

```
In [1]: # import libraries
import pandas as pd
import numpy as np
```

```
In [2]: df_netflix=pd.read_csv("8. Netflix Dataset.csv")
```

```
In [3]: df_netflix.head()
```

Out[3]:	Show_Id	Category	Title	Director	Cast	Country	Release_Date	Rating	Duration	Type	D
0	s1	TV Show	3%	NaN	João Miguel, Bianca Comparato, Michel Gomes, R...	Brazil	August 14, 2020	TV-MA	4 Seasons	International TV Shows, TV Dramas, TV Sci-Fi &...	whe
1	s2	Movie	07:19	Jorge Michel Grau	Demián Bichir, Héctor Bonilla, Oscar Serrano, ...	Mexico	December 23, 2016	TV-MA	93 min	Dramas, International Movies	c earth N
2	s3	Movie	23:59	Gilbert Chan	Tedd Chan, Stella Chung, Henley Hii, Lawrence ...	Singapore	December 20, 2018	R	78 min	Horror Movies, International Movies	Whe recr
3	s4	Movie	9	Shane Acker	Elijah Wood, John C. Reilly, Jennifer Connelly...	United States	November 16, 2017	PG-13	80 min	Action & Adventure, Independent Movies, Sci-Fi...	post wor
4	s5	Movie	21	Robert Luketic	Jim Sturgess, Kevin Spacey, Kate Bosworth, Aar...	United States	January 1, 2020	PG-13	123 min	Dramas	bec

```
In [4]: df_netflix.columns
```

```
Out[4]: Index(['Show_Id', 'Category', 'Title', 'Director', 'Cast', 'Country', 'Release_Date', 'Rating', 'Duration', 'Type', 'Description'], dtype='object')
```

```
In [5]: df_netflix.shape
```

```
Out[5]: (7789, 11)
```

```
In [6]: df_netflix.size
```

```
Out[6]: 85679
```

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

Out[7]:	Show_Id	Category	Title	Director	Cast	Country	Release_Date	Rating	Duration	Typ
---------	---------	----------	-------	----------	------	---------	--------------	--------	----------	-----

7784	s7783	Movie	Zozo	Josef Fares	Imad Creidi, Antoinette Turk, Elias Gergi, Car...	Sweden, Czech Republic, United Kingdom, Denmar...	October 19, 2020	TV-MA	99 min	Drama: International Movie
7785	s7784	Movie	Zubaan	Mozez Singh	Vicky Kaushal, Sarah-Jane Dias, Raaghav Chanan...	India	March 2, 2019	TV-14	111 min	Drama: International Movies, Music & Musical
7786	s7785	Movie	Zulu Man in Japan	NaN	Nasty C	NaN	September 25, 2020	TV-MA	44 min	Documentaries: International Movies, Music & M.
7787	s7786	TV Show	Zumbo's Just Desserts	NaN	Adriano Zumbo, Rachel Khoo	Australia	October 31, 2020	TV-PG	1 Season	International TV Shows: Reality T
7788	s7787	Movie	ZZ TOP: THAT LITTLE OL' BAND FROM TEXAS	Sam Dunn	NaN	United Kingdom, Canada, United States	March 1, 2020	TV-MA	90 min	Documentaries: Music & Musical

```
In [8]: # dtypes
df_netflix.dtypes
```

```
Out[8]: Show_Id      object
Category    object
Title       object
Director    object
Cast        object
Country     object
Release_Date object
Rating      object
Duration    object
Type        object
Description object
dtype: object
```

```
In [9]: df_netflix.info()

<class 'pandas.core.frame.DataFrame'>
RangeIndex: 7789 entries, 0 to 7788
Data columns (total 11 columns):
#   Column          Non-Null Count  Dtype
---  -
0   Show_Id         7789 non-null   object
1   Category        7789 non-null   object
2   Title           7789 non-null   object
3   Director        5401 non-null   object
4   Cast            7071 non-null   object
5   Country         7282 non-null   object
6   Release_Date    7779 non-null   object
7   Rating          7782 non-null   object
8   Duration        7789 non-null   object
```

```
9      Type      7789 non-null    object
10  Description  7789 non-null    object
dtypes: object(11)
memory usage: 669.5+ KB
```

In [10]: `df_netflix.describe()`

	Show_Id	Category	Title	Director	Cast	Country	Release_Date	Rating	Duration	
count	7789	7789	7789	5401	7071	7282	7779	7782	7789	
unique	7787	2	7787	4050	6831	681	1565	14	216	
top	s6621	Movie	The Lost Okoroshi	Raúl Campos, Jan Suter	David Attenborough	United States	January 1, 2020	TV-MA	1 Season	Documer
freq	2	5379	2	18	18	2556	118	2865	1608	

# TASK 1 - If there is any duplicate record in dataset? If yes ,then remove the duplicate records

## Duplicates()

In [11]: `df_netflix.head()`

	Show_Id	Category	Title	Director	Cast	Country	Release_Date	Rating	Duration	Type	D
0	s1	TV Show	3%	NaN	João Miguel, Bianca Comparato, Michel Gomes, R...	Brazil	August 14, 2020	TV-MA	4 Seasons	International TV Shows, TV Dramas, TV Sci-Fi &...	whe
1	s2	Movie	07:19	Jorge Michel Grau	Demián Bichir, Héctor Bonilla, Oscar Serrano, ...	Mexico	December 23, 2016	TV-MA	93 min	Dramas, International Movies	c earth N
2	s3	Movie	23:59	Gilbert Chan	Tedd Chan, Stella Chung, Henley Hii, Lawrence ...	Singapore	December 20, 2018	R	78 min	Horror Movies, International Movies	Whe recr
3	s4	Movie	9	Shane Acker	Elijah Wood, John C. Reilly, Jennifer Connelly...	United States	November 16, 2017	PG-13	80 min	Action & Adventure, Independent Movies, Sci-Fi...	postea wor
4	s5	Movie	21	Robert Luketic	Jim Sturgess, Kevin Spacey, Kate	United States	January 1, 2020	PG-13	123 min	Dramas	bec

In [12]: df\_netflix.shape

Out[12]: (7789, 11)

In [13]: df\_netflix.duplicated()

Out[13]:

```
0      False
1      False
2      False
3      False
4      False
...
7784   False
7785   False
7786   False
7787   False
7788   False
Length: 7789, dtype: bool
```

In [14]: df\_netflix[df\_netflix.duplicated()]

	Show_Id	Category	Title	Director	Cast	Country	Release_Date	Rating	Duration	Type	D
6300	s684	Movie	Backfire	Dave Patten	Black Deniro, Byron "Squally" Vinson, Dominic ...	United States	April 5, 2019	TV-MA	97 min	Dramas, Independent Movies, Thrillers	ε
6622	s6621	Movie	The Lost Okoroshi	Abba T. Makama	Seun Ajayi, Judith Audu, Tope Tedela, Ifu Enna...	Nigeria	September 4, 2020	TV-MA	94 min	Comedies, Dramas, Independent Movies	d

In [15]: *# To remove this duplicated value from dataframe*  
df\_netflix.drop\_duplicates()

	Show_Id	Category	Title	Director	Cast	Country	Release_Date	Rating	Duration	Ty
0	s1	TV Show	3%	NaN	João Miguel, Bianca Comparato, Michel Gomes, R...	Brazil	August 14, 2020	TV-MA	4 Seasons	Internation TV Shows, Dramas, TV S Fi ε
1	s2	Movie	07:19	Jorge Michel Grau	Demián Bichir, Héctor Bonilla, Oscar Serrano, ...	Mexico	December 23, 2016	TV-MA	93 min	Dram Internation Mov
2	s3	Movie	23:59	Gilbert Chan	Tedd Chan, Stella	Singapore	December 20, 2018	R	78 min	Horror Movi Internation

					Chung, Henley Hii, Lawrence ...						Mov
3	s4	Movie	9	Shane Acker	Elijah Wood, John C. Reilly, Jennifer Connelly...	United States	November 16, 2017	PG-13	80 min	Action Adventure Independent Movies, Sci-F	
4	s5	Movie	21	Robert Luketic	Jim Sturgess, Kevin Spacey, Kate Bosworth, Aar...	United States	January 1, 2020	PG-13	123 min	Dram	
...	...	...	...	...	...	...	...	...	...		
7784	s7783	Movie	Zozo	Josef Fares	Imad Creidi, Antoinette Turk, Elias Gergi, Car...	Sweden, Czech Republic, United Kingdom, Denmar...	October 19, 2020	TV-MA	99 min	Dram International Mov	
7785	s7784	Movie	Zubaan	Mozez Singh	Vicky Kaushal, Sarah-Jane Dias, Raaghav Chanan...	India	March 2, 2019	TV-14	111 min	Dram International Movies, Mu & Music	
7786	s7785	Movie	Zulu Man in Japan	NaN	Nasty C	NaN	September 25, 2020	TV-MA	44 min	Documentari International Movies, Mu & M	
7787	s7786	TV Show	Zumbo's Just Desserts	NaN	Adriano Zumbo, Rachel Khoo	Australia	October 31, 2020	TV-PG	1 Season	Internation TV Sho Reality	
7788	s7787	Movie	ZZ TOP: THAT LITTLE OL' BAND FROM TEXAS	Sam Dunn	NaN	United Kingdom, Canada, United States	March 1, 2020	TV-MA	90 min	Documentari Music Music	

7787 rows × 11 columns

```
In [16]: df_netflix.drop_duplicates(inplace=True) # for making permanent
```

```
In [17]: df_netflix
```

Out[17]:	Show_Id	Category	Title	Director	Cast	Country	Release_Date	Rating	Duration	Type	
	0	s1	TV Show	3%	NaN	João Miguel, Bianca Comparato,	Brazil	August 14, 2020	TV-MA	4 Seasons	International TV Shows, Dramas, TV Series, Documentaries, Animation, Comedy, Action, Sci-Fi & Fantasy

1	s2	Movie	07:19	Jorge Michel Grau	Michel Gomes, R...						
					Demián Bichir, Héctor Bonilla, Oscar Serrano, ...	Mexico	December 23, 2016	TV-MA	93 min	Dram Internation Mov	
2	s3	Movie	23:59	Gilbert Chan	Tedd Chan, Stella Chung, Henley Hii, Lawrence ...						
					Singapore	December 20, 2018	R	78 min	Horror Movi Internation Mov		
3	s4	Movie	9	Shane Acker	Elijah Wood, John C. Reilly, Jennifer Connelly...						
					United States	November 16, 2017	PG-13	80 min	Action Adventu Independe Movies, Sci-f		
4	s5	Movie	21	Robert Luketic	Jim Sturgess, Kevin Spacey, Kate Bosworth, Aar...						
					United States	January 1, 2020	PG-13	123 min	Dram		
...	...	...	...	...	...	...	...	...	...	...	
7784	s7783	Movie	Zozo	Josef Fares	Imad Creidi, Antoinette Turk, Elias Gergi, Car...						
					Sweden, Czech Republic, United Kingdom, Denmar...	October 19, 2020	TV-MA	99 min	Dram Internation Mov		
7785	s7784	Movie	Zubaan	Mozes Singh	Vicky Kaushal, Sarah-Jane Dias, Raaghav Chanan...						
					India	March 2, 2019	TV-14	111 min	Dram Internation Movies, Mu & Music		
7786	s7785	Movie	Zulu Man in Japan	NaN	Nasty C	NaN	September 25, 2020	TV-MA	44 min	Documentari Internation Movies, Mu & M	
7787	s7786	TV Show	Zumbo's Just Desserts	NaN	Adriano Zumbo, Rachel Khoo	Australia	October 31, 2020	TV-PG	1 Season	Internation TV Show Reality	
7788	s7787	Movie	ZZ TOP: THAT LITTLE OL' BAND FROM TEXAS	Sam Dunn	NaN	United Kingdom, Canada, United States	March 1, 2020	TV-MA	90 min	Documentari Music Music	

```
In [18]: df_netflix[df_netflix.duplicated()]
```

```
Out[18]:
```

Show_Id	Category	Title	Director	Cast	Country	Release_Date	Rating	Duration	Type	Description
---------	----------	-------	----------	------	---------	--------------	--------	----------	------	-------------

```
In [19]: df_netflix.shape # remove permentaly
```

```
Out[19]: (7787, 11)
```

## TASK 2- Is any there is any value present in any column? Show them with heatmap

### ISNULL()

```
In [20]: # To show the null value  
df_netflix.isnull()
```

```
Out[20]:
```

	Show_Id	Category	Title	Director	Cast	Country	Release_Date	Rating	Duration	Type	Description
0	False	False	False	True	False	False	False	False	False	False	False
1	False	False	False	False	False	False	False	False	False	False	False
2	False	False	False	False	False	False	False	False	False	False	False
3	False	False	False	False	False	False	False	False	False	False	False
4	False	False	False	False	False	False	False	False	False	False	False
...	...	...	...	...	...	...	...	...	...	...	...
7784	False	False	False	False	False	False	False	False	False	False	False
7785	False	False	False	False	False	False	False	False	False	False	False
7786	False	False	False	True	False	True	False	False	False	False	False
7787	False	False	False	True	False	False	False	False	False	False	False
7788	False	False	False	False	True	False	False	False	False	False	False

7787 rows × 11 columns

```
In [21]: df_netflix.isnull().sum() # to get sum of null values in each columns
```

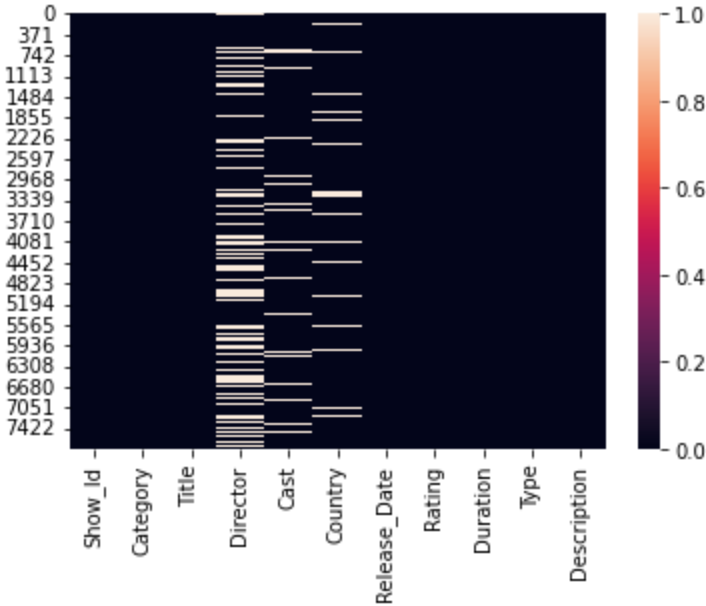
```
Out[21]: Show_Id          0  
Category          0  
Title             0  
Director        2388  
Cast             718  
Country          507  
Release_Date      10  
Rating            7  
Duration          0  
Type              0  
Description       0  
dtype: int64
```

### HEAT MAP

```
In [22]: import seaborn as sns
```

```
In [23]: sns.heatmap(df_netflix.isnull()) # white lines indcate the null value
```

Out[23]: <AxesSubplot:>



Q1- For House of cards show -what is showid and who is director of show?

```
In [24]: df_netflix
```

	Show_Id	Category	Title	Director	Cast	Country	Release_Date	Rating	Duration	Ty
0	s1	TV Show	3%	NaN	João Miguel, Bianca Comparato, Michel Gomes, R...	Brazil	August 14, 2020	TV-MA	4 Seasons	International TV Shows, Dramas, TV Series
1	s2	Movie	07:19	Jorge Michel Grau	Demían Bichir, Héctor Bonilla, Oscar Serrano, ...	Mexico	December 23, 2016	TV-MA	93 min	Drama, International Movie
2	s3	Movie	23:59	Gilbert Chan	Tedd Chan, Stella Chung, Henley Hii, Lawrence ...	Singapore	December 20, 2018	R	78 min	Horror Movie, International Movie
3	s4	Movie	9	Shane Acker	Elijah Wood, John C. Reilly, Jennifer Connelly...	United States	November 16, 2017	PG-13	80 min	Action Adventure, Independent Movies, Sci-Fi
4	s5	Movie	21	Robert Luketic	Jim Sturgess, Kevin Spacey, Kate	United States	January 1, 2020	PG-13	123 min	Drama



Bosworth, Aar...										
...	...	...	...	...	...	...	...	...	...	...
7784	s7783	Movie	Zozo	Josef Fares	Imad Creidi, Antoinette Turk, Elias Gergi, Car...	Sweden, Czech Republic, United Kingdom, Denmar...	October 19, 2020	TV-MA	99 min	Dram Internatio Mov
7785	s7784	Movie	Zubaan	Mozez Singh	Vicky Kaushal, Sarah-Jane Dias, Raaghav Chanan...	India	March 2, 2019	TV-14	111 min	Dram Internatio Movies, Mu & Music
7786	s7785	Movie	Zulu Man in Japan	NaN	Nasty C	NaN	September 25, 2020	TV-MA	44 min	Documentari Internatio Movies, Mu & M
7787	s7786	TV Show	Zumbo's Just Desserts	NaN	Adriano Zumbo, Rachel Khoo	Australia	October 31, 2020	TV-PG	1 Season	Internation TV Sho Reality
7788	s7787	Movie	ZZ TOP: THAT LITTLE OL' BAND FROM TEXAS	Sam Dunn	NaN	United Kingdom, Canada, United States	March 1, 2020	TV-MA	90 min	Documentari Music Music

7787 rows × 11 columns

```
In [25]: # ISIN()
df_netflix["Title"]
```

```
Out[25]: 0          3%
1          07:19
2          23:59
3           9
4          21
...
7784          Zozo
7785          Zubaan
7786      Zulu Man in Japan
7787      Zumbo's Just Desserts
7788  ZZ TOP: THAT LITTLE OL' BAND FROM TEXAS
Name: Title, Length: 7787, dtype: object
```

```
In [26]: df_netflix["Title"].isin(["House of Cards"])
```

```
Out[26]: 0      False
1      False
2      False
3      False
4      False
...
7784   False
7785   False
7786   False
```

```
7787      False
7788      False
Name: Title, Length: 7787, dtype: bool
```

```
In [27]: df_netflix[df_netflix["Title"].isin(["House of Cards"])]
```

```
Out[27]:
```

	Show_Id	Category	Title	Director	Cast	Country	Release_Date	Rating	Duration	Type	Descripti
2832	s2833	TV Show	House of Cards	Robin Wright, David Fincher, Gerald McRaney, J...	Kevin Spacey, Robin Wright, Kate Mara, Corey S...	United States	November 2, 2018	TV-MA	6 Seasons	TV Dramas, TV Thrillers	A ruthless politician will stop at nothing

```
In [28]: # str.contains()
df_netflix["Title"].str.contains("House of Cards")
```

```
Out[28]:
```

0	False
1	False
2	False
3	False
4	False
...	
7784	False
7785	False
7786	False
7787	False
7788	False

Name: Title, Length: 7787, dtype: bool

```
In [29]: # str.contains()
df_netflix[df_netflix["Title"].str.contains("House of Cards")]
```

```
Out[29]:
```

	Show_Id	Category	Title	Director	Cast	Country	Release_Date	Rating	Duration	Type	Descripti
2832	s2833	TV Show	House of Cards	Robin Wright, David Fincher, Gerald McRaney, J...	Kevin Spacey, Robin Wright, Kate Mara, Corey S...	United States	November 2, 2018	TV-MA	6 Seasons	TV Dramas, TV Thrillers	A ruthless politician will stop at nothing

## Q2 -Inwhich Year highest number of TV shows & Movies were released? Show them with bar graph ?

### Dtypes

```
In [30]: df_netflix.dtypes
```

```
Out[30]:
```

Show_Id	object
Category	object
Title	object
Director	object
Cast	object
Country	object
Release_Date	object

Rating object  
Duration object  
Type object  
Description object  
dtype: object

To\_datetime

```
In [31]: df_netflix["DateTime"] = pd.to_datetime(df_netflix["Release_Date"])
```

```
In [32]: df_netflix
```

Out[32]:

	Show_Id	Category	Title	Director	Cast	Country	Release_Date	Rating	Duration	Ty
--	---------	----------	-------	----------	------	---------	--------------	--------	----------	----

0	s1	TV Show	3%	NaN	João Miguel, Bianca Comparato, Michel Gomes, R...	Brazil	August 14, 2020	TV-MA	4 Seasons	International TV Shows, Dramas, TV Series
1	s2	Movie	07:19	Jorge Michel Grau	Demian Bichir, Héctor Bonilla, Oscar Serrano, ...	Mexico	December 23, 2016	TV-MA	93 min	Drama International Movie
2	s3	Movie	23:59	Gilbert Chan	Tedd Chan, Stella Chung, Henley Hii, Lawrence ...	Singapore	December 20, 2018	R	78 min	Horror Movie International Movie
3	s4	Movie	9	Shane Acker	Elijah Wood, John C. Reilly, Jennifer Connelly...	United States	November 16, 2017	PG-13	80 min	Action Adventure Independent Movies, Sci-Fi
4	s5	Movie	21	Robert Luketic	Jim Sturgess, Kevin Spacey, Kate Bosworth, Aar...	United States	January 1, 2020	PG-13	123 min	Drama
...	...	...	...	...	...	...	...	...	...	...
7784	s7783	Movie	Zozo	Josef Fares	Imad Creidi, Antoinette Turk, Elias Gergi, Car...	Sweden, Czech Republic, United Kingdom, Denmar...	October 19, 2020	TV-MA	99 min	Drama International Movie
7785	s7784	Movie	Zubaan	Moze Singh	Vicky Kaushal, Sarah-Jane Dias, Raaghav Chanan...	India	March 2, 2019	TV-14	111 min	Drama International Movies, Music & Music
7786	s7785	Movie	Zulu	NaN	Nasty C	NaN	September	TV-MA	44 min	Documentary

			Man in Japan				25, 2020			International Movies, Music & TV Shows
7787	s7786	TV Show	Zumbo's Just Desserts	NaN	Adriano Zumbo, Rachel Khoo	Australia	October 31, 2020	TV-PG	1 Season	International TV Shows Reality
7788	s7787	Movie	ZZ TOP: THAT LITTLE OL' BAND FROM TEXAS	Sam Dunn	NaN	United Kingdom, Canada, United States	March 1, 2020	TV-MA	90 min	Documentary Music Music

7787 rows × 12 columns

```
In [33]: df_netflix.dtypes
```

```
Out[33]: Show_Id      object
Category    object
Title       object
Director    object
Cast        object
Country     object
Release_Date object
Rating      object
Duration    object
Type        object
Description  object
DateTime    datetime64[ns]
dtype: object
```

dt.year.values\_counts()

```
In [34]: df_netflix["DateTime"].dt.year.value_counts()
```

```
Out[34]: 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: DateTime, dtype: int64
```

```
In [35]: df_netflix["DateTime"].dt.month.value_counts()
```

```
Out[35]: 12.0    833
10.0    785
1.0     757
11.0    738
3.0     669
9.0     619
8.0     618
```

```

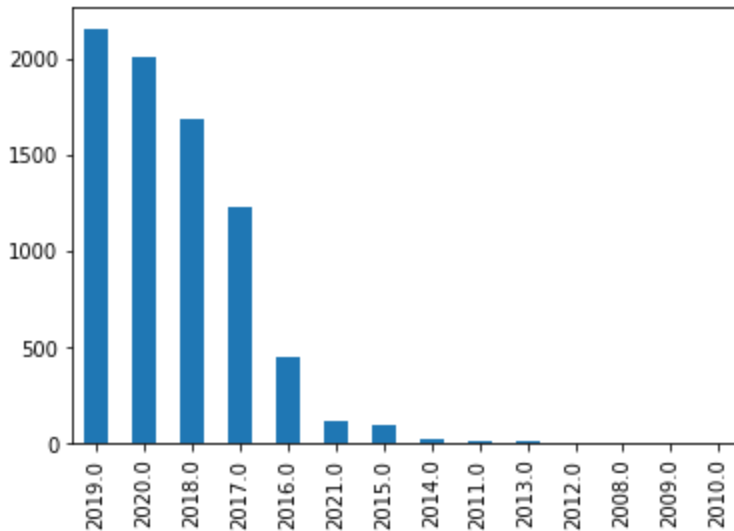
4.0      601
7.0      600
5.0      543
6.0      542
2.0      472
Name: DateTime, dtype: int64

```

## BAR GRAPH

```
In [36]: df_netflix["DateTime"].dt.year.value_counts().plot(kind="bar")
```

```
Out[36]: <AxesSubplot:>
```



## Q3 How many Movies and TV Shows are in dataset? Show them with graph

```
In [37]: #groupby()
df_netflix.groupby("Category")
```

```
Out[37]: <pandas.core.groupby.generic.DataFrameGroupBy object at 0x0000017FBFA61D60>
```

```
In [38]: df_netflix.groupby("Category").Category.count()
```

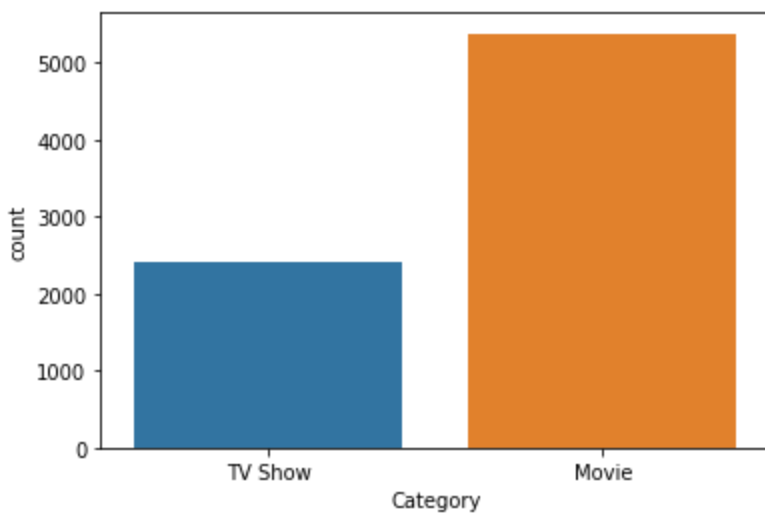
```
Out[38]: Category
Movie      5377
TV Show    2410
Name: Category, dtype: int64
```

```
In [39]: #countplot()
sns.countplot(df_netflix['Category'])
```

C:\Users\kashi\anaconda3\lib\site-packages\seaborn\\_decorators.py:36: FutureWarning: Pass the following variable as a keyword arg: x. From version 0.12, the only valid positional argument will be `data`, and passing other arguments without an explicit keyword will result in an error or misinterpretation.

```
warnings.warn(
```

```
Out[39]: <AxesSubplot:xlabel='Category', ylabel='count'>
```



## Q4 Show all the movies release in 2000?

In [40]: df\_netflix

Out[40]:

	Show_Id	Category	Title	Director	Cast	Country	Release_Date	Rating	Duration	Type
0	s1	TV Show	3%	NaN	João Miguel, Bianca Comparato, Michel Gomes, R...	Brazil	August 14, 2020	TV-MA	4 Seasons	International TV Shows, Dramas, TV Series
1	s2	Movie	07:19	Jorge Michel Grau	Demián Bichir, Héctor Bonilla, Oscar Serrano, ...	Mexico	December 23, 2016	TV-MA	93 min	Drama, International Movie
2	s3	Movie	23:59	Gilbert Chan	Tedd Chan, Stella Chung, Henley Hii, Lawrence ...	Singapore	December 20, 2018	R	78 min	Horror Movie, International Movie
3	s4	Movie	9	Shane Acker	Elijah Wood, John C. Reilly, Jennifer Connelly...	United States	November 16, 2017	PG-13	80 min	Action Adventure, Independent Movies, Sci-Fi
4	s5	Movie	21	Robert Luketic	Jim Sturgess, Kevin Spacey, Kate Bosworth, Aar...	United States	January 1, 2020	PG-13	123 min	Drama
...	...	...	...	...	...	...	...	...	...	...
7784	s7783	Movie	Zozo	Josef Fares	Imad Creidi, Antoinette Turk, Elias Gergji, Car...	Sweden, Czech Republic, United	October 19, 2020	TV-MA	99 min	Drama, International Movie

						Kingdom, Denmar...				
7785	s7784	Movie	Zubaan	Mozez Singh	Vicky Kaushal, Sarah-Jane Dias, Raaghav Chanan...	India	March 2, 2019	TV-14	111 min	Dram Internation Movies, Mu & Music
7786	s7785	Movie	Zulu Man in Japan	NaN	Nasty C	NaN	September 25, 2020	TV-MA	44 min	Documentari Internation Movies, Mu & M
7787	s7786	TV Show	Zumbo's Just Desserts	NaN	Adriano Zumbo, Rachel Khoo	Australia	October 31, 2020	TV-PG	1 Season	Internation TV Sho Reality
7788	s7787	Movie	ZZ TOP: THAT LITTLE OL' BAND FROM TEXAS	Sam Dunn	NaN	United Kingdom, Canada, United States	March 1, 2020	TV-MA	90 min	Documentari Music Music

7787 rows × 12 columns

```
In [41]: df_netflix["Year"]=df_netflix["DateTime"].dt.year # new column as year
```

```
In [42]: df_netflix
```

Out[42]:	Show_Id	Category	Title	Director	Cast	Country	Release_Date	Rating	Duration	Ty
0	s1	TV Show	3%	NaN	João Miguel, Bianca Comparato, Michel Gomes, R...	Brazil	August 14, 2020	TV-MA	4 Seasons	Internatio TV Shows, Dramas, TV S Fi &
1	s2	Movie	07:19	Jorge Michel Grau	Demián Bichir, Héctor Bonilla, Oscar Serrano, ...	Mexico	December 23, 2016	TV-MA	93 min	Dram Internatio Mov
2	s3	Movie	23:59	Gilbert Chan	Tedd Chan, Stella Chung, Henley Hii, Lawrence ...	Singapore	December 20, 2018	R	78 min	Horror Movi Internatio Mov
3	s4	Movie	9	Shane Acker	Elijah Wood, John C. Reilly, Jennifer Connelly...	United States	November 16, 2017	PG-13	80 min	Action Adventu Independ Movies, Sci-F
4	s5	Movie	21	Robert Luketic	Jim Sturgess, Kevin	United States	January 1, 2020	PG-13	123 min	Dram

					Spacey, Kate Bosworth, Aar...						
...	...	...	...	...	...	...	...	...	...	...	
7784	s7783	Movie	Zozo	Josef Fares	Imad Creidi, Antoinette Turk, Elias Gergi, Car...	Sweden, Czech Republic, United Kingdom, Denmar...	October 19, 2020	TV-MA	99 min	Dram	Internation Mov
7785	s7784	Movie	Zubaan	Mozez Singh	Vicky Kaushal, Sarah-Jane Dias, Raaghav Chanan...	India	March 2, 2019	TV-14	111 min	Dram	Internation Movies, Mu & Music
7786	s7785	Movie	Zulu Man in Japan	NaN	Nasty C	NaN	September 25, 2020	TV-MA	44 min	Documentari	Internation Movies, Mu & M
7787	s7786	TV Show	Zumbo's Just Desserts	NaN	Adriano Zumbo, Rachel Khoo	Australia	October 31, 2020	TV-PG	1 Season	Internation	TV Show Reality
7788	s7787	Movie	ZZ TOP: THAT LITTLE OL' BAND FROM TEXAS	Sam Dunn	NaN	United Kingdom, Canada, United States	March 1, 2020	TV-MA	90 min	Documentari	Musica Musica

7787 rows × 13 columns

```
In [43]: # filtering
df_netflix[(df_netflix["Category"]=="Movie") & (df_netflix["Year"]==2000)]
```

	Show_Id	Category	Title	Director	Cast	Country	Release_Date	Rating	Duration	Type	Description	DateTim
--	---------	----------	-------	----------	------	---------	--------------	--------	----------	------	-------------	---------

```
In [44]: # filtering
df_netflix[(df_netflix["Category"]=="TV Show") & (df_netflix["Year"]==2020)]
```

	Show_Id	Category	Title	Director	Cast	Country	Release_Date	Rating	Duration	Type	Description	DateTim
0	s1	TV Show	3%	NaN	João Miguel, Bianca Comparato, Michel Gomes, R...	Brazil	August 14, 2020	TV-MA	4 Seasons	Internationa TV Shows, TV Dramas, TV Sci-Fi &..		
24	s25	TV Show	SAINT SEIYA: Knights of the Zodiac	NaN	Bryson Baugus, Emily Neves, Blake Shepard, Pat...	Japan	January 23, 2020	TV-14	2 Seasons	Anime Series, Internationa TV Shows		



26	s27	TV Show	(Un)Well	NaN	NaN	United States	August 12, 2020	TV-MA	1 Season	Reality TV
29	s30	TV Show	#blackAF	NaN	Kenya Barris, Rashida Jones, Iman Benson, Genn...	United States	April 17, 2020	TV-MA	1 Season	TV Comedies
51	s52	TV Show	100 Days My Prince	NaN	Doh Kyung-soo, Nam Ji-hyun, Cho Seong-ha, Cho ...	South Korea	December 7, 2020	TV-14	1 Season	International TV Shows, Romantic TV Shows, TV ..
...	...	...	...	...	...	...	...	...	...	..
7740	s7739	TV Show	Young Wallander	NaN	Adam Pålsson, Richard Dillane, Leanne Best, El...	United Kingdom	September 3, 2020	TV-MA	1 Season	Crime TV Shows, International TV Shows, TV Dramas
7748	s7747	TV Show	دفعة القاهرة	NaN	Bashar al-Shatti, Fatima Al Safi, Maram Baloch...	NaN	April 25, 2020	TV-14	1 Season	International TV Shows, TV Dramas
7751	s7750	TV Show	Yu-Gi-Oh!	NaN	Dan Green, Eric Stuart, Amy Birnbaum, Darren D...	Japan	July 8, 2020	TV-Y7	2 Seasons	Anime Series, Kids TV
7777	s7776	TV Show	Zoids Wild	NaN	Kensho Ono, Takahiro Sakurai, Mikako Komatsu, ...	Japan	August 14, 2020	TV-Y7	1 Season	Anime Series, Kids TV
7787	s7786	TV Show	Zumbo's Just Desserts	NaN	Adriano Zumbo, Rachel Khoo	Australia	October 31, 2020	TV-PG	1 Season	International TV Shows, Reality TV

697 rows × 13 columns

## Q5 - Show all the Titles of TV Shows that were released in India Only

In [45]: `# filtering`

```
df_netflix[(df_netflix["Category"]=="TV Show") & (df_netflix["Country"]=="India")][["Tit
```

Out[45]:

		Title	Year
86	21 Sarfarosh: Saragarhi	1897	2018.0
132		7 (Seven)	2019.0
340		Agent Raghav	2017.0
364		Akbar Birbal	2020.0
533		Anjaan: Rural Myths	2018.0
...		...	...
6249		The Creative Indians	2020.0
6400	The Golden Years with Javed Akhtar		2017.0
6469		The House That Made Me	2017.0
7294		Typewriter	2019.0
7705		Yeh Meri Family	2018.0

71 rows × 2 columns

## Q6.Show the top 10 Directors who gave the highest number of Tv Show and Movies to netflix

In [46]: `df_netflix["Director"].value_counts().head(10)`

Out[46]:

```
Raúl Campos, Jan Suter      18
Marcus Raboy                 16
Jay Karas                    14
Cathy Garcia-Molina         13
Jay Chapman                  12
Youssef Chahine              12
Martin Scorsese              12
Steven Spielberg            10
David Dhawan                  9
Hakan Algül                  8
Name: Director, dtype: int64
```

## Q7 -Show all the movies where category is Movie and Type is Comedy Or Country is UnitedKingdom

In [47]: `df_netflix[(df_netflix["Category"]=="Movie") & (df_netflix["Type"]=="Comedies")]`

Out[47]:

	Show_Id	Category	Title	Director	Cast	Country	Release_Date	Rating	Duration	Type
33	s34	Movie	#realityhigh	Fernando Lebrija	Nesta Cooper, Kate Walsh, John Michael Higgins...	United States	September 8, 2017	TV-14	99 min	Comedies
72	s73	Movie	17 Again	Burr Steers	Zac Efron, Leslie Mann,	United States	January 1, 2021	PG-13	102 min	Comedies

					Matthew Perry, Thomas ...					
84	s85	Movie	21 & Over	Jon Lucas, Scott Moore	Miles Teller, Skylar Astin, Justin Chon, Sarah...	United States	April 16, 2019	R	93 min	Comedies
148	s149	Movie	A Bad Moms Christmas	Jon Lucas, Scott Moore	Mila Kunis, Kristen Bell, Kathryn Hahn, Susan ...	United States, China	February 14, 2020	R	104 min	Comedies
174	s175	Movie	A Futile and Stupid Gesture	David Wain	Will Forte, Domhnall Gleeson, Martin Mull, Joe...	United States	January 26, 2018	TV-MA	102 min	Comedies
...	...	...	...	...	...	...	...	...	...	...
7341	s7340	Movie	Undercover Brother 2	Leslie Small	Michael Jai White, Vince Swann, Barry Bostwick...	United States	November 5, 2019	R	85 min	Comedies
7590	s7589	Movie	Where's the Money	Scott Zabielski	Andrew Bachelor, Kat Graham, Mike Epps, Terry ...	United States	January 22, 2018	R	86 min	Comedies
7623	s7622	Movie	Wild Oats	Andy Tennant	Shirley MacLaine, Jessica Lange, Billy Connoll...	Germany, United States	May 13, 2017	PG-13	86 min	Comedies
7634	s7633	Movie	Wine Country	Amy Poehler	Amy Poehler, Maya Rudolph, Ana Gasteyer, Rache...	United States	May 10, 2019	R	104 min	Comedies
7664	s7663	Movie	Work It	Laura Terruso	Sabrina Carpenter, Jordan Fisher, Liza Koshy, ...	United States	August 7, 2020	TV-14	94 min	Comedies

97 rows × 13 columns

In [48]: df\_netflix[(df\_netflix["Category"]=="Movie") & (df\_netflix["Type"]=="Comedies") | (df\_net

Out[48]:

	Show_Id	Category	Title	Director	Cast	Country	Release_Date	Rating	Duration		
	19	s20	Movie	'89	NaN	Lee Dixon, Ian Wright, Paul Merson	United Kingdom	May 16, 2018	TV-PG	87 min	Sports M
	33	s34	Movie	#realityhigh	Fernando Lebrija	Nesta Cooper, Kate Walsh, John Michael Higgins...	United States	September 8, 2017	TV-14	99 min	Cor
	58	s59	TV Show	100% Hotter	NaN	Daniel Palmer, Melissa Sophia, Karen Williams,...	United Kingdom	November 1, 2019	TV-14	1 Season	Brit : Intern. TV :
	72	s73	Movie	17 Again	Burr Steers	Zac Efron, Leslie Mann, Matthew Perry, Thomas ...	United States	January 1, 2021	PG-13	102 min	Cor
	82	s83	Movie	2036 Origin Unknown	Hasraf Dulull	Katee Sackhoff, Ray Fearon, Julie Cox, Steven ...	United Kingdom	December 20, 2018	TV-14	95 min	S F
	...	...	...	...	...	...	...	...	...	...	
	7670	s7669	TV Show	World War II in Colour	NaN	Robert Powell	United Kingdom	August 1, 2017	TV-MA	1 Season	Brit : Docu Intern.
	7671	s7670	TV Show	World's Busiest Cities	NaN	Anita Rani, Ade Adepitan, Dan Snow	United Kingdom	February 1, 2019	TV-PG	1 Season	Brit : Docu
	7688	s7687	Movie	XV: Beyond the Tryline	Pierre Deschamps	NaN	United Kingdom	March 18, 2020	TV-14	91 min	Documen Sports M
	7725	s7724	Movie	You Can Tutu	James Brown	Lily O'Regan, Jeannetttsy Enriquez Borges, Joel...	United Kingdom	December 31, 2017	TV-G	87 min	Chile Family M
	7740	s7739	TV Show	Young Wallander	NaN	Adam Pålsson,	United Kingdom	September 3, 2020	TV-MA	1 Season	Cri : S

485 rows × 13 columns

## Q8 In how many movies/shows ,Tom Cruise Cast?

In [49]:

df\_netflix[df\_netflix["Cast"]=="Tom Cruise"]

Out[49]:

Show_Id	Category	Title	Director	Cast	Country	Release_Date	Rating	Duration	Type	Description	DateTim
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In [52]:

# creating new data frame

In [53]:

df\_netflix\_data=df\_netflix.dropna()

In [54]:

df\_netflix\_data

Out[54]:

Show_Id	Category	Title	Director	Cast	Country	Release_Date	Rating	Duration	Ty	
1	s2	Movie	07:19	Jorge Michel Grau	Demián Bichir, Héctor Bonilla, Oscar Serrano, ...	Mexico	December 23, 2016	TV-MA	93 min	Dram Internatio Mov
2	s3	Movie	23:59	Gilbert Chan	Tedd Chan, Stella Chung, Henley Hii, Lawrence ...	Singapore	December 20, 2018	R	78 min	Hor Mov Internatio Mov
3	s4	Movie	9	Shane Acker	Elijah Wood, John C. Reilly, Jennifer Connelly...	United States	November 16, 2017	PG-13	80 min	Action Adventu Independ Movies, S
4	s5	Movie	21	Robert Luketic	Jim Sturgess, Kevin Spacey, Kate Bosworth, Aar...	United States	January 1, 2020	PG-13	123 min	Dram
5	s6	TV Show	46	Serdar Akar	Erdal Beşikçioğlu, Yasemin Allen, Melis Birkan...	Turkey	July 1, 2017	TV-MA	1 Season	Internatio TV Sho TV Dram TV Myste
...	...	...	...	...	...	...	...	...	...	...
7780	s7779	Movie	Zombieland	Ruben Fleischer	Jesse Eisenberg, Woody Harrelson,	United States	November 1, 2019	R	88 min	Comed Hor Mov

					Emma Stone, ...					
7782	s7781	Movie	Zoo	Shlok Sharma	Shashank Arora, Shweta Tripathi, Rahul Kumar, ...	India	July 1, 2018	TV-MA	94 min	Dram Independ Mov Internatio Mov
7783	s7782	Movie	Zoom	Peter Hewitt	Tim Allen, Courteney Cox, Chevy Chase, Kate Ma...	United States	January 11, 2020	PG	88 min	Childrer Fan Mov Comec
7784	s7783	Movie	Zozo	Josef Fares	Imad Creidi, Antoinette Turk, Elias Gergi, Car...	Sweden, Czech Republic, United Kingdom, Denmar...	October 19, 2020	TV-MA	99 min	Dram Internatio Mov
7785	s7784	Movie	Zubaan	Mozez Singh	Vicky Kaushal, Sarah-Jane Dias, Raaghav Chanan...	India	March 2, 2019	TV-14	111 min	Dram Internatio Mov Musii Music

4809 rows × 13 columns

```
In [55]: df_netflix_data[df_netflix_data["Cast"].str.contains("Tom Cruise")]
```

	Show_Id	Category	Title	Director	Cast	Country	Release_Date	Rating	Duration	Type
3860	s3861	Movie	Magnolia	Paul Thomas Anderson	Jeremy Blackman, Tom Cruise, Melinda Dillon, A...	United States	January 1, 2020	R	189 min	Dramas, Independent Movies
5071	s5071	Movie	Rain Man	Barry Levinson	Dustin Hoffman, Tom Cruise, Valeria Golino, Ge...	United States	July 1, 2019	R	134 min	Classic Movies, Dramas

## Q9 What are different Ratings defined by netflix

```
In [56]: df_netflix["Rating"].value_counts()
```

```
Out[56]: TV-MA      2863
TV-14      1931
TV-PG       806
R           665
PG-13       386
TV-Y        280
TV-Y7       271
PG          247
```

```
TV-G      194
NR        84
G         39
TV-Y7-FV  6
UR         5
NC-17     3
Name: Rating, dtype: int64
```

```
In [57]: df_netflix["Rating"].unique()

Out[57]: array(['TV-MA', 'R', 'PG-13', 'TV-14', 'TV-PG', 'NR', 'TV-G', 'TV-Y', nan,
        'TV-Y7', 'PG', 'G', 'NC-17', 'TV-Y7-FV', 'UR'], dtype=object)
```

## Q9.1 How many Movies get "TV14 "rating in Canada

```
In [58]: df_netflix[(df_netflix["Rating"]=="TV-14") & (df_netflix["Country"]=="Canada") & (df_net
```

Out[58]:										
Show_Id	Category	Title	Director	Cast	Country	Release_Date	Rating	Duration		
30	s31	Movie	#cats_the_mewvie	Michael Margolis	NaN	Canada	February 5, 2020	TV-14	90 min	D
34	s35	Movie	#Roxy	Michael Kennedy	Jake Short, Sarah Fisher, Booboo Stewart, Dann...	Canada	April 10, 2019	TV-14	105 min	
608	s609	Movie	At First Light	Jason Stone	Stefanie Scott, Theodore Pellerin, Percy Hynes...	Canada	December 27, 2018	TV-14	91 min	I
1506	s1507	Movie	Counterfeiting in Suburbia	Jason Bourque	Sarah Butler, Larissa Albuquerque, Kayla Walla...	Canada	July 1, 2018	TV-14	88 min	
3713	s3714	Movie	Long Time Running	Jennifer Baichwal, Nicholas de Pencier	Gord Downie, Paul Langlois, Gord Sinclair, Rob...	Canada	November 12, 2017	TV-14	96 min	D I
3956	s3957	Movie	Martin Matte: La vie, la mort...eh la la..!	Jean-François Blais	Martin Matte	Canada	October 14, 2019	TV-14	62 min	
5336	s5336	Movie	Sadie's Last Days on Earth	Michael Seater	Morgan Taylor Campbell, Clark Backo, Ricardo H...	Canada	August 22, 2017	TV-14	94 min	C
5393	s5393	Movie	Sardaar ji	Rohit Jugraj	Diljit Dosanjh, Neeru Bajwa,	Canada	December 1, 2017	TV-14	140 min	I

					Mandy Takhar, Jas...					
--	--	--	--	--	----------------------	--	--	--	--	--

6062	s6062	Movie	The Accountant of Auschwitz	Matthew Shoychet	NaN	Canada	July 1, 2019	TV-14	78 min	D
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7025	s7024	Movie	The Wrong Babysitter	George Mendeluk	Daphne Zuniga, Seann Gallagher, Lisa Marie Car...	Canada	June 18, 2019	TV-14	89 min	
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7041	s7040	Movie	There's Something in the Water	Ellen Page, Ian Daniel	Ellen Page	Canada	March 27, 2020	TV-14	72 min	D
------	-------	-------	--------------------------------	------------------------	------------	--------	----------------	-------	--------	---

## Q9.2 How many TV show got the R rating after year 2018?

```
In [59]: df_netflix[(df_netflix["Category"]=="TV Show") & (df_netflix["Rating"]=="R")]
```

	Show_Id	Category	Title	Director	Cast	Country	Release_Date	Rating	Duration	Type
4497	s4498	TV Show	Nobel	NaN	Aksel Hennie, Tuva Novotny, Anders Danielsen L...	Norway	December 10, 2016	R	1 Season	International TV Shows, TV Dramas, TV Thrillers
6437	s6436	TV Show	The Hateful Eight: Extended Version	Quentin Tarantino	Samuel L. Jackson, Kurt Russell, Jennifer Jaso...	NaN	April 25, 2019	R	1 Season	TV Shows

```
In [60]: df_netflix[(df_netflix["Category"]=="TV Show") & (df_netflix["Rating"]=="R") & (df_netfl
```

	Show_Id	Category	Title	Director	Cast	Country	Release_Date	Rating	Duration	Type	Descrip
6437	s6436	TV Show	The Hateful Eight: Extended Version	Quentin Tarantino	Samuel L. Jackson, Kurt Russell, Jennifer Jaso...	NaN	April 25, 2019	R	1 Season	TV Shows	Trappe stagec stop storm ri

## Q10.What is maximum duration of Movie \show

```
In [61]: df_netflix["Duration"].value_counts
```

```
Out[61]: <bound method IndexOpsMixin.value_counts of 0 4 Seasons
```



```
1          93 min
2          78 min
3          80 min
4         123 min
...
7784        99 min
7785       111 min
7786        44 min
7787        1 Season
7788        90 min
Name: Duration, Length: 7787, dtype: object>
```

```
In [62]: df_netflix["Duration"].nunique
```

```
Out[62]: <bound method IndexOpsMixin.nunique of 0          4 Seasons
1          93 min
2          78 min
3          80 min
4         123 min
...
7784        99 min
7785       111 min
7786        44 min
7787        1 Season
7788        90 min
Name: Duration, Length: 7787, dtype: object>
```

```
In [63]: df_netflix.dtypes
```

```
Out[63]: Show_Id          object
Category          object
Title             object
Director          object
Cast              object
Country           object
Release_Date      object
Rating            object
Duration          object
Type              object
Description        object
DateTime          datetime64[ns]
Year              float64
dtype: object
```

```
In [64]: #str.split()
df_netflix[["Minutes", "Unit"]]=df_netflix["Duration"].str.split(' ', expand=True)
```

```
In [65]: df_netflix
```

```
Out[65]:
```

	Show_Id	Category	Title	Director	Cast	Country	Release_Date	Rating	Duration	Ty	
	0	s1	TV Show	3%	NaN	João Miguel, Bianca Comparato, Michel Gomes, R...	Brazil	August 14, 2020	TV-MA	4 Seasons	International TV Shows, Dramas, TV Series
	1	s2	Movie	07:19	Jorge Michel Grau	Demián Bichir, Héctor Bonilla, Oscar Serrano, ...	Mexico	December 23, 2016	TV-MA	93 min	Drama, International Movie
	2	s3	Movie	23:59	Gilbert	Tedd Chan,	Singapore	December 20,	R	78 min	Horror Movie

				Chan	Stella Chung, Henley Hii, Lawrence ...		2018			Internation Mov
3	s4	Movie	9	Shane Acker	Elijah Wood, John C. Reilly, Jennifer Connelly...	United States	November 16, 2017	PG-13	80 min	Action Adventu Independe Movies, Sci-f
4	s5	Movie	21	Robert Luketic	Jim Sturgess, Kevin Spacey, Kate Bosworth, Aar...	United States	January 1, 2020	PG-13	123 min	Dram
...	...	...	...	...	...	...	...	...	...	
7784	s7783	Movie	Zozo	Josef Fares	Imad Creidi, Antoinette Turk, Elias Gergi, Car...	Sweden, Czech Republic, United Kingdom, Denmar...	October 19, 2020	TV-MA	99 min	Dram Internation Mov
7785	s7784	Movie	Zubaan	Moze Singh	Vicky Kaushal, Sarah-Jane Dias, Raaghav Chanan...	India	March 2, 2019	TV-14	111 min	Dram Internation Movies, Mu & Music
7786	s7785	Movie	Zulu Man in Japan	NaN	Nasty C	NaN	September 25, 2020	TV-MA	44 min	Documentari Internation Movies, Mu & M
7787	s7786	TV Show	Zumbo's Just Desserts	NaN	Adriano Zumbo, Rachel Khoo	Australia	October 31, 2020	TV-PG	1 Season	Internation TV Show Reality
7788	s7787	Movie	ZZ TOP: THAT LITTLE OL' BAND FROM TEXAS	Sam Dunn	NaN	United Kingdom, Canada, United States	March 1, 2020	TV-MA	90 min	Documentari Music Music

7787 rows × 15 columns

```
In [66]: df_netflix.Minutes.max()
```

```
Out[66]: '99'
```

```
In [67]: df_netflix.Minutes.mean() # because datatype object is infinte in nature
```

```
Out[67]: inf
```

# Q11 Which individual country has the highest No. of the TVShows?

```
In [68]: df_netflix_tvshow=df_netflix[df_netflix["Category"]=="TV Show" ]
```

```
In [69]: df_netflix_tvshow
```

Out[69]:

Show_Id	Category	Title	Director	Cast	Country	Release_Date	Rating	Duration	Type	
0	s1	TV Show	3%	NaN	João Miguel, Bianca Comparato, Michel Gomes, R...	Brazil	August 14, 2020	TV-MA	4 Seasons	International TV Shows, TV Dramas, TV Sci-Fi &...
5	s6	TV Show	46	Serdar Akar	Erdal Beşikçioğlu, Yasemin Allen, Melis Birkan...	Turkey	July 1, 2017	TV-MA	1 Season	International TV Shows, TV Dramas, TV Mysteries
11	s12	TV Show	1983	NaN	Robert Więckiewicz, Maciej Musiał, Michalina O...	Poland, United States	November 30, 2018	TV-MA	1 Season	Crime TV Shows, International TV Shows, TV Dramas
12	s13	TV Show	1994	Diego Enrique Osorno	NaN	Mexico	May 17, 2019	TV-MA	1 Season	Crime TV Shows, Docuseries, International TV S...
16	s17	TV Show	Feb-09	NaN	Shahd El Yaseen, Shaila Sabt, Hala, Hanadi Al-...	NaN	March 20, 2019	TV-14	1 Season	International TV Shows, TV Dramas
...	...	...	...	...	...	...	...	...	...	...
7769	s7768	TV Show	Zindagi Gulzar Hai	NaN	Sanam Saeed, Fawad Khan, Ayesha Omer, Mehreen ...	Pakistan	December 15, 2016	TV-PG	1 Season	International TV Shows, Romantic TV Shows, TV ...
7777	s7776	TV Show	Zoids Wild	NaN	Kensho Ono, Takahiro Sakurai, Mikako Komatsu, ...	Japan	August 14, 2020	TV-Y7	1 Season	Anime Series, Kids' TV
7779	s7778	TV Show	Zombie Dumb	NaN	NaN	NaN	July 1, 2019	TV-Y7	2 Seasons	Kids' TV, Korean TV Shows, TV Comedies
7781	s7780	TV Show	Zona	NaN	Manu NNa,	Mexico	November	TV-MA	1 Season	International

			Rosa		Ana Julia Yeyé, Ray Contreras, Pablo...		26, 2019			TV Shows, Spanish-Language TV Sh...
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<b>7787</b>	s7786	TV Show	Zumbo's Just Desserts	NaN	Adriano Zumbo, Rachel Khoo	Australia	October 31, 2020	TV-PG	1 Season	International TV Shows, Reality TV
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2410 rows × 15 columns

```
In [70]: df_netflix_tvshow.Country.value_counts()
```

```
Out[70]: United States      705
United Kingdom      204
Japan      157
South Korea      147
India      71
...
Canada, United States, United Kingdom, France, Luxembourg      1
United States, Italy      1
Chile, Italy      1
Canada, United Kingdom      1
United States, France, South Korea, Indonesia      1
Name: Country, Length: 183, dtype: int64
```

```
In [71]: df_netflix_tvshow.Country.value_counts().head(1)
```

```
Out[71]: United States      705
Name: Country, dtype: int64
```

## Q 12.How can we sort the dataset by year

```
In [72]: df_netflix.sort_values("Year")
```

	Show_Id	Category	Title	Director	Cast	Country	Release_Date	Rating	Duration	
<b>7115</b>	s7114	Movie	To and From New York	Sorin Dan Mihalcescu	Barbara King, Shaana Diya, John Kriaiukenas, Y...	United States	January 1, 2008	TV-MA	81 min	Drai Independ Mo Thri
<b>1765</b>	s1766	TV Show	Dinner for Five	NaN	NaN	United States	February 4, 2008	TV-MA	1 Season	Stand Comec Talk Sh
<b>3248</b>	s3249	Movie	Just Another Love Story	Ole Børnedal	Anders W. Berthelsen, Rebecca Hemse, Nikolaj L...	Denmark	May 5, 2009	TV-MA	104 min	Drai Internati Mc
<b>5766</b>	s5766	Movie	Splatter	Joe Dante	Corey Feldman, Tony Todd,	United States	November 18, 2009	TV-MA	29 min	Hc Mc

					Tara Leigh, Erin Way...						
3840	s3841	Movie	Mad Ron's Prevues from Hell	Jim Monaco	Nick Pawlow, Jordu Schell, Jay Kushwara, Micha...	United States	November 1, 2010	NR	84 min	Cult Mo Hc Mc	
...	...	...	...	...	...	...	...	...	...		
3374	s3375	TV Show	Kikoriki	NaN	Igor Dmitriev	NaN	NaN	TV-Y	2 Seasons	Kids	
3492	s3493	TV Show	La Familia P. Luche	NaN	Eugenio Derbez, Consuelo Duval, Luis Manuel Áv...	United States	NaN	TV-14	3 Seasons	Internati TV Sho Spar Langu TV	
3946	s3947	TV Show	Maron	NaN	Marc Maron, Judd Hirsch, Josh Brener, Nora Zeh...	United States	NaN	TV-MA	4 Seasons	Come	
5138	s5138	TV Show	Red vs. Blue	NaN	Burnie Burns, Jason Saldaña, Gustavo Sorola, G...	United States	NaN	NR	13 Seasons	TV Actio Advent  Comer TV Sci-	
6066	s6066	TV Show	The Adventures of Figaro Pho	NaN	Luke Jurevicius, Craig Behenna, Charlotte Haml...	Australia	NaN	TV-Y7	2 Seasons	Kids' TV Come	

7787 rows × 15 columns

```
In [73]: df_netflix.sort_values("Year",ascending=False)
```

	Show_Id	Category	Title	Director	Cast	Country	Release_Date	Rating	Duration	Ty
	5564	Movie	Sherlock Holmes	Guy Ritchie	Robert Downey Jr., Jude Law, Rachel McAdams, M...	United States, Germany, United Kingdom, Australia	January 1, 2021	PG-13	128 min	Action Adventu Comed
	5919	Movie	Surf's Up	Ash Brannon, Chris Buck	Shia LaBeouf, Jeff Bridges, Zooe	United States	January 1, 2021	PG	86 min	Children Farr Movi Comedi

										Deschanel, J...	Spo Mov
980	s981	TV Show	Bling Empire	NaN	NaN	NaN	January 15, 2021	TV-MA	1 Season	Reality	
5955	s5955	Movie	Taare Zameen Par	Aamir Khan	Aamir Khan, Darsheel Safary, Tanay Chheda, Tis...	India	January 10, 2021	PG	162 min	Dram Internation Mov	
366	s367	Movie	Al acecho	Francisco D'Eufemia	Rodrigo de la Serna, Belen Blanco, Walter Jako...	NaN	January 12, 2021	TV-MA	81 min	Internation Movi Thrill	
...	...	...	...	...	...	...	...	...	...		
3374	s3375	TV Show	Kikoriki	NaN	Igor Dmitriev	NaN	NaN	TV-Y	2 Seasons	Kids'	
3492	s3493	TV Show	La Familia P. Luche	NaN	Eugenio Derbez, Consuelo Duval, Luis Manuel Áv...	United States	NaN	TV-14	3 Seasons	Internation TV Show Spanis Langua TV S	
3946	s3947	TV Show	Maron	NaN	Marc Maron, Judd Hirsch, Josh Brener, Nora Zeh...	United States	NaN	TV-MA	4 Seasons	Comed	
5138	s5138	TV Show	Red vs. Blue	NaN	Burnie Burns, Jason Saldaña, Gustavo Sorola, G...	United States	NaN	NR	13 Seasons	TV Action Adventu  Comedi TV Sci-F	
6066	s6066	TV Show	The Adventures of Figaro Pho	NaN	Luke Jurevicius, Craig Behenna, Charlotte Haml...	Australia	NaN	TV-Y7	2 Seasons	Kids' TV, Comed	

7787 rows × 15 columns

# Q13 -Find all instances where: Category is "Movie and type is"drama or Category is TV Show and Type is kidsTv

```
In [74]: df_netflix[(df_netflix["Category"]=="Movie") & (df_netflix["Type"]=="Dramas")]
```

Out[74]:

	Show_Id	Category	Title	Director	Cast	Country	Release_Date	Rating	Duration	Type	D
--	---------	----------	-------	----------	------	---------	--------------	--------	----------	------	---

4	s5	Movie	21	Robert Luketic	Jim Sturgess, Kevin Spacey, Kate Bosworth, Aar...	United States	January 1, 2020	PG-13	123 min	Dramas	Ca
7	s8	Movie	187	Kevin Reynolds	Samuel L. Jackson, John Heard, Kelly Rowan, Cl...	United States	November 1, 2019	R	119 min	Dramas	At
170	s171	Movie	A Family Man	Mark Williams	Gerard Butler, Gretchen Mol, Alison Brie, Will...	Canada, United States	December 15, 2019	R	110 min	Dramas	h
232	s233	Movie	A Stoning in Fulham County	Larry Elikann	Ken Olin, Jill Eikenberry, Maureen Mueller, Gr...	United States	October 1, 2011	TV-14	95 min	Dramas	te Ar
295	s296	Movie	Across Grace Alley	Ralph Macchio	Ben Hyland, Marsha Mason, Karina Smirnoff, Col...	United States	December 1, 2016	TV-PG	24 min	Dramas	
...	...	...	...	...	...	...	...	...	...	...	
7417	s7416	Movie	Victor	Brandon Dickerson	Patrick Davis, Lisa Vidal, Josh Pence, José Zú...	United States	July 24, 2017	PG-13	110 min	Dramas	E 
7422	s7421	Movie	Villain	Philip Barantini	Craig Fairbrass, George Russo, Robert Gleniste...	United Kingdom	September 5, 2020	R	97 min	Dramas	Fr e: 1
7449	s7448	Movie	VS.	Ed Lilly	Connor Swindells, Fola Evans-Akingbola, Nichol...	United Kingdom	June 19, 2019	TV-MA	99 min	Dramas	1

7465	s7464	Movie	Wakefield	Robin Swicord	Bryan Cranston, Jennifer Garner, Jason O'Mara,...	United States	March 2, 2019	R	109 min	Dramas	Ar
7480	s7479	Movie	War Horse	Steven Spielberg	Emily Watson, David Thewlis, Peter Mullan, Nie...	United States, India	May 6, 2019	PG-13	147 min	Dramas	I

117 rows × 15 columns

```
In [75]: df_netflix[(df_netflix["Category"]=="TV Show") & (df_netflix["Type"]=="Kids' TV")]
```

Out[75]:	Show_Id	Category	Title	Director	Cast	Country	Release_Date	Rating	Duration	Type
111	s112	TV Show	44 Cats	NaN	Sarah Natochenny, Suzy Myers, Simona Berman, E...	Italy	October 1, 2020	TV-Y7	2 Seasons	Kids' TV
276	s277	TV Show	Abby Hatcher	Kyran Kelly	Macy Drouin, Wyatt White, Paul Sun-Hyung Lee, ...	United States, Canada	July 1, 2020	TV-Y	1 Season	Kids' TV
434	s435	TV Show	Alphablocks	NaN	Teresa Gallagher, David Holt, Lizzie Waterworth	United Kingdom	May 25, 2020	TV-Y	5 Seasons	Kids' TV
598	s599	TV Show	Ask the StoryBots	NaN	Judy Greer, Erin Fitzgerald, Fred Tatasciore, ...	United States	August 2, 2019	TV-Y	3 Seasons	Kids' TV
706	s707	TV Show	Bal Ganesh	Vijay S. Bhanushali	Meghna Erande Joshi, Parminder Ghuman	NaN	March 31, 2020	TV-Y7	1 Season	Kids' TV
...	...	...	...	...	...	...	...	...	...	...
7668	s7667	TV Show	World of Winx	Iginio Straffi	Haven Paschall, Alysha Deslorieux, Jessica Paq...	Italy, United States	June 16, 2017	TV-Y7	2 Seasons	Kids' TV
7717	s7716	TV Show	Yoko	NaN	Eileen Stevens, Alyson Leigh	NaN	June 23, 2018	TV-Y	1 Season	Kids' TV



					Rosenfeld, Sarah ...						
7719	s7718	TV Show	YOM	NaN	Sairaj, Devyani Dagaonkar, Ketan Singh, Mayur ...	NaN	June 7, 2018	TV-Y7	1 Season	Kids' TV	
7758	s7757	TV Show	Z4	NaN	Apollo Costa, Gabriel Santana, Matheus Lustosa...	Brazil	February 22, 2019	TV-PG	2 Seasons	Kids' TV	
7761	s7760	TV Show	Zak Storm	NaN	Michael Johnston, Jessica Gee-George, Christin...	United States, France, South Korea, Indonesia	September 13, 2018	TV-Y7	3 Seasons	Kids' TV	

205 rows × 15 columns

```
In [76]: df_netflix[(df_netflix["Category"]=="Movie") & (df_netflix["Type"]=="Dramas") | (df_netf
```

Out[76]:

	Show_Id	Category	Title	Director	Cast	Country	Release_Date	Rating	Duration	Type	De
4	s5	Movie	21	Robert Luketic	Jim Sturgess, Kevin Spacey, Kate Bosworth, Aar...	United States	January 1, 2020	PG-13	123 min	Dramas	ca
7	s8	Movie	187	Kevin Reynolds	Samuel L. Jackson, John Heard, Kelly Rowan, Cl...	United States	November 1, 2019	R	119 min	Dramas	Af
111	s112	TV Show	44 Cats	NaN	Sarah Natocheny, Suzy Myers, Simona Berman, E...	Italy	October 1, 2020	TV-Y7	2 Seasons	Kids' TV	Pa sin
170	s171	Movie	A Family Man	Mark Williams	Gerard Butler, Gretchen Mol, Alison Brie, Will...	Canada, United States	December 15, 2019	R	110 min	Dramas	he t
232	s233	Movie	A Stoning in Fulham County	Larry Elikann	Ken Olin, Jill Eikenberry, Maureen Mueller, Gr...	United States	October 1, 2011	TV-14	95 min	Dramas	ter An
...	...	...	...	...	...	...	...	...	...	...	
7668	s7667	TV Show	World of Winx	Iginio Straffi	Haven Paschall, Alysha	Italy, United States	June 16, 2017	TV-Y7	2 Seasons	Kids' TV	1

