```python
import numpy as np
import pandas as pd
import matplotlib.pyplot as plt
import seaborn as sns
```

```python
df = pd.read_csv('Netflix_Dataset.csv')
df.head()
```

	Show_Id	Category	Title	Director	Cast	Country	Release_Date	Rating	Durati
0	s1	TV Show	3%	NaN	João Miguel, Bianca Comparato, Michel Gomes, R...	Brazil	August 14, 2020	TV-MA	Seaso
1	s2	Movie	07:19	Jorge Michel Grau	Demián Bichir, Héctor Bonilla, Oscar	Mexico	December 23, 2016	TV-MA	93

```python
df.shape
```

```
(7789, 11)
```

```python
df.columns
```

```
Index(['Show_Id', 'Category', 'Title', 'Director', 'Cast', 'Country',
       'Release_Date', 'Rating', 'Duration', 'Type', 'Description'],
      dtype='object')
```

```python
df.info()
```

```python
df[df.duplicated()]
```

	Show_Id	Category	Title	Director	Cast	Country	Release_Date	Rating	Dura
6300	s684	Movie	Backfire	Dave Patten	Black Deniro, Byron "Squally" Vinson	United States	April 5, 2019	TV-MA	9

```python
df.drop_duplicates(inplace = True)
```
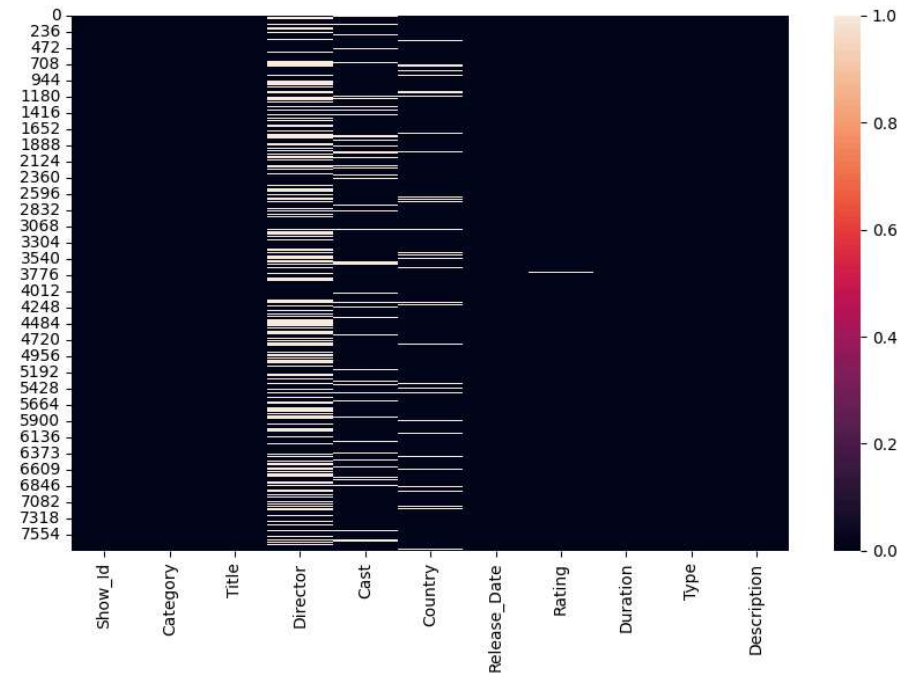
```python
df[df.duplicated()]
```

	Show_Id	Category	Title	Director	Cast	Country	Release_Date	Rating	Duration	Type

```python
df.isnull().sum()
```

```
Show_Id           0
Category          0
Title             0
Director       2388
Cast            718
Country         507
Release_Date     10
Rating            7
Duration          0
Type              0
Description       0
dtype: int64
```

```python
plt.figure(figsize =[10,6])
sns.heatmap(df.isnull())
```

```
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```



```python
df[df['Title'].isin(['Zindagi Na Milegi Dobara'])]
```

	Show_Id	Category	Title	Director	Cast	Country	Release_Date	Rating	Durat:
					Hrithik Roshan,				

```python
df['Date']=pd.to_datetime(df['Release_Date'])
df.head()
```

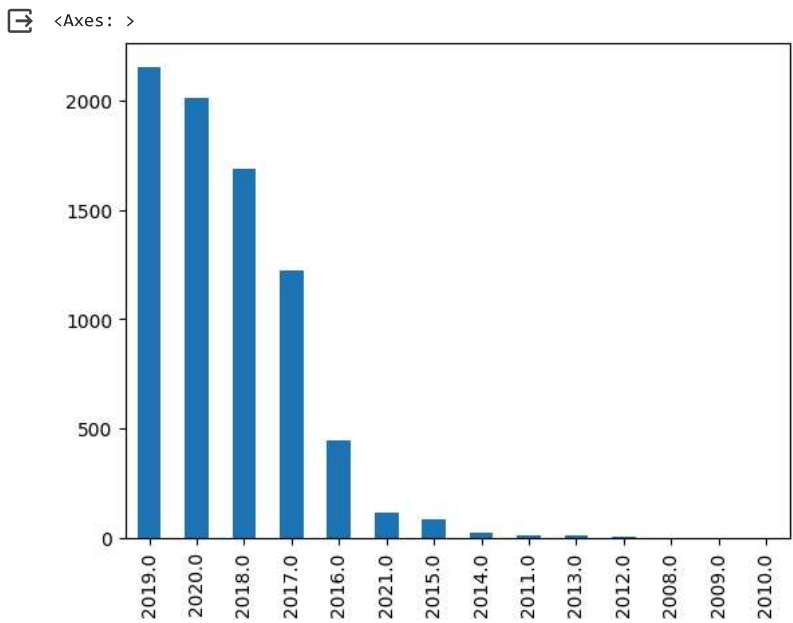|	Show_Id	Category	Title	Director	Cast	Country	Release_Date	Rating	Durat:
0	s1	TV Show	3%	NaN	João Miguel, Bianca Comparato, Michel Gomes, R...	Brazil	August 14, 2020	TV-MA	Seas(
1	s2	Movie	07:19	Jorge Michel Grau	Demián Bichir, Héctor Bonilla, Oscar	Mexico	December 23, 2016	TV-MA	93 i

```python
df['Date'].dt.year.value_counts()
```

```
2019.0    2153
2020.0    2009
2018.0    1685
2017.0    1225
2016.0     443
2021.0     117
2015.0      88
2014.0      25
2011.0      13
2013.0      11
2012.0       3
2008.0       2
2009.0       2
2010.0       1
Name: Date, dtype: int64
```

```
df['Date'].dt.year.value_counts().plot(kind='bar')
```

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```
df['Category'].value_counts()
```

```
Movie      5377
TV Show    2410
Name: Category, dtype: int64
```

```
df['Year']=df['Date'].dt.year
df.head()
```

	Show_Id	Category	Title	Director	Cast	Country	Release_Date	Rating	Durat:
0	s1	TV Show	3%	NaN	João Miguel, Bianca Comparato, Michel Gomes, R...	Brazil	August 14, 2020	TV-MA	Seas(
1	s2	Movie	07:19	Jorge Michel Grau	Demián Bichir, Héctor Bonilla, Oscar Serrano, ...	Mexico	December 23, 2016	TV-MA	93 (

```
df[(df['Category']=='Movie') & (df['Year']== 2016)].head()
```

	Show_Id	Category	Title	Director	Cast	Country	Release_Date	Rating	Du
1	s2	Movie	07:19	Jorge Michel Grau	Demián Bichir, Héctor Bonilla, Oscar Serrano, ...	Mexico	December 23, 2016	TV-MA	
25	s26	Movie	(T)ERROR	Lyric R. Cabral, David Felix Sutcliffe	NaN	United States	June 30, 2016	NR	
35	s36	Movie	#Rucker50	Robert McCullough Jr.	NaN	United States	December 1, 2016	TV-PG	

```
df[(df['Category']=='TV Show') & (df['Country']=='India')]['Title']
```

```
86                21 Sarfarosh: Saragarhi 1897
132                                  7 (Seven)
340                              Agent Raghav
364                              Akbar Birbal
533                        Anjaan: Rural Myths
                             ...
6249                       The Creative Indians
6400       The Golden Years with Javed Akhtar
6469               The House That Made Me
7294                                 Typewriter
7705                           Yeh Meri Family
Name: Title, Length: 71, dtype: object
```

```
df['Director'].value_counts().head()
```

```
Raúl Campos, Jan Suter      18
Marcus Raboy                16
Jay Karas                   14
Cathy Garcia-Molina         13
Jay Chapman                 12
Name: Director, dtype: int64
```

```
df[(df['Category']== 'Movie') & (df['Type'] == 'Comedies')| (df['Country']== 'India')].head()
```

	Show_Id	Category	Title	Director	Cast	Country	Release_Date	Rating
8	s9	Movie	706	Shravan Kumar	Divya Dutta, Atul Kulkarni, Mohan Agashe, Anup...	India	April 1, 2019	TV-14
9	s10	Movie	1920	Vikram Bhatt	Rajneesh Duggal, Adah Sharma, Indraneil Sengup...	India	December 15, 2017	TV-MA
18	s19	Movie	15-Aug	Swapnaneel Jayakar	Rahul Pethe, Mrunmayee Deshpande, Adinath Koth...	India	March 29, 2019	TV-14

```
new_df=df.dropna()
new_df.head()
```

	Show_Id	Category	Title	Director	Cast	Country	Release_Date	Rating	Durat:
1	s2	Movie	07:19	Jorge Michel Grau	Demián Bichir, Héctor Bonilla, Oscar Serrano, ...	Mexico	December 23, 2016	TV-MA	93
2	s3	Movie	23:59	Gilbert Chan	Tedd Chan, Stella Chung, Henley Hii, Lawrence ...	Singapore	December 20, 2018	R	78

```
new_df[new_df['Cast'].str.contains('Rajneesh Duggal')]
```

	Show_Id	Category	Title	Director	Cast	Country	Release_Date	Rating	Dui
9	s10	Movie	1920	Vikram Bhatt	Rajneesh Duggal, Adah Sharma, Indraneil Sengup...	India	December 15, 2017	TV-MA	1

```
new_df['Rating'].unique()
```

```
array(['TV-MA', 'R', 'PG-13', 'TV-14', 'TV-G', 'TV-PG', 'NR', 'PG', 'G',
       'TV-Y7', 'TV-Y', 'NC-17', 'TV-Y7-FV', 'UR'], dtype=object)
```

```
new_df[(new_df['Rating']== 'TV-14') & (new_df['Country']=='India')].head()
```

	Show_Id	Category	Title	Director	Cast	Country	Release_Date	Rating
8	s9	Movie	706	Shravan Kumar	Divya Dutta, Atul Kulkarni, Mohan Agashe, Anup...	India	April 1, 2019	TV-14
18	s19	Movie	15-Aug	Swapnaneel Jayakar	Rahul Pethe, Mrunmayee Deshpande, Adinath Koth...	India	March 29, 2019	TV-14
20	s21	Movie	Kuch Bheege Alfaaz	Onir	Geetanjali Thapa, Zain Khan Durrani, Shray Rai...	India	September 1, 2018	TV-14

```
country_with_highest_no_of_tvshows = new_df[new_df['Category']== 'TV Show']
country_with_highest_no_of_tvshows.head()
```
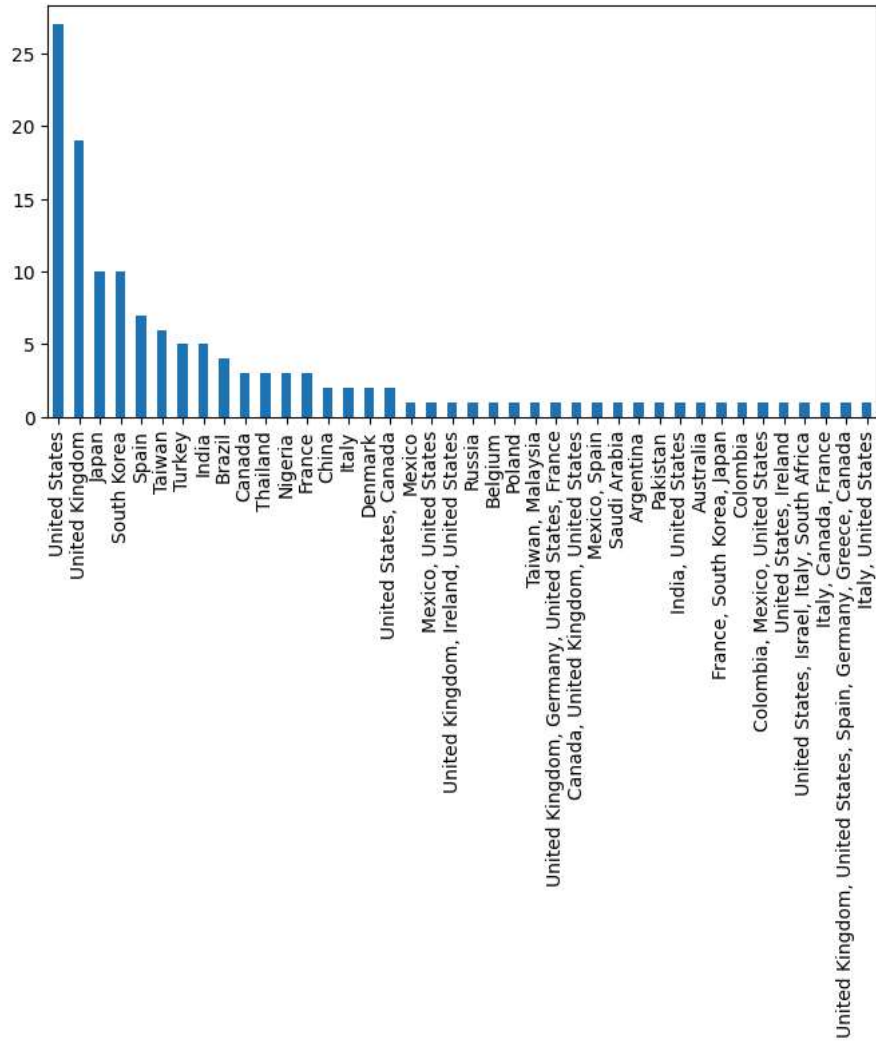
	Show_Id	Category	Title	Director	Cast	Country	Release_Date	Rating	Dur
5	s6	TV Show	46	Serdar Akar	Erdal Beşikçioğlu, Yasemin Allen, Melis Birkan...	Turkey	July 1, 2017	TV-MA	1 S
132	s133	TV Show	7 (Seven)	Nizar Shafi	Rahman, Havish, Regina Cassandra, Nandita Swet...	India	July 30, 2019	TV-14	1 S

```
country_with_highest_no_of_tvshows.Country.value_counts().head()
```

```
United States     27
United Kingdom    19
Japan             10
South Korea       10
Spain              7
Name: Country, dtype: int64
```

```
plt.figure(figsize = [8,4])
country_with_highest_no_of_tvshows.Country.value_counts().plot(kind= 'bar')
```

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```python
data = {
    'Genre': ['Action', 'Comedy', 'Drama', 'Action', 'Comedy', 'Drama'],
    'Rating': [4.2, 3.9, 4.1, 4.3, 3.8, 4.0]
}
Netflix_Dataset = pd.DataFrame(data)


genre_ratings = Netflix_Dataset.groupby('Genre')['Rating'].mean().sort_values(ascending=False).reset_index()


plt.figure(figsize=(10, 6))
sns.barplot(x='Genre', y='Rating', data=genre_ratings)
plt.title('Average Rating by Genre')
plt.xlabel('Genre')
plt.ylabel('Average Rating')
plt.xticks(rotation=45, ha='right')
plt.tight_layout()
plt.show()
```

Average Rating by Genre