import library

In [2]:
```python
import numpy as np
import pandas as pd
```

import dataset

In [4]:
```python
d=pd.read_csv(r"C:\Users\user\Downloads\2015 - 2015.csv")
d
```

Out[4]:

| | Country | Region | Happiness Rank | Happiness Score | Standard Error | Economy (GDP per Capita) | Family | Health (Life Expectancy) | Freedom |
|---|---|---|---|---|---|---|---|---|---|
| 0 | Switzerland | Western Europe | 1 | 7.587 | 0.03411 | 1.39651 | 1.34951 | 0.94143 | 0.66557 |
| 1 | Iceland | Western Europe | 2 | 7.561 | 0.04884 | 1.30232 | 1.40223 | 0.94784 | 0.62877 |
| 2 | Denmark | Western Europe | 3 | 7.527 | 0.03328 | 1.32548 | 1.36058 | 0.87464 | 0.64938 |
| 3 | Norway | Western Europe | 4 | 7.522 | 0.03880 | 1.45900 | 1.33095 | 0.88521 | 0.66973 |
| 4 | Canada | North America | 5 | 7.427 | 0.03553 | 1.32629 | 1.32261 | 0.90563 | 0.63297 |
| ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| 153 | Rwanda | Sub-Saharan Africa | 154 | 3.465 | 0.03464 | 0.22208 | 0.77370 | 0.42864 | 0.59201 |
| 154 | Benin | Sub-Saharan Africa | 155 | 3.340 | 0.03656 | 0.28665 | 0.35386 | 0.31910 | 0.48450 |
| 155 | Syria | Middle East and Northern Africa | 156 | 3.006 | 0.05015 | 0.66320 | 0.47489 | 0.72193 | 0.15684 |
| 156 | Burundi | Sub-Saharan Africa | 157 | 2.905 | 0.08658 | 0.01530 | 0.41587 | 0.22396 | 0.11850 |
| 157 | Togo | Sub-Saharan Africa | 158 | 2.839 | 0.06727 | 0.20868 | 0.13995 | 0.28443 | 0.36453 |

158 rows × 12 columns

head

In [5]:
```python
d.head()
```

| | Country | Region | Happiness Rank | Happiness Score | Standard Error | Economy (GDP per Capita) | Family | Health (Life Expectancy) | Freedom | (Go C |
|---|---|---|---|---|---|---|---|---|---|---|
| 0 | Switzerland | Western Europe | 1 | 7.587 | 0.03411 | 1.39651 | 1.34951 | 0.94143 | 0.66557 | |
| 1 | Iceland | Western Europe | 2 | 7.561 | 0.04884 | 1.30232 | 1.40223 | 0.94784 | 0.62877 | |
| 2 | Denmark | Western Europe | 3 | 7.527 | 0.03328 | 1.32548 | 1.36058 | 0.87464 | 0.64938 | |
| 3 | Norway | Western Europe | 4 | 7.522 | 0.03880 | 1.45900 | 1.33095 | 0.88521 | 0.66973 | |
| 4 | Canada | North America | 5 | 7.427 | 0.03553 | 1.32629 | 1.32261 | 0.90563 | 0.63297 | |

In [6]:
```
d.head(5)
```

| | Country | Region | Happiness Rank | Happiness Score | Standard Error | Economy (GDP per Capita) | Family | Health (Life Expectancy) | Freedom | (Go C |
|---|---|---|---|---|---|---|---|---|---|---|
| 0 | Switzerland | Western Europe | 1 | 7.587 | 0.03411 | 1.39651 | 1.34951 | 0.94143 | 0.66557 | |
| 1 | Iceland | Western Europe | 2 | 7.561 | 0.04884 | 1.30232 | 1.40223 | 0.94784 | 0.62877 | |
| 2 | Denmark | Western Europe | 3 | 7.527 | 0.03328 | 1.32548 | 1.36058 | 0.87464 | 0.64938 | |
| 3 | Norway | Western Europe | 4 | 7.522 | 0.03880 | 1.45900 | 1.33095 | 0.88521 | 0.66973 | |
| 4 | Canada | North America | 5 | 7.427 | 0.03553 | 1.32629 | 1.32261 | 0.90563 | 0.63297 | |

tail

In [7]:
```
d.tail()
```

| | Country | Region | Happiness Rank | Happiness Score | Standard Error | Economy (GDP per Capita) | Family | Health (Life Expectancy) | Freedom | (Go C |
|---|---|---|---|---|---|---|---|---|---|---|
| 153 | Rwanda | Sub-Saharan Africa | 154 | 3.465 | 0.03464 | 0.22208 | 0.77370 | 0.42864 | 0.59201 | |
| 154 | Benin | Sub-Saharan Africa | 155 | 3.340 | 0.03656 | 0.28665 | 0.35386 | 0.31910 | 0.48450 | |

| | Country | Region | Happiness Rank | Happiness Score | Standard Error | Economy (GDP per Capita) | Family | Health (Life Expectancy) | Freedom | (Go C |
|---|---|---|---|---|---|---|---|---|---|---|
| **155** | Syria | Middle East and Northern Africa | 156 | 3.006 | 0.05015 | 0.66320 | 0.47489 | 0.72193 | 0.15684 | |
| **156** | Burundi | Sub-Saharan Africa | 157 | 2.905 | 0.08658 | 0.01530 | 0.41587 | 0.22396 | 0.11850 | |
| **157** | Togo | Sub-Saharan Africa | 158 | 2.839 | 0.06727 | 0.20868 | 0.13995 | 0.28443 | 0.36453 | |

In [8]:
```python
d.tail(3)
```

Out[8]:

| | Country | Region | Happiness Rank | Happiness Score | Standard Error | Economy (GDP per Capita) | Family | Health (Life Expectancy) | Freedom | (Go C |
|---|---|---|---|---|---|---|---|---|---|---|
| **155** | Syria | Middle East and Northern Africa | 156 | 3.006 | 0.05015 | 0.66320 | 0.47489 | 0.72193 | 0.15684 | |
| **156** | Burundi | Sub-Saharan Africa | 157 | 2.905 | 0.08658 | 0.01530 | 0.41587 | 0.22396 | 0.11850 | |
| **157** | Togo | Sub-Saharan Africa | 158 | 2.839 | 0.06727 | 0.20868 | 0.13995 | 0.28443 | 0.36453 | |

describe

In [9]:
```python
d.describe()
```

Out[9]:

| | Happiness Rank | Happiness Score | Standard Error | Economy (GDP per Capita) | Family | Health (Life Expectancy) | Freedom | Trus (Governmen Corruptior |
|---|---|---|---|---|---|---|---|---|
| **count** | 158.000000 | 158.000000 | 158.000000 | 158.000000 | 158.000000 | 158.000000 | 158.000000 | 158.00000 |
| **mean** | 79.493671 | 5.375734 | 0.047885 | 0.846137 | 0.991046 | 0.630259 | 0.428615 | 0.14342 |
| **std** | 45.754363 | 1.145010 | 0.017146 | 0.403121 | 0.272369 | 0.247078 | 0.150693 | 0.12003 |
| **min** | 1.000000 | 2.839000 | 0.018480 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.00000 |
| **25%** | 40.250000 | 4.526000 | 0.037268 | 0.545808 | 0.856823 | 0.439185 | 0.328330 | 0.06167 |
| **50%** | 79.500000 | 5.232500 | 0.043940 | 0.910245 | 1.029510 | 0.696705 | 0.435515 | 0.10722 |
| **75%** | 118.750000 | 6.243750 | 0.052300 | 1.158448 | 1.214405 | 0.811013 | 0.549092 | 0.18025 |

| | Happiness Rank | Happiness Score | Standard Error | Economy (GDP per Capita) | Family | Health (Life Expectancy) | Freedom | Trust (Government Corruption |
|---|---|---|---|---|---|---|---|---|
| **max** | 158.000000 | 7.587000 | 0.136930 | 1.690420 | 1.402230 | 1.025250 | 0.669730 | 0.55191 |

shape

```
In [10]: np.shape(d)
```

Out[10]: (158, 12)

size

```
In [11]: np.size(d)
```

Out[11]: 1896

missing values

```
In [12]: d.isnull()
```

Out[12]:

| | Country | Region | Happiness Rank | Happiness Score | Standard Error | Economy (GDP per Capita) | Family | Health (Life Expectancy) | Freedom | (Gov Cor |
|---|---|---|---|---|---|---|---|---|---|---|
| **0** | False | False | False | False | False | False | False | False | False | |
| **1** | False | False | False | False | False | False | False | False | False | |
| **2** | False | False | False | False | False | False | False | False | False | |
| **3** | False | False | False | False | False | False | False | False | False | |
| **4** | False | False | False | False | False | False | False | False | False | |
| **...** | ... | ... | ... | ... | ... | ... | ... | ... | ... | |
| **153** | False | False | False | False | False | False | False | False | False | |
| **154** | False | False | False | False | False | False | False | False | False | |
| **155** | False | False | False | False | False | False | False | False | False | |
| **156** | False | False | False | False | False | False | False | False | False | |
| **157** | False | False | False | False | False | False | False | False | False | |

158 rows × 12 columns

fill\drop

```
In [13]: d.fillna(value=0)
```

| | Country | Region | Happiness Rank | Happiness Score | Standard Error | Economy (GDP per Capita) | Family | Health (Life Expectancy) | Freedom |
|---|---|---|---|---|---|---|---|---|---|
| **0** | Switzerland | Western Europe | 1 | 7.587 | 0.03411 | 1.39651 | 1.34951 | 0.94143 | 0.66557 |
| **1** | Iceland | Western Europe | 2 | 7.561 | 0.04884 | 1.30232 | 1.40223 | 0.94784 | 0.62877 |
| **2** | Denmark | Western Europe | 3 | 7.527 | 0.03328 | 1.32548 | 1.36058 | 0.87464 | 0.64938 |
| **3** | Norway | Western Europe | 4 | 7.522 | 0.03880 | 1.45900 | 1.33095 | 0.88521 | 0.66973 |
| **4** | Canada | North America | 5 | 7.427 | 0.03553 | 1.32629 | 1.32261 | 0.90563 | 0.63297 |
| **...** | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| **153** | Rwanda | Sub-Saharan Africa | 154 | 3.465 | 0.03464 | 0.22208 | 0.77370 | 0.42864 | 0.59201 |
| **154** | Benin | Sub-Saharan Africa | 155 | 3.340 | 0.03656 | 0.28665 | 0.35386 | 0.31910 | 0.48450 |
| **155** | Syria | Middle East and Northern Africa | 156 | 3.006 | 0.05015 | 0.66320 | 0.47489 | 0.72193 | 0.15684 |
| **156** | Burundi | Sub-Saharan Africa | 157 | 2.905 | 0.08658 | 0.01530 | 0.41587 | 0.22396 | 0.11850 |
| **157** | Togo | Sub-Saharan Africa | 158 | 2.839 | 0.06727 | 0.20868 | 0.13995 | 0.28443 | 0.36453 |

158 rows × 12 columns

```
d.dropna()
```

| | Country | Region | Happiness Rank | Happiness Score | Standard Error | Economy (GDP per Capita) | Family | Health (Life Expectancy) | Freedom |
|---|---|---|---|---|---|---|---|---|---|
| **0** | Switzerland | Western Europe | 1 | 7.587 | 0.03411 | 1.39651 | 1.34951 | 0.94143 | 0.66557 |
| **1** | Iceland | Western Europe | 2 | 7.561 | 0.04884 | 1.30232 | 1.40223 | 0.94784 | 0.62877 |
| **2** | Denmark | Western Europe | 3 | 7.527 | 0.03328 | 1.32548 | 1.36058 | 0.87464 | 0.64938 |
| **3** | Norway | Western | 4 | 7.522 | 0.03880 | 1.45900 | 1.33095 | 0.88521 | 0.66973 |

| | Country | Region | Happiness Rank | Happiness Score | Standard Error | Economy (GDP per Capita) | Family | Health (Life Expectancy) | Freedom |
|---|---|---|---|---|---|---|---|---|---|
| **4** | Canada | Europe North America | 5 | 7.427 | 0.03553 | 1.32629 | 1.32261 | 0.90563 | 0.63297 |
| **...** | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| **153** | Rwanda | Sub-Saharan Africa | 154 | 3.465 | 0.03464 | 0.22208 | 0.77370 | 0.42864 | 0.59201 |
| **154** | Benin | Sub-Saharan Africa | 155 | 3.340 | 0.03656 | 0.28665 | 0.35386 | 0.31910 | 0.48450 |
| **155** | Syria | Middle East and Northern Africa | 156 | 3.006 | 0.05015 | 0.66320 | 0.47489 | 0.72193 | 0.15684 |
| **156** | Burundi | Sub-Saharan Africa | 157 | 2.905 | 0.08658 | 0.01530 | 0.41587 | 0.22396 | 0.11850 |
| **157** | Togo | Sub-Saharan Africa | 158 | 2.839 | 0.06727 | 0.20868 | 0.13995 | 0.28443 | 0.36453 |

158 rows × 12 columns