Assignment 01

April 8, 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!

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[5]:
```
"""
DESCRIPTION

Problem Statement: Evaluate the dataset containing the GDPs of different␣
↪countries to:

    Find and print the name of the country with the highest GDP
    Find and print the name of the country with the lowest GDP
    Print out text and input values iteratively
    Print out the entire list of the countries with their GDPs
    Print the highest GDP value, lowest GDP value, mean GDP value, standardized␣
↪GDP value, and the sum of all the GDPs

Follow the cues provided to complete the assignment.
"""
```

[5]:
```
'\nDESCRIPTION\n\nProblem Statement: Evaluate the dataset containing the GDPs of
different countries to:\n\n    Find and print the name of the country with the
highest GDP\n    Find and print the name of the country with the lowest GDP\n
Print out text and input values iteratively\n    Print out the entire list of
the countries with their GDPs\n    Print the highest GDP value, lowest GDP
value, mean GDP value, standardized GDP value, and the sum of all the
GDPs\n\nFollow the cues provided to complete the assignment.\n'
```

1: View and add the dataset

[9]:
```
#Import required library
import numpy as np
```

[10]:
```
#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_of_Countries = 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

[12]:
```
#Use the argmax() method to find the highest GDP
highest_GDP = GDP_of_Countries.argmax()
```

```
45
```

[16]:
```
#Print the name of the country
Country_with_Highest_GDP=Countries[highest_GDP]
print (Country_with_Highest_GDP)
```

```
Norway
```

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

[17]:
```
#Use the argmin() method to find the lowest GDP
lowest_GDP = GDP_of_Countries.argmin()
```

```
21
```

[18]:
```
#Print the name of the country
Country_with_Lowest_GDP=Countries[lowest_GDP]
print (Country_with_Lowest_GDP)
```

```
Ethiopia
```

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

[33]:
```
#Use a for loop to print the required output
for country in Countries:
    print ('Evalating country {}'.format(country))
```

```
Evalating country Algeria
Evalating country Angola
Evalating country Argentina
Evalating country Australia
Evalating country Austria
Evalating country Bahamas
Evalating country Bangladesh
Evalating country Belarus
Evalating country Belgium
Evalating country Bhutan
Evalating country Brazil
Evalating country Bulgaria
Evalating country Cambodia
Evalating country Cameroon
Evalating country Chile
Evalating country China
Evalating country Colombia
Evalating country Cyprus
Evalating country Denmark
Evalating country El Salvador
Evalating country Estonia
Evalating country Ethiopia
Evalating country Fiji
Evalating country Finland
Evalating country France
Evalating country Georgia
Evalating country Ghana
Evalating country Grenada
Evalating country Guinea
Evalating country Haiti
Evalating country Honduras
Evalating country Hungary
Evalating country India
Evalating country Indonesia
Evalating country Ireland
Evalating country Italy
Evalating country Japan
Evalating country Kenya
Evalating country South Korea
Evalating country Liberia
Evalating country Malaysia
Evalating country Mexico
Evalating country Morocco
Evalating country Nepal
```

```
Evalating country New Zealand
Evalating country Norway
Evalating country Pakistan
Evalating country Peru
Evalating country Qatar
Evalating country Russia
Evalating country Singapore
Evalating country South Africa
Evalating country Spain
Evalating country Sweden
Evalating country Switzerland
Evalating country Thailand
Evalating country United Arab Emirates
Evalating country United Kingdom
Evalating country United States
Evalating country Uruguay
Evalating country Venezuela
Evalating country Vietnam
Evalating country Zimbabwe
```

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

[37]:
```
#Use a for loop to print the required list
for i in range(len(GDP_of_Countries)):
    country=Countries[i]
    GDP=GDP_of_Countries[i]
    print ('{}\'s GDP is {}'.format(country,GDP))
```

```
Algeria's GDP is 2255.225482
Angola's GDP is 629.9553062
Argentina's GDP is 11601.63022
Australia's GDP is 25306.82494
Austria's GDP is 27266.40335
Bahamas's GDP is 19466.99052
Bangladesh's GDP is 588.3691778
Belarus's GDP is 2890.345675
Belgium's GDP is 24733.62696
Bhutan's GDP is 1445.760002
Brazil's GDP is 4803.398244
Bulgaria's GDP is 2618.876037
Cambodia's GDP is 590.4521124
Cameroon's GDP is 665.7982328
Chile's GDP is 7122.938458
China's GDP is 2639.54156
Colombia's GDP is 3362.4656
Cyprus's GDP is 15378.16704
Denmark's GDP is 30860.12808
El Salvador's GDP is 2579.115607
Estonia's GDP is 6525.541272
```

```
Ethiopia's GDP is 229.6769525
Fiji's GDP is 2242.689259
Finland's GDP is 27570.4852
France's GDP is 23016.84778
Georgia's GDP is 1334.646773
Ghana's GDP is 402.6953275
Grenada's GDP is 6047.200797
Guinea's GDP is 394.1156638
Haiti's GDP is 385.5793827
Honduras's GDP is 1414.072488
Hungary's GDP is 5745.981529
India's GDP is 837.7464011
Indonesia's GDP is 1206.991065
Ireland's GDP is 27715.52837
Italy's GDP is 18937.24998
Japan's GDP is 39578.07441
Kenya's GDP is 478.2194906
South Korea's GDP is 16684.21278
Liberia's GDP is 279.2204061
Malaysia's GDP is 5345.213415
Mexico's GDP is 6288.25324
Morocco's GDP is 1908.304416
Nepal's GDP is 274.8728621
New Zealand's GDP is 14646.42094
Norway's GDP is 40034.85063
Pakistan's GDP is 672.1547506
Peru's GDP is 3359.517402
Qatar's GDP is 36152.66676
Russia's GDP is 3054.727742
Singapore's GDP is 33529.83052
South Africa's GDP is 3825.093781
Spain's GDP is 15428.32098
Sweden's GDP is 33630.24604
Switzerland's GDP is 39170.41371
Thailand's GDP is 2699.123242
United Arab Emirates's GDP is 21058.43643
United Kingdom's GDP is 28272.40661
United States's GDP is 37691.02733
Uruguay's GDP is 9581.05659
Venezuela's GDP is 5671.912202
Vietnam's GDP is 757.4009286
Zimbabwe's GDP is 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

[43]:
```
print(GDP_of_Countries.max())
print(GDP_of_Countries.min())
print(GDP_of_Countries.mean())
print(GDP_of_Countries.std())
print(GDP_of_Countries.sum())
```

```
40034.85063
229.6769525
11289.409271639683
12743.828910617945
711232.7841133
```

[ ]: