

# NETFLIX PROJECT

```
In [2]: import pandas as pd  
data = pd.read_csv(r"C:\Users\91981\Downloads\8. Netflix Dataset.csv")
```

```
In [3]: data
```

Out[3]:	Show_Id	Category	Title	Director	Cast	Country	Release_Date	Rating	Duration	T
0	s1	TV Show	3%	NaN	João Miguel, Bianca Comparato, Michel Gomes, R...	Brazil	August 14, 2020	TV-MA	4 Seasons	Internatic TV Shows, Dramas, Sci-Fi
1	s2	Movie	07:19	Jorge Michel Grau	Demián Bichir, Héctor Bonilla, Oscar Serrano, ...	Mexico	December 23, 2016	TV-MA	93 min	Dran Internatic Mo
2	s3	Movie	23:59	Gilbert Chan	Tedd Chan, Stella Chung, Henley Hii, Lawrence ...	Singapore	December 20, 2018	R	78 min	Horror Mov Internatic Mo
3	s4	Movie	9	Shane Acker	Elijah Wood, John C. Reilly, Jennifer Connelly...	United States	November 16, 2017	PG-13	80 min	Actio Adventu Independ Movies, I
4	s5	Movie	21	Robert Luketic	Jim Sturgess, Kevin Spacey, Kate Bosworth, Aar...	United States	January 1, 2020	PG-13	123 min	Drar
...	...	...	...	...	...	...	...	...	...	
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	Dran Internatic Mo
7785	s7784	Movie	Zubaan	Mozez Singh	Vicky Kaushal, Sarah-Jane Dias, Raaghav Chanan...	India	March 2, 2019	TV-14	111 min	Dran Internatic Movies, Mi & Musi
7786	s7785	Movie	Zulu Man in Japan	NaN	Nasty C	NaN	September 25, 2020	TV-MA	44 min	Documentar Internatic Movies, Mi &
7787	s7786	TV Show	Zumbo's Just Desserts	NaN	Adriano Zumbo, Rachel Khoo	Australia	October 31, 2020	TV-PG	1 Season	Internatic 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	Documentar Mus Musi

7789 rows × 11 columns

```
In [4]: #to show top 5 records of the dataset
data.head()
```

Out[4]:

	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 &...	wh
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	earthl 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	Wh reci
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 wo
4	s5	Movie	21	Robert Luketic	Jim Sturgess, Kevin Spacey, Kate Bosworth, Aar...	United States	January 1, 2020	PG-13	123 min	Dramas	A bri be

```
In [5]: #to show bottom -5 records of the dataset
data.tail()
```

Out[5]:

	Show_Id	Category	Title	Director	Cast	Country	Release_Date	Rating	Duration	Type
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, Mus & Musica
7786	s7785	Movie	Zulu Man in Japan	NaN	Nasty C	NaN	September 25, 2020	TV-MA	44 min	Documentarie: International Movies, Mus & M.
7787	s7786	TV Show	Zumbo's Just Desserts	NaN	Adriano Zumbo, Rachel Khoo	Australia	October 31, 2020	TV-PG	1 Season	International TV Show: 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	Documentarie: Music Musica

In [6]:

#to show the shape and dataframe  
data.shape

Out[6]:

(7789, 11)

In [7]:

#size total number of elements  
data.size

Out[7]:

85679

In [8]:

#to show each column name  
data.columns

Out[8]:

Index(['Show\_Id', 'Category', 'Title', 'Director', 'Cast', 'Country', 'Release\_Date', 'Rating', 'Duration', 'Type', 'Description'], dtype='object')

In [9]:

#to show data types  
data.dtypes

```
Out[9]: 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 [10]: data.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
```

## Task 1 - Is there any duplicate record?if yes remove the duplicate records

```
duplicate()
```

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

Out[11]:

	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 &...	wh
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	earthl 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	Wh reci
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 wo
4	s5	Movie	21	Robert Luketic	Jim Sturgess, Kevin Spacey, Kate Bosworth, Aar...	United States	January 1, 2020	PG-13	123 min	Dramas	A bri be

In [13]:

data.shape

Out[13]:

(7789, 11)

In [15]:

data[data.duplicated()]#to check row wise and detect rows

Out[15]:

	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	a
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	di

In [18]:

data.drop\_duplicates(inplace = True)#to remove duplicates

In [19]:

data[data.duplicated()]

Out[19]:      Show\_Id   Category   Title   Director   Cast   Country   Release\_Date   Rating   Duration   Type   Description

In [20]:   data.shape

Out[20]:   (7787, 11)

is there any null value

In [21]:   data.head()

Out[21]:	Show_Id	Category	Title	Director	Cast	Country	Release_Date	Rating	Duration	Type	Description
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 &...	wh
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	earthl 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	Wh reci
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 wo
4	s5	Movie	21	Robert Luketic	Jim Sturgess, Kevin Spacey, Kate Bosworth, Aar...	United States	January 1, 2020	PG-13	123 min	Dramas	A bri be

In [22]:   data.isnull()*#to show null values*

Out[22]:

	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 [23]:

data.isnull().sum()*#count of null values*

Out[23]:

Show\_Id0  
Category0  
Title0  
Director2388  
Cast718  
Country507  
Release\_Date10  
Rating7  
Duration0  
Type0  
Description0  
dtype: int64

# SEABORN LIBRARY -HEAT MAP

In [24]:

import seaborn as sns

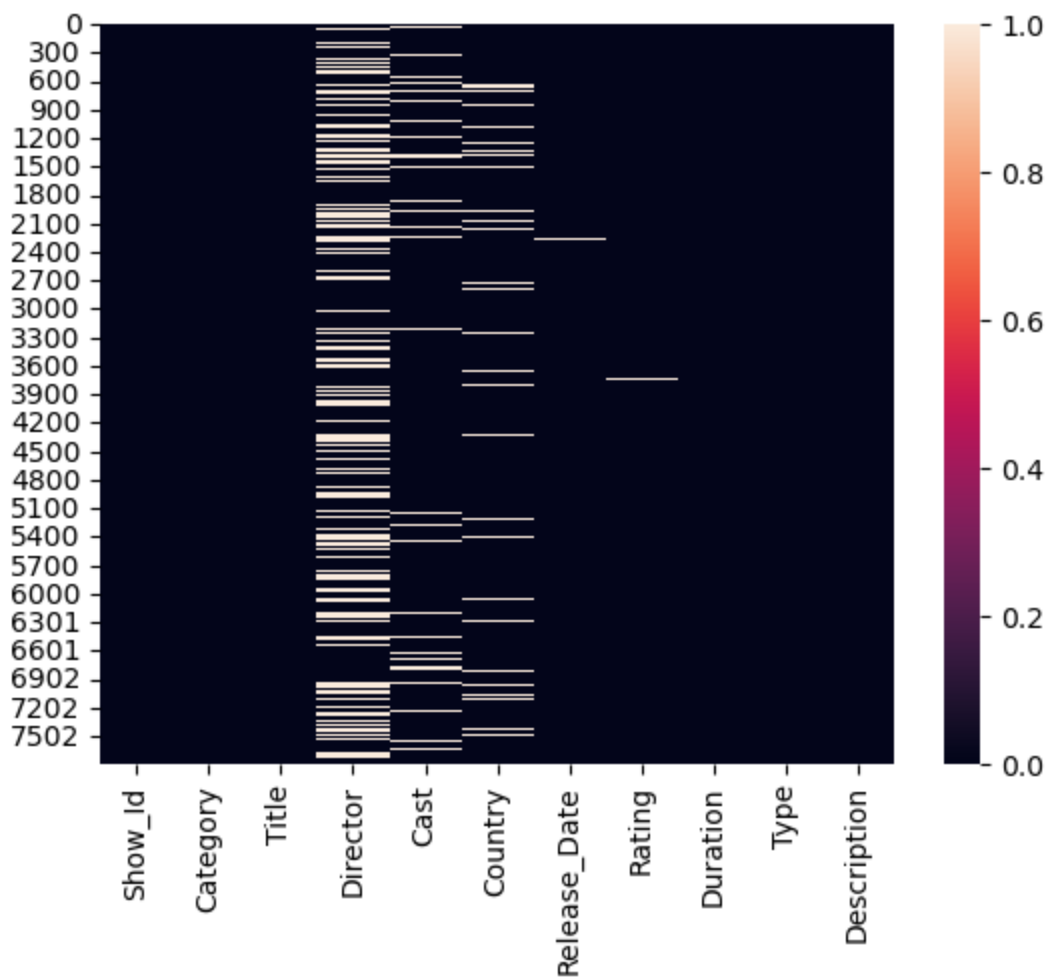
In [25]:

sns.heatmap(data.isnull()) *#using heatmap to show null values*

Out[25]:

<Axes: >





Q1.for 'House of cards'what is the show id and who is the director of this show

```
In [26]: data.head()
```

Out[26]:

	Show_Id	Category	Title	Director	Cast	Country	Release_Date	Rating	Duration	Type	Description
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 &...	where
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	earthl 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	Wh reci
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 wo
4	s5	Movie	21	Robert Luketic	Jim Sturgess, Kevin Spacey, Kate Bosworth, Aar...	United States	January 1, 2020	PG-13	123 min	Dramas	A bri be

In [31]:

```
data[data['Title'].isin(['House of cards'])] #to show all records of particular item
```

Out[31]:

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

In [32]:

```
#second method  
data[data['Title'].str.contains('House of Cards')]
```

Out[32]:

Show_Id	Category	Title	Director	Cast	Country	Release_Date	Rating	Duration	Type	Description	
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

n which year highest number of shows show with graphs

In [33]:

```
data.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  
dtype: object

In [37]: data['Date\_n']=pd.to\_datetime(data['Release\_Date'])

In [38]: data.head()

Out[38]:

	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 &...	wh
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	earthl M
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	Wh reci
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 wo
4	s5	Movie	21	Robert Luketic	Jim Sturgess, Kevin Spacey, Kate Bosworth, Aar...	United States	January 1, 2020	PG-13	123 min	Dramas	A bri be

In [46]: data.dtypes

```
Out[46]: Show_Id      object
         Category     object
         Title        object
         Director     object
         Cast         object
         Country      object
         Release_Date  object
         Rating       object
         Duration     object
         Type         object
         Description   object
         Date_n       datetime64[ns]
         dtype: object
```

```
In [ ]:
```

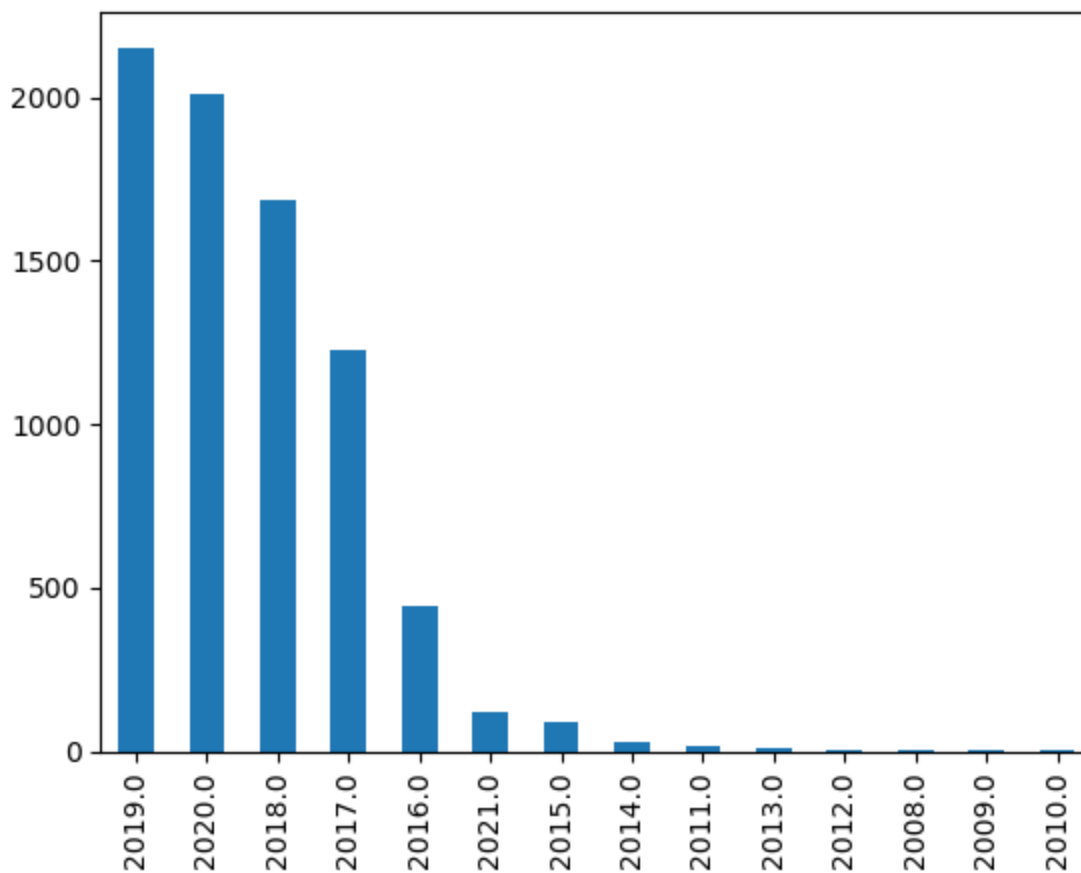
```
In [52]: data['Date_n'].dt.year.value_counts()
```

```
Out[52]: 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_n, dtype: int64
```

## plotting bar graph

```
In [53]: data['Date_n'].dt.year.value_counts().plot(kind = 'bar')
```

```
Out[53]: <Axes: >
```



How many movies and Tv shows are in the dataset?

```
In [54]: data.head(2)
```

	Show_Id	Category	Title	Director	Cast	Country	Release_Date	Rating	Duration	Type	Descr
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 &...	In a whe elite i an isl
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	devas earth hits M

```
In [57]: #to group by all unique items
data.groupby('Category').Category.count()
```

```
Out[57]: Category
Movie      5377
TV Show    2410
Name: Category, dtype: int64
```

Show all the movies released in the year 2000

```
In [64]: #creating new column
data.head(2)
```

Out[64]:

	Show_Id	Category	Title	Director	Cast	Country	Release_Date	Rating	Duration	Type	Descr
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 &...	In a whe elite i an isl
1	s2	Movie	07:19	Jorge Michel Grau	Demían Bichir, Héctor Bonilla, Oscar Serrano, ...	Mexico	December 23, 2016	TV-MA	93 min	Dramas, International Movies	devas earth hits M

```
In [66]: data['Year'] = data['Date_n'].dt.year
```

```
In [67]: data.head(2)
```

Out[67]:

	Show_Id	Category	Title	Director	Cast	Country	Release_Date	Rating	Duration	Type	Descr
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 &...	In a whe elite i an isl
1	s2	Movie	07:19	Jorge Michel Grau	Demían Bichir, Héctor Bonilla, Oscar Serrano, ...	Mexico	December 23, 2016	TV-MA	93 min	Dramas, International Movies	devas earth hits M

# Flitering

```
In [72]: data[(data['Category'] == 'Movie')&(data['Year']==2020)]
```

Out[72]:											
	Show_Id	Category	Title	Director	Cast	Country	Release_Date	Rating	Duration		
	4	s5	Movie	21	Robert Luketic	Jim Sturgess, Kevin Spacey, Kate Bosworth, Aaron Eckhart	United States	January 1, 2020	PG-13	123 min	Drama
	6	s7	Movie	122	Yasir Al Yasiri	Amina Khalil, Ahmed Dawood, Tarek Lotfy, Ahmed El Sakka	Egypt	June 1, 2020	TV-MA	95 min	Horror Movie International Movie
	14	s15	Movie	3022	John Suits	Omar Epps, Kate Walsh, Miranda Cosgrove, Angus T. Jones	United States	March 19, 2020	R	91 min	Indepent Movies, & Far Th
	27	s28	Movie	#Alive	Cho Il	Yoo Ah-in, Park Shin-hye	South Korea	September 8, 2020	TV-MA	99 min	Horror Movie International Movie Th
	28	s29	Movie	#AnneFrank - Parallel Stories	Sabina Fedeli, Anna Migotto	Helen Mirren, Gengher Gatti	Italy	July 1, 2020	TV-14	95 min	Documenta International M
	...	...	...	...	...	...	...	...	...	...	
	7762	s7761	Movie	Zaki Chan	Wael Ihsan	Ahmed Helmy, Yasmin Abdulaziz, Hassan Hosny, Hossam	Egypt	May 19, 2020	TV-PG	109 min	Come International Mc Rom M
	7783	s7782	Movie	Zoom	Peter Hewitt	Tim Allen, Courteney Cox, Chevy Chase, Kate MacLaren	United States	January 11, 2020	PG	88 min	Child Family Mc Com
	7784	s7783	Movie	Zozo	Josef Fares	Imad Creidi, Antoinette Turk, Elias Gergi, Carole	Sweden, Czech Republic, United Kingdom, Denmar...	October 19, 2020	TV-MA	99 min	Dra International M
	7786	s7785	Movie	Zulu Man in Japan	NaN	Nasty C	NaN	September 25, 2020	TV-MA	44 min	Documenta International Movies, M &
	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	Documenta Mu Mus

# Tv shows released in India Only

In [73]: `data.head(2)`

Out[73]:

	Show_Id	Category	Title	Director	Cast	Country	Release_Date	Rating	Duration	Type	Descr
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 &...	In a whe elite i an isl
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	devas earth hits M

In [76]: `data [ (data['Category'] == 'TV Show') & (data['Country']=='India')]['Title']`

Out[76]:

```
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
```

## Creating new dataframe

In [77]: `data_new = data.dropna()#all mising values`

In [78]: `data_new.head(2)`

Out[78]:

	Show_Id	Category	Title	Director	Cast	Country	Release_Date	Rating	Duration	Type	Descri
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	devas earth hits M
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	Wh army i is dea fe



# Ratings defined by netflix

```
In [79]: data.head(2)
```

```
Out[79]:
```

	Show_Id	Category	Title	Director	Cast	Country	Release_Date	Rating	Duration	Type	Descr
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 &...	In a whe elite i an isl
1	s2	Movie	07:19	Jorge Michel Grau	Demían Bichir, Héctor Bonilla, Oscar Serrano, ...	Mexico	December 23, 2016	TV-MA	93 min	Dramas, International Movies	devas earth hits M

```
In [80]: data['Rating'].nunique()
```

```
Out[80]: 14
```

```
In [81]: #for different ratings
data['Rating'].unique()
```

```
Out[81]: 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)
```

## TV show getting R rating after year 2018

```
In [82]: data.head(2)
```

```
Out[82]:
```

	Show_Id	Category	Title	Director	Cast	Country	Release_Date	Rating	Duration	Type	Descr
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 &...	In a whe elite i an isl
1	s2	Movie	07:19	Jorge Michel Grau	Demían Bichir, Héctor Bonilla, Oscar Serrano, ...	Mexico	December 23, 2016	TV-MA	93 min	Dramas, International Movies	devas earth hits M

```
In [85]: data[(data['Category']=='TV Show') & (data['Rating'] == 'R')]
```

Out[85]:

	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 [88]:

```
data[(data['Category']=='TV Show') & (data['Rating'] == 'R') & (data['Year']>2018)]
```

Out[88]:

	Show_Id	Category	Title	Director	Cast	Country	Release_Date	Rating	Duration	Type	Descr
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	Trap stage storm

# Maximum Duration of movie/show

In [89]:

```
data.head(2)
```

Out[89]:

	Show_Id	Category	Title	Director	Cast	Country	Release_Date	Rating	Duration	Type	Descr
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 &...	In a whe elite i an isl
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	devas earth hits M

In [90]:

```
data.Duration.unique()
```

```
Out[90]: array(['4 Seasons', '93 min', '78 min', '80 min', '123 min', '1 Season',
'95 min', '119 min', '118 min', '143 min', '103 min', '89 min',
'91 min', '149 min', '144 min', '124 min', '87 min', '110 min',
'128 min', '117 min', '100 min', '2 Seasons', '84 min', '99 min',
'90 min', '102 min', '104 min', '105 min', '56 min', '125 min',
'81 min', '97 min', '106 min', '107 min', '109 min', '44 min',
'75 min', '101 min', '3 Seasons', '37 min', '113 min', '114 min',
'130 min', '94 min', '140 min', '135 min', '82 min', '70 min',
'121 min', '92 min', '164 min', '53 min', '83 min', '116 min',
'86 min', '120 min', '96 min', '126 min', '129 min', '77 min',
'137 min', '148 min', '28 min', '122 min', '176 min', '85 min',
'22 min', '68 min', '111 min', '29 min', '142 min', '168 min',
'21 min', '59 min', '20 min', '98 min', '108 min', '76 min',
'26 min', '156 min', '30 min', '57 min', '150 min', '133 min',
'115 min', '154 min', '127 min', '146 min', '136 min', '88 min',
'131 min', '24 min', '112 min', '74 min', '63 min', '38 min',
'25 min', '174 min', '60 min', '153 min', '158 min', '151 min',
'162 min', '54 min', '51 min', '69 min', '64 min', '147 min',
'42 min', '79 min', '5 Seasons', '40 min', '45 min', '172 min',
'10 min', '163 min', '9 Seasons', '55 min', '72 min', '61 min',
'71 min', '160 min', '171 min', '48 min', '139 min', '157 min',
'15 min', '65 min', '134 min', '161 min', '62 min', '8 Seasons',
'186 min', '49 min', '73 min', '58 min', '165 min', '166 min',
'138 min', '159 min', '141 min', '132 min', '52 min', '67 min',
'34 min', '66 min', '312 min', '180 min', '47 min', '6 Seasons',
'155 min', '14 min', '177 min', '11 min', '9 min', '46 min',
'145 min', '11 Seasons', '7 Seasons', '13 Seasons', '8 min',
'12 min', '12 Seasons', '10 Seasons', '43 min', '50 min', '23 min',
'185 min', '200 min', '169 min', '27 min', '170 min', '196 min',
'33 min', '181 min', '204 min', '32 min', '35 min', '167 min',
'16 Seasons', '179 min', '193 min', '13 min', '214 min', '17 min',
'173 min', '192 min', '209 min', '187 min', '41 min', '182 min',
'224 min', '233 min', '189 min', '152 min', '19 min', '15 Seasons',
'208 min', '237 min', '31 min', '178 min', '230 min', '194 min',
'228 min', '195 min', '3 min', '16 min', '5 min', '18 min',
'205 min', '190 min', '36 min', '201 min', '253 min', '203 min',
'191 min'], dtype=object)
```

```
In [91]: data.Duration.dtypes
```

```
Out[91]: dtype('O')
```

```
In [92]: #to convert in numeric format
data.head(2)
```

Out[92]:	Show_Id	Category	Title	Director	Cast	Country	Release_Date	Rating	Duration	Type	Descr
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 &...	In a whe elite i an isl
1	s2	Movie	07:19	Jorge Michel Grau	Demían Bichir, Héctor Bonilla, Oscar Serrano, ...	Mexico	December 23, 2016	TV-MA	93 min	Dramas, International Movies	devas earth hits M

```
In [96]: data[['Minutes', 'Unit',]] = data['Duration'].str.split(' ', expand = True)
```

```
In [97]: data.head(2)
```

```
Out[97]:
```

	Show_Id	Category	Title	Director	Cast	Country	Release_Date	Rating	Duration	Type	Descr
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 &...	In a whe elite i an isl
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	deva: earth hits M

```
In [98]: #max value
data['Minutes'].max()
```

```
Out[98]: '99'
```

Which individual country has the nhighest number of tv shows

```
In [99]: data.head(2)
```

```
Out[99]:
```

	Show_Id	Category	Title	Director	Cast	Country	Release_Date	Rating	Duration	Type	Descr
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 &...	In a whe elite i an isl
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	deva: earth hits M

```
In [101... data_tvshow = data[data['Category']=='TV Show']
```

```
In [102... data_tvshow.head(2)
```

Out[102]:	Show_Id	Category	Title	Director	Cast	Country	Release_Date	Rating	Duration	Type	Descr
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 &...	In a whi elite an is
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	A ge pro exper tr

```
In [109... data_tvshow.Country.value_counts()
```

```
Out[109]: 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 [ ]:
```