In [5]:
```
import numpy as np
import pandas as pd
import matplotlib.pyplot as plt

df = pd.read_csv("C:\\Users\\user\\Downloads\\master.c
df.head()
```

Out[5]:

	country	year	sex	age	suicides_no	population	suicides
0	Albania	1987	male	15-24 years	21	312900	
1	Albania	1987	male	35-54 years	16	308000	
2	Albania	1987	female	15-24 years	14	289700	
3	Albania	1987	male	75+ years	1	21800	
4	Albania	1987	male	25-34 years	9	274300	

In [6]:
```
df.tail()
```

Out[6]:

	country	year	sex	age	suicides_no	population	s
27815	Uzbekistan	2014	female	35-54 years	107	3620833	
27816	Uzbekistan	2014	female	75+ years	9	348465	
27817	Uzbekistan	2014	male	5-14 years	60	2762158	
27818	Uzbekistan	2014	female	5-14 years	44	2631600	
27819	Uzbekistan	2014	female	55-74 years	21	1438935	

In [8]:
```
df.describe()
```

Out[8]:

	year	suicides_no	population	suicides/100k pop	
count	27820.000000	27820.000000	2.782000e+04	27820.000000	8
mean	2001.258375	242.574407	1.844794e+06	12.816097	
std	8.469055	902.047917	3.911779e+06	18.961511	
min	1985.000000	0.000000	2.780000e+02	0.000000	
25%	1995.000000	3.000000	9.749850e+04	0.920000	
50%	2002.000000	25.000000	4.301500e+05	5.990000	
75%	2008.000000	131.000000	1.486143e+06	16.620000	
max	2016.000000	22338.000000	4.380521e+07	224.970000	

In [11]:
```
df.columns
```

Out[11]:
```
Index(['country', 'year', 'sex', 'age', 'suicides_n
o', 'population',
       'suicides/100k pop', 'country-year', 'HDI for
year',
       ' gdp_for_year ($) ', 'gdp_per_capita ($)',
'generation'],
      dtype='object')
```

- **Line Chart**: plot the trend of total global suicides per year.
- **Bar Chart**: comparing the total number of global suicides by age group for a particular year. 1987 Albania .
- **Pie Chart**: illustrating the proportion of global suicides by gender for the year 1987.

In [9]:
```
sample=df.groupby('year')['suicides/100k pop'].sum().r
samplex
```

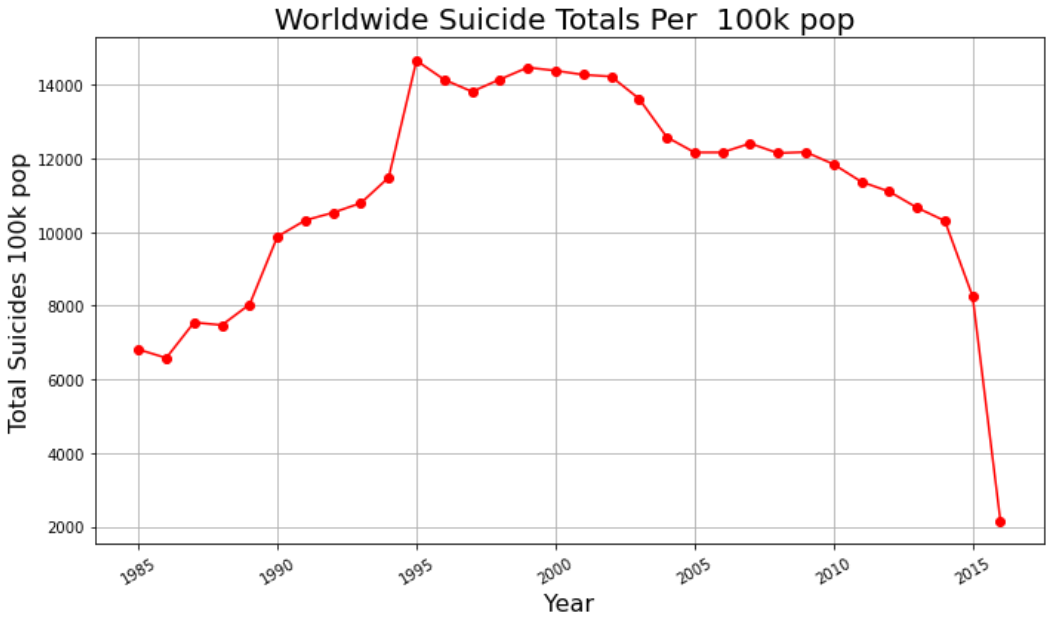
Out[9]:

	year	suicides/100k pop
0	1985	6811.89
1	1986	6579.84
2	1987	7545.45
3	1988	7473.13
4	1989	8036.54
5	1990	9878.75
6	1991	10321.06
7	1992	10528.88
8	1993	10790.29
9	1994	11483.79
10	1995	14660.26
11	1996	14142.21
12	1997	13817.83
13	1998	14150.72
14	1999	14473.91
15	2000	14387.45
16	2001	14276.21
17	2002	14227.72
18	2003	13627.58
19	2004	12581.80
20	2005	12164.99
21	2006	12166.01
22	2007	12410.15
23	2008	12145.84
24	2009	12176.04
25	2010	11843.99
26	2011	11367.84
27	2012	11101.91
28	2013	10663.64

	year	suicides/100k pop
29	2014	10306.73
30	2015	8253.99
31	2016	2147.39

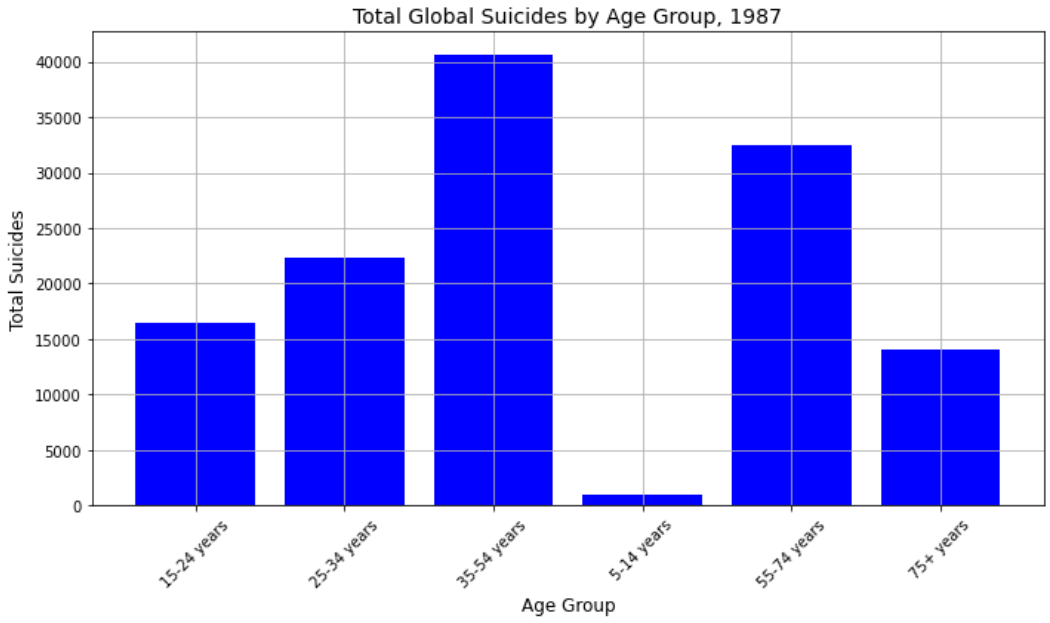
In [10]:
```
def generate_suicide_timeline(df):
    """
    Creates a line chart showing global suicide totals
    The comments explain what's happening in each step
    """

    # First group the data by year and sum the suicide
    print("Grouping the data by year...")
    yearly_data = df.groupby('year')['suicides/100k po

    # Now let's visualize this data in a line chart
    print("Creating the line chart...")
    plt.figure(figsize=(10, 6))
    plt.plot(yearly_data['year'],yearly_data['suicides

    # Add some details to the chart to make it clearer
    print("Adding labels and styles...")
    plt.title("Worldwide Suicide Totals Per  100k pop
    plt.xlabel('Year', fontsize=16)
    plt.ylabel('Total Suicides 100k pop', fontsize=16)
    plt.grid(True)
    plt.xticks(rotation=30)
    plt.tight_layout()

    # Finally, display the chart
    print("Showing the chart...")
    plt.show()

    print("All done!")

# Example usage
generate_suicide_timeline(df)
```

```
Grouping the data by year...
Creating the line chart...
Adding labels and styles...
Showing the chart...
```

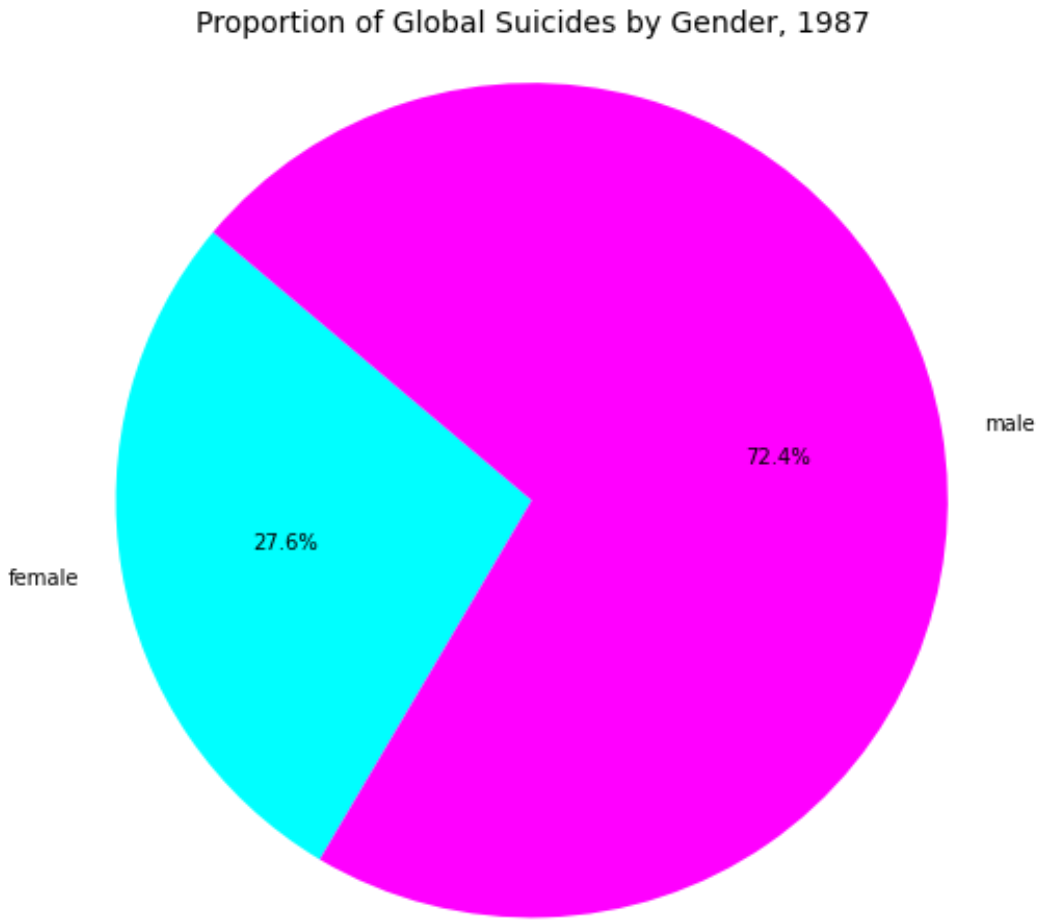

Worldwide Suicide Totals Per 100k pop
Total Suicides 100k pop
14000
12000
10000
8000
6000
4000
2000
1985
1990
1995
2000
2005
2010
2015
Year

All done!

In [24]:
```
# Group df by age group and sum the suicides for all c
global_1987_suicides_by_age_all_countries = df[df['yea

# Sort the age groups in a meaningful order
global_1987_suicides_by_age_all_countries['age'] = pd.
global_1987_suicides_by_age_all_countries = global_198

# Plotting the bar chart
plt.figure(figsize=(10, 6))
plt.bar(global_1987_suicides_by_age_all_countries['age
plt.title('Total Global Suicides by Age Group, 1987',
plt.xlabel('Age Group', fontsize=12)
plt.ylabel('Total Suicides', fontsize=12)
plt.grid()
plt.xticks(rotation=45)
plt.tight_layout()  # Adjusts the plot to ensure every
plt.show()
```



In [25]:
```
# Group df by sex and sum the suicides for 1987 for al
global_1987_suicides_by_sex_all_countries = df[df['yea

# Plotting the pie chart
plt.figure(figsize=(8, 8))
plt.pie(global_1987_suicides_by_sex_all_countries['sui
        colors=['cyan', 'magenta'], autopct='%1.1f%%',
plt.title('Proportion of Global Suicides by Gender, 19
plt.axis('equal')  # Equal aspect ratio ensures that p
plt.show()
```



In [ ]: