Practical 4

Problem Statement - To visualize diff attributes of dataset using bar & line graphs

dataset - netflix titles

Libraries used - Pandas, Collections, matplot

Plots used - Bar chart & Line chart.

Practical No.4

Data Science and Visualization (Honors Course)

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In this practical we will perform Data Visualization.

In [1]:

```
import pandas as pd
```

In [6]:

```
df = pd.read_csv('netflix_titles.csv')
df.head(8807)
```

Out[6]:

	show_id	type	title	director	cast	country	date_added	release_year	rating	duration	listed_in
0	s1	Movie	Dick Johnson Is Dead	Kirsten Johnson	NaN	United States	September 25, 2021	2020	PG-13	90 min	Documentaries
1	s2	TV Show	Blood & Water	NaN	Ama Qamata, Khosi Ngema, Gail Mabalane, Thaban...	South Africa	September 24, 2021	2021	TV-MA	2 Seasons	International TV Shows, TV Dramas, TV Mysteries
2	s3	TV Show	Ganglands	Julien Leclercq	Sami Bouajila, Tracy Gotoas, Samuel Jouy, Nabi...	NaN	September 24, 2021	2021	TV-MA	1 Season	Crime TV Shows, International TV Shows, TV Act...
3	s4	TV Show	Jailbirds New Orleans	NaN	NaN	NaN	September 24, 2021	2021	TV-MA	1 Season	Docuseries, Reality TV
4	s5	TV Show	Kota Factory	NaN	Mayur More, Jitendra Kumar, Ranjan Raj, Alam K...	India	September 24, 2021	2021	TV-MA	2 Seasons	International TV Shows, Romantic TV Shows, TV ...
...	...	...	...	...	...	...	...	...	...	...	...
8802	s8803	Movie	Zodiac	David Fincher	Mark Ruffalo, Jake Gyllenhaal, Robert	United States	November 20, 2019	2007	R	158 min	Cult Movies, Dramas, Thrillers

	show_id	type	title	director	Downey cast J...	country	date_added	release_year	rating	duration	listed_in
8803	s8804	TV Show	Zombie Dumb	NaN	NaN	NaN	July 1, 2019	2018	TV-Y7	2 Seasons	Kids' TV, Korean TV Shows, TV Comedies
8804	s8805	Movie	Zombieland	Ruben Fleischer	Jesse Eisenberg, Woody Harrelson, Emma Stone, ...	United States	November 1, 2019	2009	R	88 min	Comedies, Horror Movies
8805	s8806	Movie	Zoom	Peter Hewitt	Tim Allen, Courteney Cox, Chevy Chase, Kate Ma...	United States	January 11, 2020	2006	PG	88 min	Children & Family Movies, Comedies
8806	s8807	Movie	Zubaan	Mozez Singh	Vicky Kaushal, Sarah-Jane Dias, Raaghav Chanan...	India	March 2, 2019	2015	TV-14	111 min	Dramas, International Movies, Music & Musicals

8807 rows × 12 columns

In [5]:

```
df.shape
```

Out[5]:

```
(8807, 12)
```

In [8]:

```
categories=df['listed_in']
```

In [9]:

```
total_child=sum(df['listed_in'].str.contains('Child'))
```

In [10]:

```
total_child
```

Out[10]:

```
641
```

In [11]:

```
Standup_Comedies=sum(df['listed_in'].str.contains('Stand'))
```

In [13]:

```
Standup_Comedies
```

Out[13]:

```
399
```

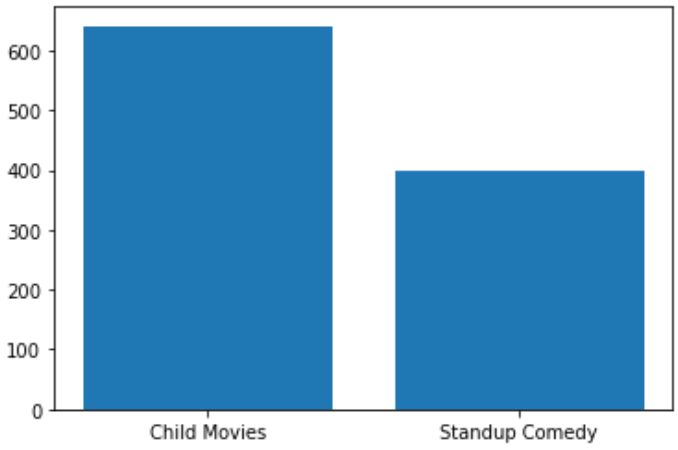
We determined the number of child movies/shows and standup comedies.We will visualize this number using plot.

In [14]:

```
import matplotlib.pyplot as plt
```

In [19]:

```
plt.bar(['Child Movies','Standup Comedy'],
        [total_child, Standup_Comedies])
plt.show()
```



In [20]:

```
set(df['type'])
```

Out[20]:

```
{'Movie', 'TV Show'}
```

In [21]:

```
tv_shows = df[df['type'] == 'TV Show'] #Boolean Filtering
```

In [30]:

```
seasons13 = tv_shows [tv_shows [ 'duration'] == '13 Seasons']

seasons15 = tv_shows [tv_shows['duration'] == '15 Seasons']

seasons16= tv_shows [tv_shows['duration'] == '16 Seasons']

seasons12 = tv_shows [tv_shows['duration'] == '12 Seasons']

seasons11= tv_shows [tv_shows['duration'] == '11 Seasons']
```

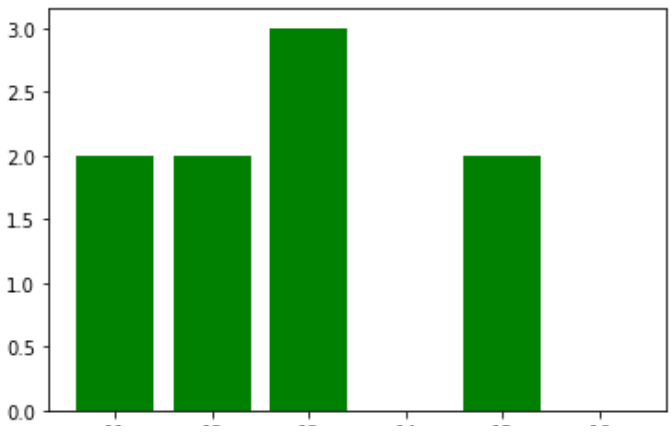
In [31]:

```
plt.bar ([11, 12, 13, 15, 16],
[len(seasons11), len(seasons12), len(seasons13), len (seasons15), len(seasons16)],

color='green')
```

Out[31]:

```
<BarContainer object of 5 artists>
```



11 12 13 14 15 16

In [32]:

```
from collections import Counter
ratings = Counter(df['rating'])
```

In [33]:

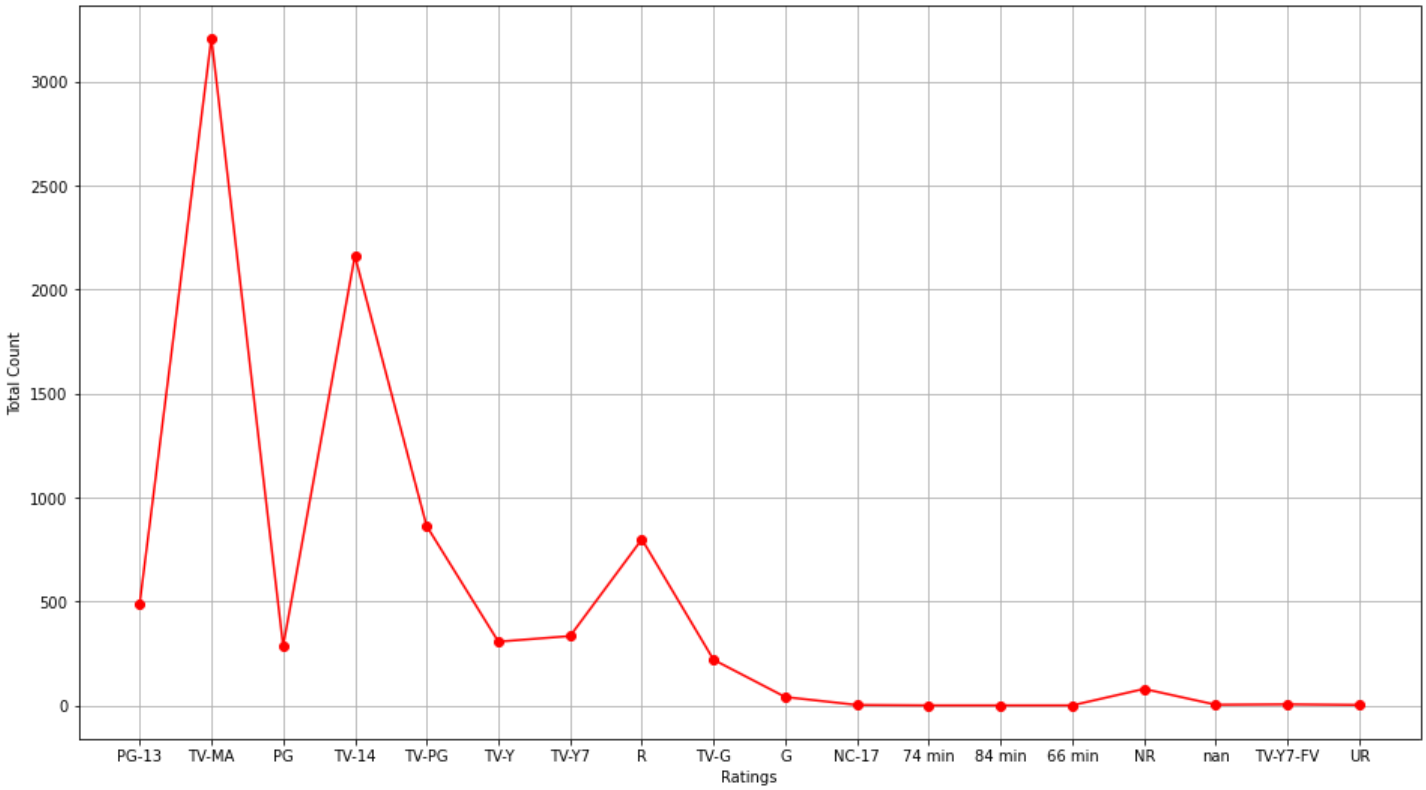
```
ratings
```

Out[33]:

```
Counter({'PG-13': 490,
         'TV-MA': 3207,
         'PG': 287,
         'TV-14': 2160,
         'TV-PG': 863,
         'TV-Y': 307,
         'TV-Y7': 334,
         'R': 799,
         'TV-G': 220,
         'G': 41,
         'NC-17': 3,
         '74 min': 1,
         '84 min': 1,
         '66 min': 1,
         'NR': 80,
         nan: 4,
         'TV-Y7-FV': 6,
         'UR': 3})
```

In [36]:

```
plt. figure(figsize=(16,9))
plt.plot(ratings.keys(), ratings.values(), color = 'red', marker='o')
plt.xlabel('Ratings'); plt.ylabel('Total Count')
plt.grid()
```



If we wish to plot all these plots in the same plot we can use subplot.

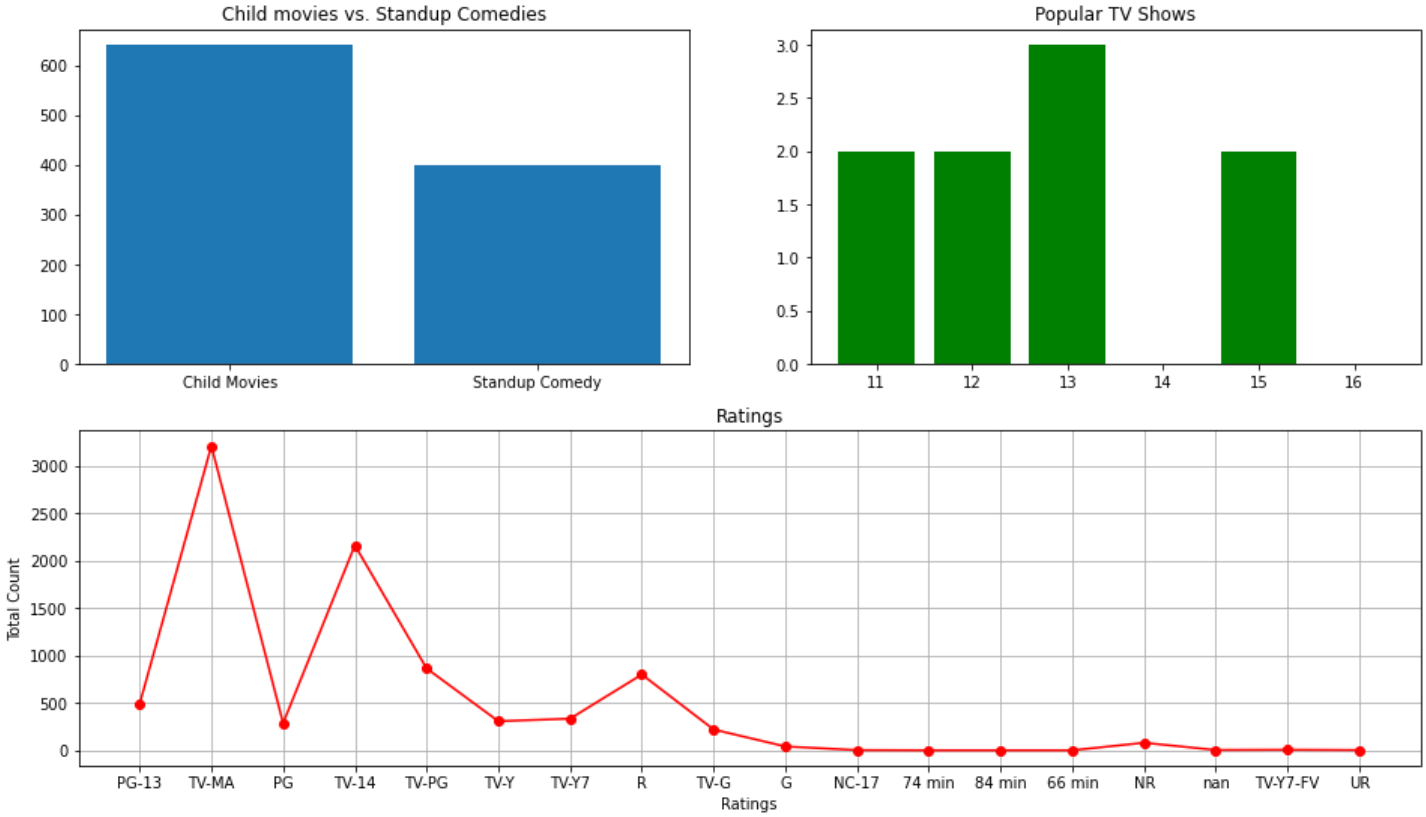
In [40]:

```
plt. figure (figsize=(16,9))
```

```
#plot1
plt.subplot (2,2,1)
plt.title ("Child movies vs. Standup Comedies")
plt.bar(['Child Movies', 'Standup Comedy'], [total_child, Standup_Comedies])

#plot2
plt. subplot (2,2,2)
plt.title('Popular TV Shows')
plt.bar([11, 12, 13, 15, 16],
[len (seasons11), len (seasons12), len(seasons13),
len (seasons15), len (seasons16)],
color='green')

#plot3
plt.subplot (2,1,2)
plt.title('Ratings')
plt.plot(ratings.keys (), ratings.values(), color='red', marker='o')
plt.xlabel('Ratings'); plt.ylabel('Total Count')
plt.grid()
```



In [ ]: