['Norway']   [40034.85063]
['Pakistan']   [672.1547506]
['Peru']   [3359.517402]
['Qatar']   [36152.66676]
['Russia']   [3054.727742]
['Singapore']   [33529.83052]

```
['South Africa']            [3825.093781]
['Spain']         [15428.32098]
['Sweden']              [33630.24604]
['Switzerland']         [39170.41371]
['Thailand']            [2699.123242]
['United Arab Emirates']          [21058.43643]
['United Kingdom']            [28272.40661]
['United States']             [37691.02733]
['Uruguay']             [9581.05659]
['Venezuela']           [5671.912202]
['Vietnam']             [757.4009286]
['Zimbabwe']            [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

```
print("Highest GDP Value is                ",np.max(GDP_each_country))
print("Lowest GDP Value is                 ",np.min(GDP_each_country))
print("Mean GDP Value is                   ",np.mean(GDP_each_country))
print("Standard Deviation GDP Value is     ",np.std(GDP_each_country))
print("Sum of all GDPs                     ",np.sum(GDP_each_country))
```

```
Highest GDP Value is                40034.85063
Lowest GDP Value is                 229.6769525
Mean GDP Value is                   11289.409271639683
Standard Deviation GDP Value is     12743.828910617945
Sum of all GDPs                     711232.7841133
```

```
#
by Sangeeta Nag
```