Project 2 Analyzing World Happiness Dataset

The "World Happiness Report" consist of six factor in measuring happiness around the world. The first column records the overall rank of the country according to there happiness score in a descending manner. Second column records the region and country. The third column is the happiness score. The reminding column are GDP, Social support, life expectancy, generosity, and corruption.

Context

The data from the world happiness report is collected through the Gallup World Pol.l The participants are asked to rate there life on a scale of 1 to 10. The dataset utlizie in this instance are the national representative sample from the year 2015 to 2017. Each columns represent the extent of its influence toward life evaluation higher than they are in a Dystopia, a theoretical country consist of the world's lowest national averages of each of the six factors.

Aim

The aim for this project would be to answer the following question, which country is the happiest , which factor affects the most on nation happiness, and is happiness in general increasing or decreasing ?

In [1]:
```python
import pandas as pd
import seaborn as sns
data1 = pd.read_csv('2015.csv')
data2 = pd.read_csv('2016.csv')
data3 = pd.read_csv('2017.csv')
print(data1.isnull())
print(data2.isnull())
print(data3.isnull())
```

```
     Country  Region  Happiness Rank  Happiness Score  Standard Error  \
0      False   False           False            False           False
1      False   False           False            False           False
2      False   False           False            False           False
3      False   False           False            False           False
4      False   False           False            False           False
..       ...     ...             ...              ...             ...
153    False   False           False            False           False
154    False   False           False            False           False
155    False   False           False            False           False
156    False   False           False            False           False
157    False   False           False            False           False

     Economy (GDP per Capita)  Family  Health (Life Expectancy)  Freedom  \
0                       False   False                     False    False
1                       False   False                     False    False
2                       False   False                     False    False
3                       False   False                     False    False
4                       False   False                     False    False
..                        ...     ...                       ...      ...
153                     False   False                     False    False
154                     False   False                     False    False
155                     False   False                     False    False
156                     False   False                     False    False
157                     False   False                     False    False

     Trust (Government Corruption)  Generosity  Dystopia Residual
0                            False       False              False
1                            False       False              False
2                            False       False              False
3                            False       False              False
4                            False       False              False
..                             ...         ...                ...
153                          False       False              False
154                          False       False              False
155                          False       False              False
156                          False       False              False
157                          False       False              False

[158 rows x 12 columns]
     Country  Region  Happiness Rank  Happiness Score  \
0      False   False           False            False
1      False   False           False            False
2      False   False           False            False
3      False   False           False            False
4      False   False           False            False
..       ...     ...             ...              ...
152    False   False           False            False
153    False   False           False            False
154    False   False           False            False
155    False   False           False            False
156    False   False           False            False

     Lower Confidence Interval  Upper Confidence Interval  \
0                        False                      False
1                        False                      False
2                        False                      False
3                        False                      False
4                        False                      False
..                         ...                        ...
152                      False                      False
153                      False                      False
154                      False                      False
155                      False                      False
156                      False                      False

     Economy (GDP per Capita)  Family  Health (Life Expectancy)  Freedom  \
0                       False   False                     False    False
1                       False   False                     False    False
2                       False   False                     False    False
3                       False   False                     False    False
4                       False   False                     False    False
..                        ...     ...                       ...      ...
152                     False   False                     False    False
153                     False   False                     False    False
154                     False   False                     False    False
155                     False   False                     False    False
156                     False   False                     False    False

     Trust (Government Corruption)  Generosity  Dystopia Residual
0                            False       False              False
1                            False       False              False
2                            False       False              False
3                            False       False              False
4                            False       False              False
..                             ...         ...                ...
152                          False       False              False
153                          False       False              False
154                          False       False              False
155                          False       False              False
156                          False       False              False

[157 rows x 13 columns]
     Country  Happiness.Rank  Happiness.Score  Whisker.high  Whisker.low  \
0      False           False            False         False        False
1      False           False            False         False        False
2      False           False            False         False        False
3      False           False            False         False        False
4      False           False            False         False        False
..       ...             ...              ...           ...          ...
150    False           False            False         False        False
151    False           False            False         False        False
152    False           False            False         False        False
153    False           False            False         False        False
154    False           False            False         False        False

     Economy..GDP.per.Capita.  Family  Health..Life.Expectancy.  Freedom  \
0                       False   False                     False    False
1                       False   False                     False    False
2                       False   False                     False    False
3                       False   False                     False    False
4                       False   False                     False    False
..                        ...     ...                       ...      ...
150                     False   False                     False    False
151                     False   False                     False    False
152                     False   False                     False    False
153                     False   False                     False    False
154                     False   False                     False    False

     Generosity  Trust..Government.Corruption.  Dystopia.Residual
0         False                          False              False
1         False                          False              False
2         False                          False              False
3         False                          False              False
4         False                          False              False
..          ...                            ...                ...
150       False                          False              False
151       False                          False              False
152       False                          False              False
153       False                          False              False
154       False                          False              False

[155 rows x 12 columns]
```

Firstly we start off by calling for the necessary tools which we'll use later for further analyis.Also I check one more time to make sure there is no null or NA value hidden in the dataset. Which we can see there is no missing value and the data is very complete all around.

In [2]:
```python
data3.head()
```

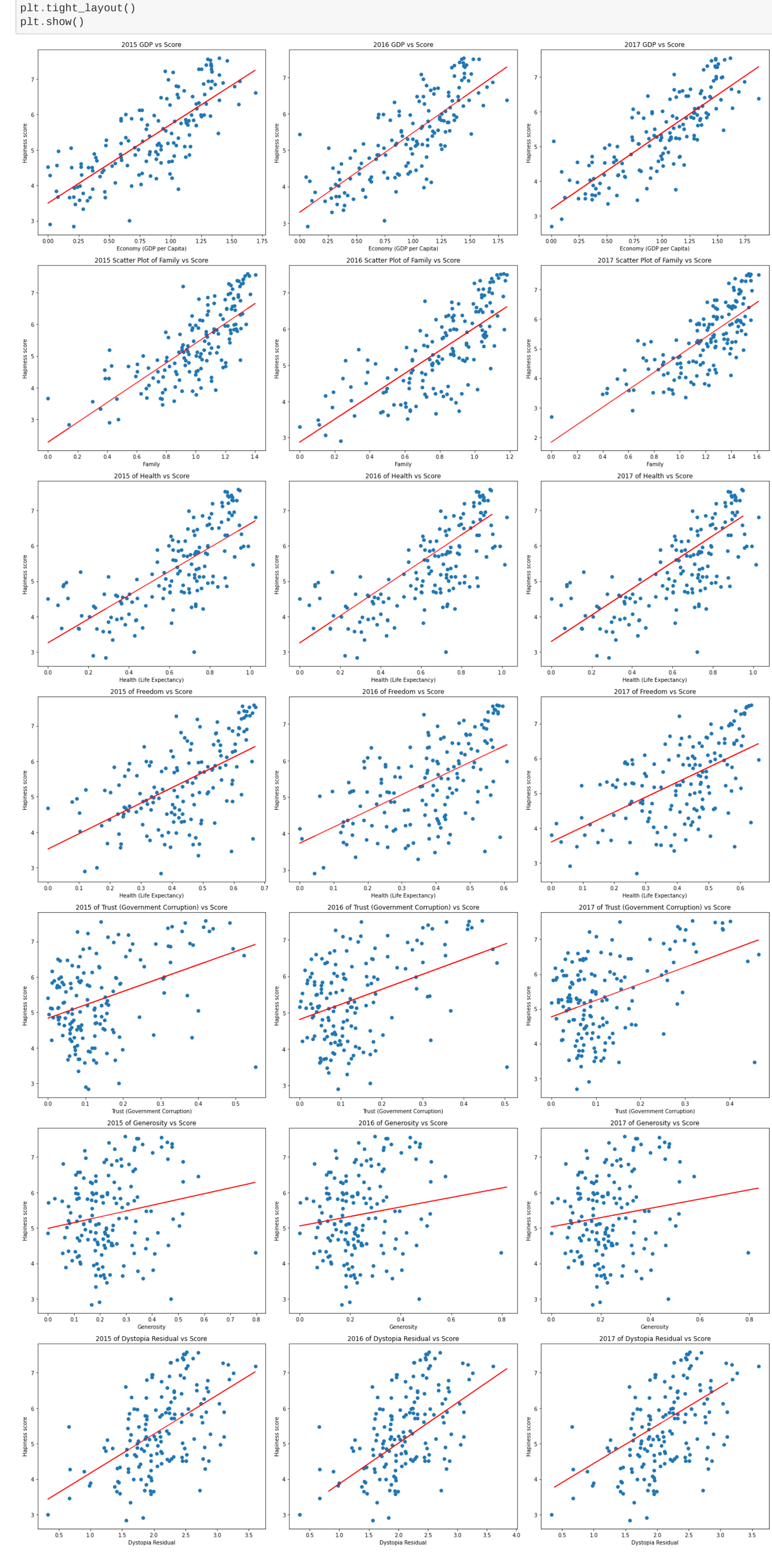
Out[2]:

	Country	Happiness.Rank	Happiness.Score	Whisker.high	Whisker.low	Economy..GDP.per.Capita.	Family	Health..Life.Expectancy.	Freedom	Generosity
0	Norway	1	7.537	7.594445	7.479556	1.616463	1.533524	0.796667	0.635423	0.362012
1	Denmark	2	7.522	7.581728	7.462272	1.482383	1.551122	0.792566	0.626007	0.355280
2	Iceland	3	7.504	7.622030	7.385970	1.480633	1.610574	0.833552	0.627163	0.475540
3	Switzerland	4	7.494	7.561772	7.426227	1.564980	1.516912	0.858131	0.620071	0.290549
4	Finland	5	7.469	7.527542	7.410458	1.443572	1.540247	0.809158	0.617951	0.245483

In [3]:
```python
data3.rename(columns={'Happiness.Rank': 'Happiness Rank'}, inplace=True)
data3.rename(columns={'Happiness.Score': 'Happiness Score'}, inplace=True)
data3.rename(columns={'Economy..GDP.per.Capita.': 'Economy (GDP per Capita)'}, inplace=True)
data3.rename(columns={'Health..Life.Expectancy.': 'Health (Life Expectancy)'}, inplace=True)
data3.rename(columns={'Trust..Government.Corruption.': 'Trust (Government Corruption)'}, inplace=True)
data3.rename(columns={'Dystopia.Residual': 'Dystopia Residual'}, inplace=True)
```

Through further specualtion I realize there's a difference in the column name for data after 2016, therefore I rename some of the column name for easier manipulation in the later parts of my code.

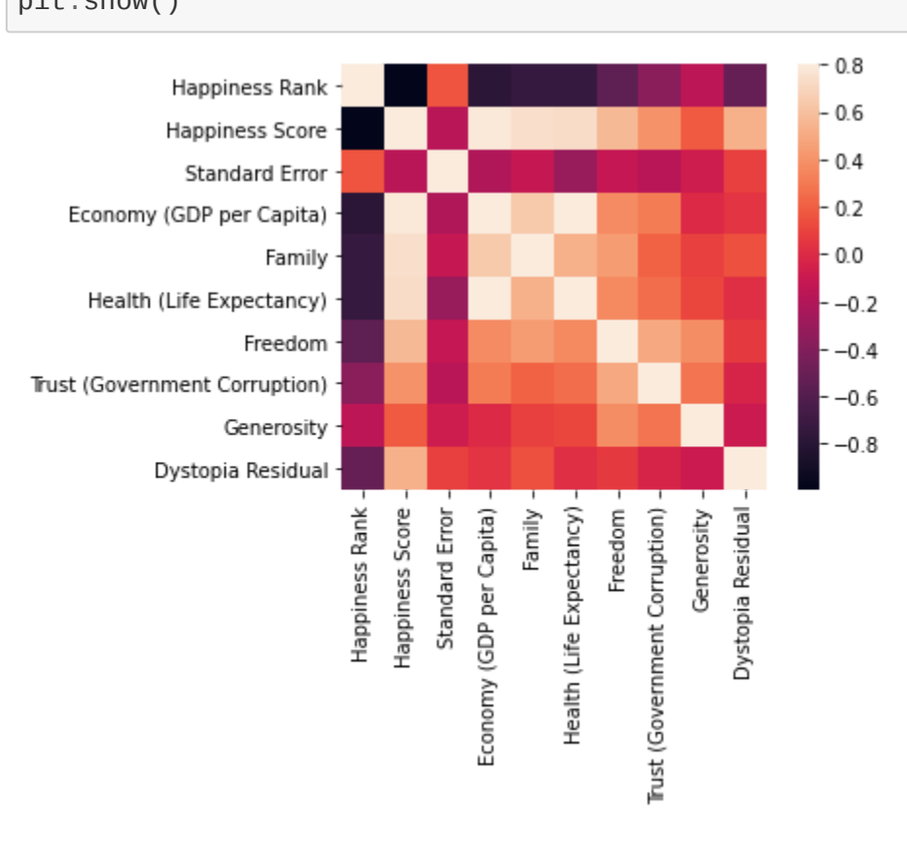
In [4]:
```python
import numpy as np
import matplotlib.pyplot as plt
fig, graph = plt.subplots(nrows=7, ncols=3, figsize=(20, 40))

#Ecnonomy vs Score

#2015
graph[0][0].scatter(data1['Economy (GDP per Capita)'],data1['Happiness Score'])
graph[0][0].set_title('2015 GDP vs Score')
graph[0][0].set_xlabel('Economy (GDP per Capita)')
graph[0][0].set_ylabel('Hapiness score')

fit = np.polyfit(data1['Economy (GDP per Capita)'],data1['Happiness Score'], 1)
line = np.polyval(fit, data1['Economy (GDP per Capita)'])
graph[0][0].plot(data1['Economy (GDP per Capita)'], line, color='red')

#2016
graph[0][1].scatter(data2['Economy (GDP per Capita)'],data2['Happiness Score'])
graph[0][1].set_title('2016 GDP vs Score')
graph[0][1].set_xlabel('Economy (GDP per Capita)')
graph[0][1].set_ylabel('Hapiness score')
fit = np.polyfit(data2['Economy (GDP per Capita)'],data2['Happiness Score'], 1)
line = np.polyval(fit, data2['Economy (GDP per Capita)'])
graph[0][1].plot(data2['Economy (GDP per Capita)'], line, color='red')

#2017
graph[0][2].scatter(data3['Economy (GDP per Capita)'],data3['Happiness Score'])
graph[0][2].set_title('2017 GDP vs Score')
graph[0][2].set_xlabel('Economy (GDP per Capita)')
graph[0][2].set_ylabel('Hapiness score')

fit = np.polyfit(data3['Economy (GDP per Capita)'],data3['Happiness Score'], 1)
line = np.polyval(fit, data3['Economy (GDP per Capita)'])
graph[0][2].plot(data3['Economy (GDP per Capita)'], line, color='red')

#Family vs Score

#2015
graph[1][0].scatter(data1['Family'],data1['Happiness Score'])
graph[1][0].set_title('2015 Scatter Plot of Family vs Score')
graph[1][0].set_xlabel('Family')
graph[1][0].set_ylabel('Hapiness score')

fit = np.polyfit(data1['Family'],data1['Happiness Score'], 1)
line = np.polyval(fit, data1['Family'])
graph[1][0].plot(data1['Family'], line, color='red')

#2016
graph[1][1].scatter(data2['Family'],data2['Happiness Score'])
graph[1][1].set_title('2016 Scatter Plot of Family vs Score')
graph[1][1].set_xlabel('Family')
graph[1][1].set_ylabel('Hapiness score')

fit = np.polyfit(data2['Family'],data2['Happiness Score'], 1)
line = np.polyval(fit, data2['Family'])
graph[1][1].plot(data2['Family'], line, color='red')

#2017
graph[1][2].scatter(data3['Family'],data3['Happiness Score'])
graph[1][2].set_title('2017 Scatter Plot of Family vs Score')
graph[1][2].set_xlabel('Family')
graph[1][2].set_ylabel('Hapiness score')

fit = np.polyfit(data3['Family'],data3['Happiness Score'], 1)
line = np.polyval(fit, data3['Family'])
graph[1][2].plot(data3['Family'], line, color='red')

# Health (Life Expectancy)vs Score

#2015
graph[2][0].scatter(data1['Health (Life Expectancy)'],data1['Happiness Score'])
graph[2][0].set_title('2015 of Health vs Score')
graph[2][0].set_xlabel('Health (Life Expectancy)')
graph[2][0].set_ylabel('Hapiness score')

fit = np.polyfit(data1['Health (Life Expectancy)'],data1['Happiness Score'], 1)
line = np.polyval(fit, data1['Health (Life Expectancy)'])
graph[2][0].plot(data1['Health (Life Expectancy)'], line, color='red')


#2016
graph[2][1].scatter(data1['Health (Life Expectancy)'],data1['Happiness Score'])
graph[2][1].set_title('2016 of Health vs Score')
graph[2][1].set_xlabel('Health (Life Expectancy)')
graph[2][1].set_ylabel('Hapiness score')

fit = np.polyfit(data2['Health (Life Expectancy)'],data2['Happiness Score'], 1)
line = np.polyval(fit, data2['Health (Life Expectancy)'])
graph[2][1].plot(data2['Health (Life Expectancy)'], line, color='red')

#2017
graph[2][2].scatter(data1['Health (Life Expectancy)'],data1['Happiness Score'])
graph[2][2].set_title('2017 of Health vs Score')
graph[2][2].set_xlabel('Health (Life Expectancy)')
graph[2][2].set_ylabel('Hapiness score')

fit = np.polyfit(data3['Health (Life Expectancy)'],data3['Happiness Score'], 1)
line = np.polyval(fit, data3['Health (Life Expectancy)'])
graph[2][2].plot(data3['Health (Life Expectancy)'], line, color='red')

# Freedom vs Score

graph[3][0].scatter(data1['Freedom'],data1['Happiness Score'])
graph[3][0].set_title('2015 of Freedom vs Score')
graph[3][0].set_xlabel('Health (Life Expectancy)')
graph[3][0].set_ylabel('Hapiness score')

fit = np.polyfit(data1['Freedom'],data1['Happiness Score'], 1)
line = np.polyval(fit, data1['Freedom'])
graph[3][0].plot(data1['Freedom'], line, color='red')



graph[3][1].scatter(data2['Freedom'],data2['Happiness Score'])
graph[3][1].set_title('2016 of Freedom vs Score')
graph[3][1].set_xlabel('Health (Life Expectancy)')
graph[3][1].set_ylabel('Hapiness score')

fit = np.polyfit(data2['Freedom'],data2['Happiness Score'], 1)
line = np.polyval(fit, data2['Freedom'])
graph[3][1].plot(data2['Freedom'], line, color='red')

graph[3][2].scatter(data3['Freedom'],data3['Happiness Score'])
graph[3][2].set_title('2017 of Freedom vs Score')
graph[3][2].set_xlabel('Health (Life Expectancy)')
graph[3][2].set_ylabel('Hapiness score')

fit = np.polyfit(data3['Freedom'],data3['Happiness Score'], 1)
line = np.polyval(fit, data3['Freedom'])
graph[3][2].plot(data3['Freedom'], line, color='red')


#Trust (Government Corruption) vs Score

graph[4][0].scatter(data1['Trust (Government Corruption)'],data1['Happiness Score'])
graph[4][0].set_title('2015 of Trust (Government Corruption) vs Score')
graph[4][0].set_xlabel('Trust (Government Corruption)')
graph[4][0].set_ylabel('Hapiness score')

fit = np.polyfit(data1['Trust (Government Corruption)'],data1['Happiness Score'], 1)
line = np.polyval(fit, data1['Trust (Government Corruption)'])
graph[4][0].plot(data1['Trust (Government Corruption)'], line, color='red')

graph[4][1].scatter(data2['Trust (Government Corruption)'],data2['Happiness Score'])
graph[4][1].set_title('2016 of Trust (Government Corruption) vs Score')
graph[4][1].set_xlabel('Trust (Government Corruption)')
graph[4][1].set_ylabel('Hapiness score')

fit = np.polyfit(data2['Trust (Government Corruption)'],data2['Happiness Score'], 1)
line = np.polyval(fit, data2['Trust (Government Corruption)'])
graph[4][1].plot(data2['Trust (Government Corruption)'], line, color='red')


graph[4][2].scatter(data3['Trust (Government Corruption)'],data3['Happiness Score'])
graph[4][2].set_title('2017 of Trust (Government Corruption) vs Score')
graph[4][2].set_xlabel('Trust (Government Corruption)')
graph[4][2].set_ylabel('Hapiness score')

fit = np.polyfit(data3['Trust (Government Corruption)'],data3['Happiness Score'], 1)
line = np.polyval(fit, data3['Trust (Government Corruption)'])
graph[4][2].plot(data3['Trust (Government Corruption)'], line, color='red')

#Generosity vs Score


graph[5][0].scatter(data1['Generosity'],data1['Happiness Score'])
graph[5][0].set_title('2015 of Generosity vs Score')
graph[5][0].set_xlabel('Generosity')
graph[5][0].set_ylabel('Hapiness score')

fit = np.polyfit(data1['Generosity'],data1['Happiness Score'], 1)
line = np.polyval(fit, data1['Generosity'])
graph[5][0].plot(data1['Generosity'], line, color='red')

graph[5][1].scatter(data1['Generosity'],data1['Happiness Score'])
graph[5][1].set_title('2016 of Generosity vs Score')
graph[5][1].set_xlabel('Generosity')
graph[5][1].set_ylabel('Hapiness score')

fit = np.polyfit(data2['Generosity'],data2['Happiness Score'], 1)
line = np.polyval(fit, data2['Generosity'])
graph[5][1].plot(data2['Generosity'], line, color='red')

graph[5][2].scatter(data1['Generosity'],data1['Happiness Score'])
graph[5][2].set_title('2017 of Generosity vs Score')
graph[5][2].set_xlabel('Generosity')
graph[5][2].set_ylabel('Hapiness score')

fit = np.polyfit(data3['Generosity'],data3['Happiness Score'], 1)
line = np.polyval(fit, data3['Generosity'])
graph[5][2].plot(data3['Generosity'], line, color='red')

#Dystopia Residual vs Score


graph[6][0].scatter(data1['Dystopia Residual'],data1['Happiness Score'])
graph[6][0].set_title('2015 of Dystopia Residual vs Score')
graph[6][0].set_xlabel('Dystopia Residual')
graph[6][0].set_ylabel('Hapiness score')

fit = np.polyfit(data1['Dystopia Residual'],data1['Happiness Score'], 1)
line = np.polyval(fit, data1['Dystopia Residual'])
graph[6][0].plot(data1['Dystopia Residual'], line, color='red')


graph[6][1].scatter(data1['Dystopia Residual'],data1['Happiness Score'])
graph[6][1].set_title('2016 of Dystopia Residual vs Score')
graph[6][1].set_xlabel('Dystopia Residual')
graph[6][1].set_ylabel('Hapiness score')

fit = np.polyfit(data2['Dystopia Residual'],data2['Happiness Score'], 1)
line = np.polyval(fit, data2['Dystopia Residual'])
graph[6][1].plot(data2['Dystopia Residual'], line, color='red')

graph[6][2].scatter(data1['Dystopia Residual'],data1['Happiness Score'])
graph[6][2].set_title('2017 of Dystopia Residual vs Score')
graph[6][2].set_xlabel('Dystopia Residual')
graph[6][2].set_ylabel('Hapiness score')

fit = np.polyfit(data3['Dystopia Residual'],data3['Happiness Score'], 1)
line = np.polyval(fit, data3['Dystopia Residual'])
graph[6][2].plot(data3['Dystopia Residual'], line, color='red')



plt.tight_layout()
plt.show()
```



2015 GDP vs Score
2016 GDP vs Score
2017 GDP vs Score
2015 Scatter Plot of Family vs Score
2016 Scatter Plot of Family vs Score
2017 Scatter Plot of Family vs Score
2015 of Health vs Score
2016 of Health vs Score
2017 of Health vs Score
2015 of Freedom vs Score
2016 of Freedom vs Score
2017 of Freedom vs Score
2015 of Generosity vs Score
2016 of Generosity vs Score
2017 of Generosity vs Score
2015 of Dystopia Residual vs Score
2016 of Dystopia Residual vs Score
2017 of Dystopia Residual vs Score
Economy (GDP per Capita)
Family
Health (Life Expectancy)
Trust (Government Corruption)
Generosity
Dystopia Residual
Hapiness score

Here I utilizie a scatterplot to see the relationship between happiness score and the differnet categories of the dataset. A interesting trend is the correlation of GDP and Family with the Happiness score. The higher the happiness score the higher the GDP and Family score.

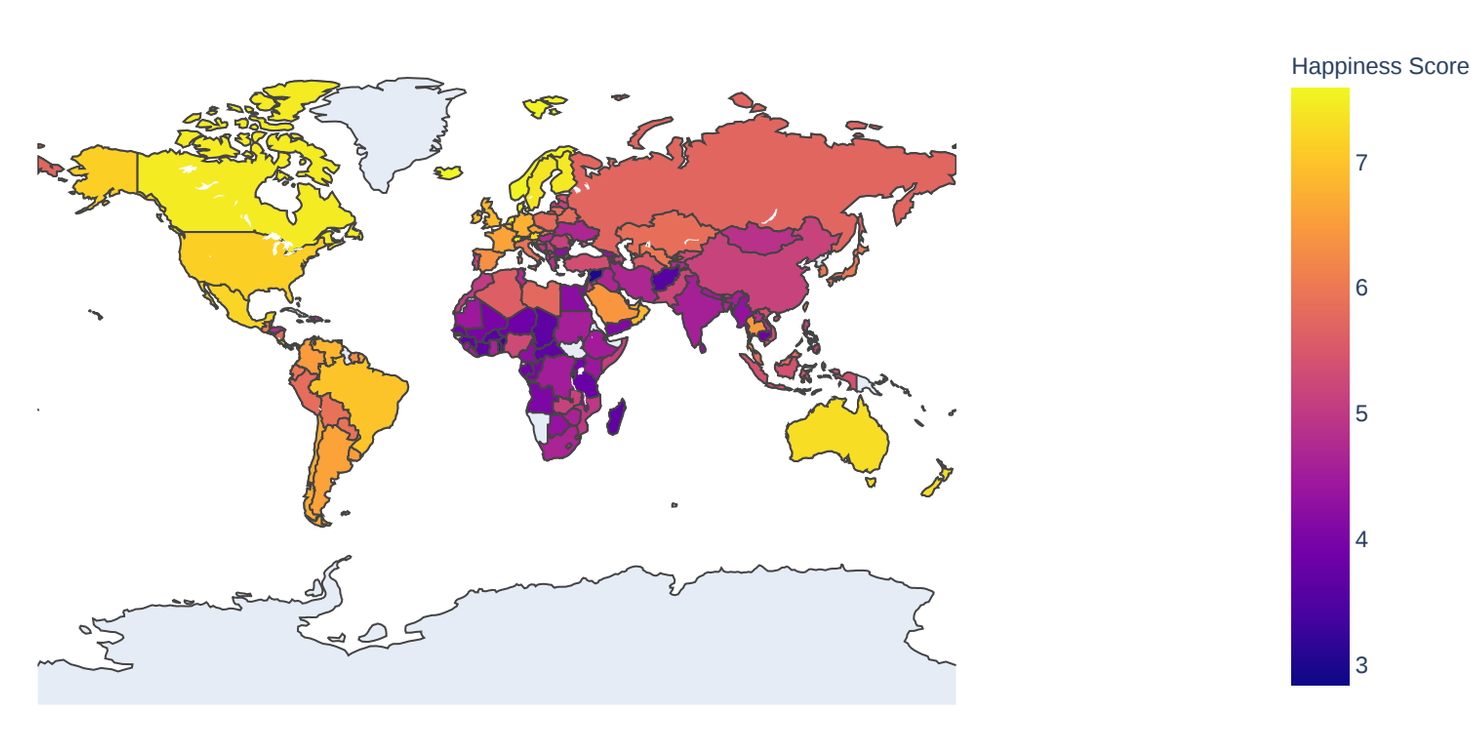
In [5]:
```python
sns.heatmap(data1.corr(), vmax=.8, square=True)
plt.show()
```



Here utilzling the corr() function I dive deeper into the correlation each cateogry have with the other. Which we can see the a near perfect score between GDP, Family, Life Expectency and Hapiness score.

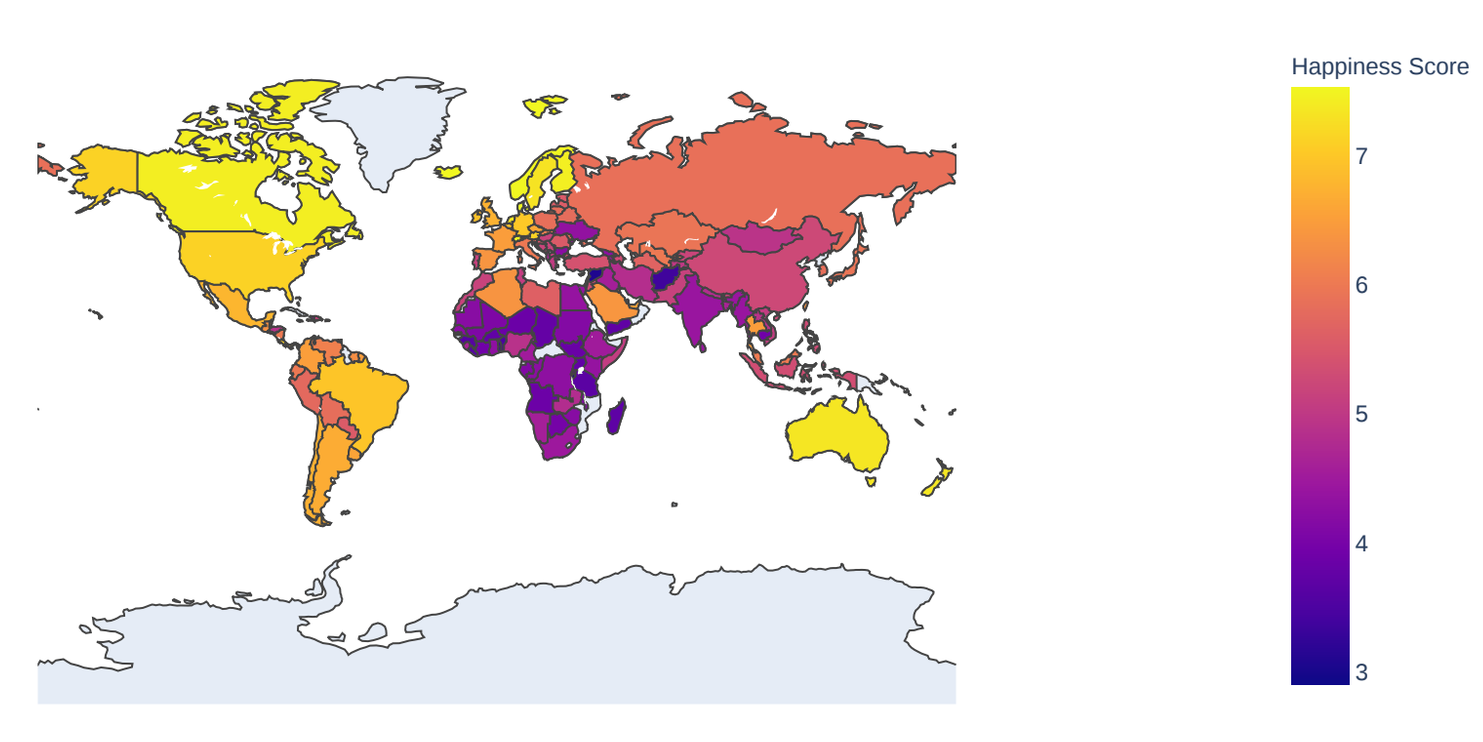
In [6]:
```python
import plotly.graph_objs as go
from plotly.offline import download_plotlyjs, init_notebook_mode, plot, iplot
import pandas as pd

data = dict(
    type='choropleth',
    locations=data1['Country'],
    locationmode='country names',
    z=data1['Happiness Score'],
    text=data1['Country'],
    colorbar={'title': 'Happiness Score'}
)

layout = dict(
    title='Global Happiness 2015',
    geo=dict(
        showframe=False,
        projection_type='miller',
    )
)
choromap = go.Figure(data=[data], layout=layout)
iplot(choromap)
```

Global Happiness 2015



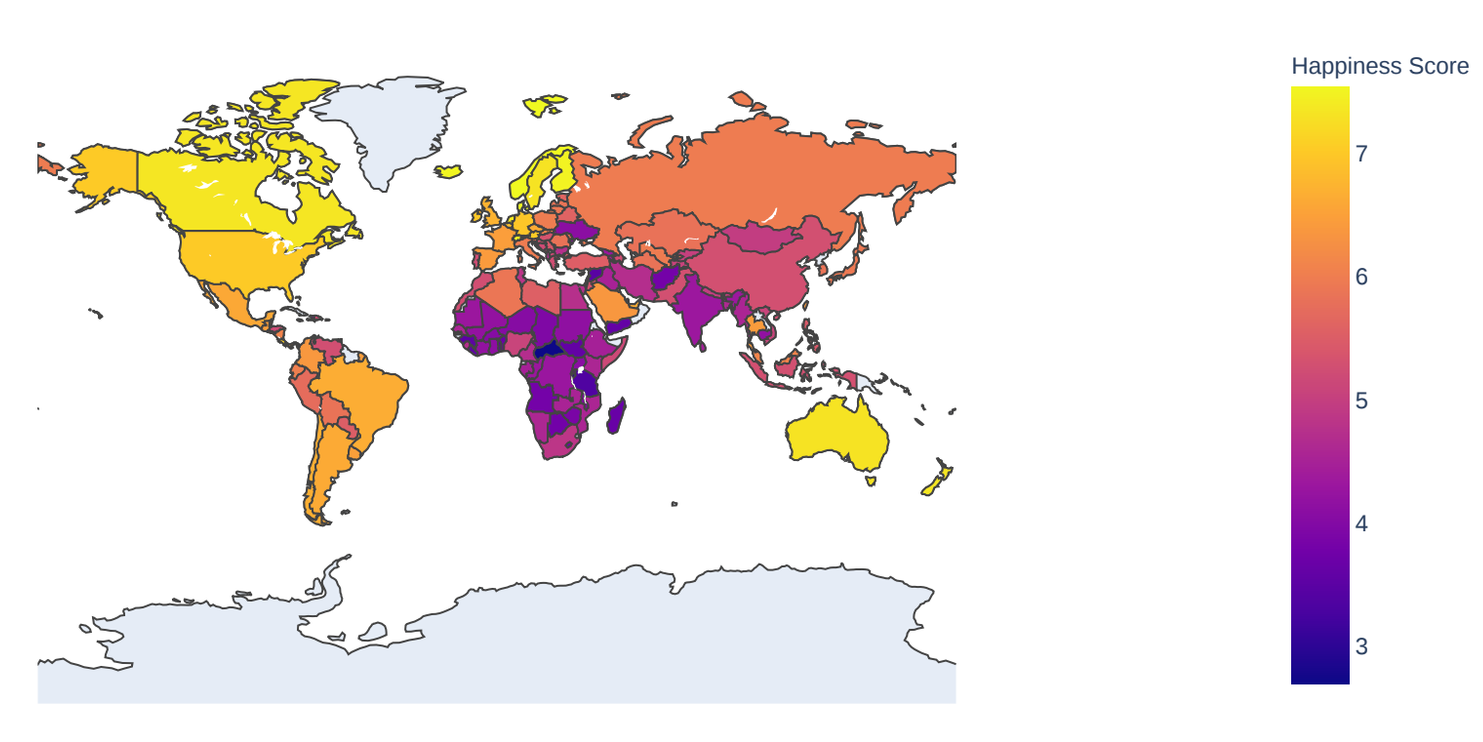
In [7]:
```python
data = dict(
    type='choropleth',
    locations=data2['Country'],
    locationmode='country names',
    z=data2['Happiness Score'],
    text=data2['Country'],
    colorbar={'title': 'Happiness Score'}
)

layout = dict(
    title='Global Happiness 2016',
    geo=dict(
        showframe=False,
        projection_type='miller',
    )
)
choromap = go.Figure(data=[data], layout=layout)
iplot(choromap)
```

Global Happiness 2016



In [8]:
```python
data = dict(
    type='choropleth',
    locations=data3['Country'],
    locationmode='country names',
    z=data3['Happiness Score'],
    text=data3['Country'],
    colorbar={'title':'Happiness Score'}
)

layout = dict(
    title='Global Happiness 2017',
    geo=dict(
        showframe=False,
        projection_type='miller',
    )
)
choromap = go.Figure(data=[data], layout=layout)
iplot(choromap)
```

Global Happiness 2017



Throuh the three choropleth graphs, I was able to find which states have the hapiness score. Which most visbily are Canada, Australia, Finland,Norway, Iceland. All of these countries have a high GDP, which may mean there are more factors which are affecting the happiness scores.

In [10]:
```python
data1.head()
```

Out[10]:

	Country	Region	Happiness Rank	Happiness Score	Standard Error	Economy (GDP per Capita)	Family	Health (Life Expectancy)	Freedom	Trust (Government Corruption)	Generosity	Dystopia Residual
0	Switzerland	Western Europe	1	7.587	0.03411	1.39651	1.34951	0.94143	0.66557	0.41978	0.29678	2.51738
1	Iceland	Western Europe	2	7.561	0.04884	1.30232	1.40223	0.94784	0.62877	0.14145	0.43630	2.70201
2	Denmark	Western Europe	3	7.527	0.03328	1.32548	1.36058	0.87464	0.64938	0.48357	0.34139	2.49204
3	Norway	Western Europe	4	7.522	0.03880	1.45900	1.33095	0.88521	0.66973	0.36503	0.34699	2.46531
4	Canada	North America	5	7.427	0.03553	1.32629	1.32261	0.90563	0.63297	0.32957	0.45811	2.45176

In [11]:
```python
data2.head()
```

Out[11]:

	Country	Region	Happiness Rank	Happiness Score	Lower Confidence Interval	Upper Confidence Interval	Economy (GDP per Capita)	Family	Health (Life Expectancy)	Freedom	Trust (Government Corruption)	Generosity	Dystopia Residual
0	Denmark	Western Europe	1	7.526	7.460	7.592	1.44178	1.16374	0.79504	0.57941	0.44453	0.36171	2.73939
1	Switzerland	Western Europe	2	7.509	7.428	7.590	1.52733	1.14524	0.86303	0.58557	0.41203	0.28083	2.69463
2	Iceland	Western Europe	3	7.501	7.333	7.669	1.42666	1.18326	0.86733	0.56624	0.14975	0.47678	2.83137
3	Norway	Western Europe	4	7.498	7.421	7.575	1.57744	1.12690	0.79579	0.59609	0.35776	0.37895	2.66465
4	Finland	Western Europe	5	7.413	7.351	7.475	1.40598	1.13464	0.81091	0.57104	0.41004	0.25492	2.82596

In [12]:
```python
data3.head()
```

Out[12]:

	Country	Happiness Rank	Happiness Score	Whisker.high	Whisker.low	Economy (GDP per Capita)	Family	Health (Life Expectancy)	Freedom	Generosity	Trust (Government Corruption)	Dystopia Residual
0	Norway	1	7.537	7.594445	7.479556	1.616463	1.533524	0.796667	0.635423	0.362012	0.315964	2.277027
1	Denmark	2	7.522	7.581728	7.462272	1.482383	1.551122	0.792566	0.626007	0.355280	0.400770	2.313707
2	Iceland	3	7.504	7.622030	7.385970	1.480633	1.610574	0.833552	0.627163	0.475540	0.153527	2.322715
3	Switzerland	4	7.494	7.561772	7.426227	1.564980	1.516912	0.858131	0.620071	0.290549	0.367007	2.276716
4	Finland	5	7.469	7.527542	7.410458	1.443572	1.540247	0.809158	0.617951	0.245483	0.382612	2.430182

Through observing the data of the top five countries from the year 2015 to 2017, we can see Western Europe are always in the top five. In the top five, Denmark and Iceland being the long standing place of number two and number three.

In [16]:
```python
h = data1.head(10)
print(h.mean())
t = data1.tail(10)
print(t.mean())
```

```
Happiness Rank                     5.500000
Happiness Score                    7.434200
Standard Error                     0.035606
Economy (GDP per Capita)           1.334476
Family                             1.328228
Health (Life Expectancy)           0.908750
Freedom                            0.645429
Trust (Government Corruption)      0.369529
Generosity                         0.386243
Dystopia Residual                  2.461565
dtype: float64
Happiness Rank                   153.500000
Happiness Score                    3.369500
Standard Error                     0.047489
Economy (GDP per Capita)           0.295529
Family                             0.530952
Health (Life Expectancy)           0.309470
Freedom                            0.342637
Trust (Government Corruption)      0.160781
Generosity                         0.249940
Dystopia Residual                  1.480151
dtype: float64
```

Comparing the data of the top 10 and the last 10 countries on the ranking in 2015, we can see major difference in three main categories Family and Econonmy.

Conclusion

From the above analysis of the dataset, I believe I can conclude the following two points. The happiest country would between the two Country Denmark and Iceland, with there consistent happiness score of above 7.5. Also Western Europe is definetely the happiest place to live in , if we see its high rank in the period from 2015-2017.

In regards to the factor which affects happiness the most, I belive it's compeltely certain there are only certain factors affecting the overall score. Yet from my analysis there are certain factor which seem noticable when looking at countries with high hapiness score over 7, which are GDP , Family, and Life expectancy. These three factors are always accopmanied when a high ranking country on the hapiness scale is mentioned.

Reference https://www.kaggle.com/datasets/unsdsn/world-happiness https://www.purdue.edu/stepstoleaps/new/featured/well-being-tips/2021/2021_0308.php#:~:text=It%20can%20enhance%20your%20productivity,And%20it%20predicts%20greater%20longevity https://wisevoter.com/country-rankings/happiest-countries-in-the-world/#:~:text=The%20ten%20happiest%20countries%20in,a%20happiness%20index%20of%207.82.