

```
In [24]: import pandas as pd
import seaborn as sns
data=pd.read_csv(r"C:\\Users\\Rishabh\\Downloads\\8. Netflix Dataset.csv")
data
```

Out[24]:	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 &...	In a future where the elite inhabit an island ...
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	After a devastating earthquake hits Mexico Cit...
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	When an army recruit is found dead, his fellow...
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...	In a postapocalyptic world, rag-doll robots hi...
4	s5	Movie	21	Robert Luketic	Jim Sturgess, Kevin Spacey, Kate Bosworth, Aar...	United States	January 1, 2020	PG-13	123 min	Dramas	A brilliant group of students become card-coun...
...
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	Dramas, International Movies	When Lebanon's Civil War deprives Zozo of his ...

	Show_Id	Category	Title	Director	Cast	Country	Release_Date	Rating	Duration	Type	Description
7785	s7784	Movie	Zubaan	Mozez Singh	Vicky Kaushal, Sarah-Jane Dias, Raaghav Chanan...	India	March 2, 2019	TV-14	111 min	Dramas, International Movies, Music & Musicals	A scrappy but poor boy worms his way into a ty...
7786	s7785	Movie	Zulu Man in Japan	NaN	Nasty C	NaN	September 25, 2020	TV-MA	44 min	Documentaries, International Movies, Music & M...	In this documentary, South African rapper Nast...
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	Dessert wizard Adriano Zumbo looks for the nex...
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 & Musicals	This documentary delves into the mystique behi...

7789 rows × 11 columns

In [8]: `data.head(5)`

Out[8]:

	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 &...	In a future where the elite inhabit an island ...
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	After a devastating earthquake hits Mexico Cit...
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	When an army recruit is found dead, his fellow...

Show_Id	Category	Title	Director	Cast	Country	Release_Date	Rating	Duration	Type	Description	
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...	In a postapocalyptic world, rag-doll robots hi...
4	s5	Movie	21	Robert Luketic	Jim Sturgess, Kevin Spacey, Kate Bosworth, Aar...	United States	January 1, 2020	PG-13	123 min	Dramas	A brilliant group of students become card-coun...

```
In [9]: data.shape
```

```
Out[9]: (7789, 11)
```

```
In [10]: data.size
```

```
Out[10]: 85679
```

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

```
Out[11]: Index(['Show_Id', 'Category', 'Title', 'Director', 'Cast', 'Country',
               'Release_Date', 'Rating', 'Duration', 'Type', 'Description'],
              dtype='object')
```

```
In [12]: data.dtypes
```

```
Out[12]: 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 [13]: 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

```

```
In [14]: # Is there any Duplicate record in this dataset? if yes remove.
```

```
In [16]: data[data.duplicated()]
```

```
Out[16]:
```

	Show_Id	Category	Title	Director	Cast	Country	Release_Date	Rating	Duration	Type	Description
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	When two would-be robbers accidentally kill 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	A disillusioned security guard transforms into...

```
In [21]: data.drop_duplicates()
```

```
Out[21]:
```

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

	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 &...	In a future where the elite inhabit an island ...
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	After a devastating earthquake hits Mexico Cit...
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	When an army recruit is found dead, his fellow...
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...	In a postapocalyptic world, rag-doll robots hi...
4	s5	Movie	21	Robert Luketic	Jim Sturgess, Kevin Spacey, Kate Bosworth, Aar...	United States	January 1, 2020	PG-13	123 min	Dramas	A brilliant group of students become card-coun...
...
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	Dramas, International Movies	When Lebanon's Civil War deprives Zozo of his ...
7785	s7784	Movie	Zubaan	Mozez Singh	Vicky Kaushal, Sarah-Jane Dias, Raaghav Chanan...	India	March 2, 2019	TV-14	111 min	Dramas, International Movies, Music & Musicals	A scrappy but poor boy worms his way into a ty...
7786	s7785	Movie	Zulu Man in Japan	NaN	Nasty C	NaN	September 25, 2020	TV-MA	44 min	Documentaries, International Movies, Music & M...	In this documentary, South African rapper Nast...

	Show_Id	Category	Title	Director	Cast	Country	Release_Date	Rating	Duration	Type	Description
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	Dessert wizard Adriano Zumbo looks for the nex...
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 & Musicals	This documentary delves into the mystique behi...

7787 rows × 11 columns

```
In [22]: data.shape
```

```
Out[22]: (7787, 11)
```

```
In [ ]: data.drop_duplicates(inplace=True)
```

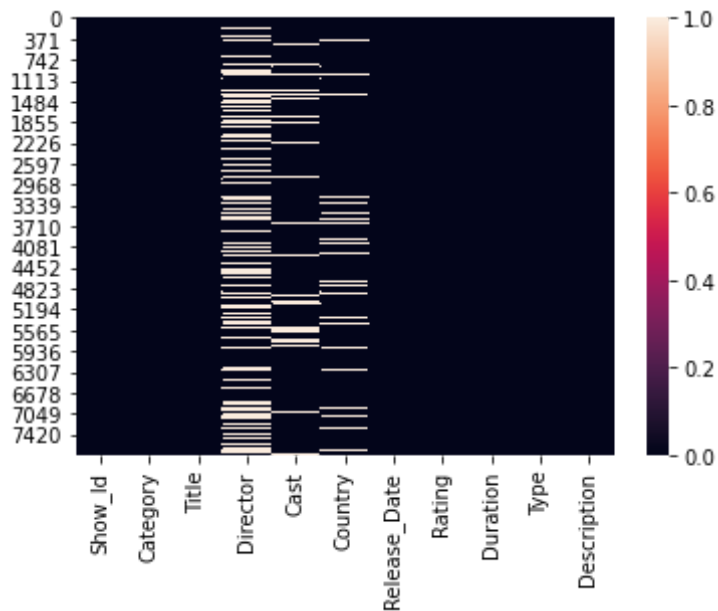
```
In [23]: #is there any null value
```

```
In [26]: data.isnull().sum()
```

```
Out[26]: 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
```

```
In [28]: sns.heatmap(data.isnull()) #showing in heatmap
```

```
Out[28]: <AxesSubplot:>
```



1-for "house of the cards",what is the show id and who is Director of this show?

```
In [30]: data.head(2)
```

```
Out[30]:
```

	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 &...	In a future where the elite inhabit an island ...
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	After a devastating earthquake hits Mexico Cit...

```
In [36]: data[data['Title'].isin(["House of Cards"])]
```

```
Out[36]:
```

	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	Dramas, TV Thrillers	A ruthless politician will stop at nothing to ...

2- In which year highest no. of the TV shows & movies releases?

```
In [38]: data.dtypes
```

```
Out[38]: 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 [44]: data['Date_N'] = pd.to_datetime(data['Release_Date'])
```

```
In [45]: data.head()
```

```
Out[45]:
```

	Show_Id	Category	Title	Director	Cast	Country	Release_Date	Rating	Duration	Type	Description	Data_N	Date_N
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 future where the elite inhabit an island ...	2020-08-14	2020-08-14
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	After a devastating earthquake hits Mexico Cit...	2016-12-23	2016-12-23

Show_Id	Category	Title	Director	Cast	Country	Release_Date	Rating	Duration	Type	Description	Data_N	Date_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	When an army recruit is found dead, his fellow...	2018-12-20	2018-12-20
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...	In a postapocalyptic world, rag-doll robots hi...	2017-11-16	2017-11-16
4	s5	Movie	21	Robert Luketic	Jim Sturgess, Kevin Spacey, Kate Bosworth, Aar...	United States	January 1, 2020	PG-13	123 min	Dramas	A brilliant group of students become card-coun...	2020-01-01	2020-01-01

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
Data_N           datetime64[ns]
Date_N           datetime64[ns]
dtype: object
```

In [50]: `data['Date_N'].dt.year.value_counts()`

```
Out[50]: 2019.0    2154
2020.0    2010
2018.0    1685
2017.0    1225
2016.0     443
2021.0     117
```

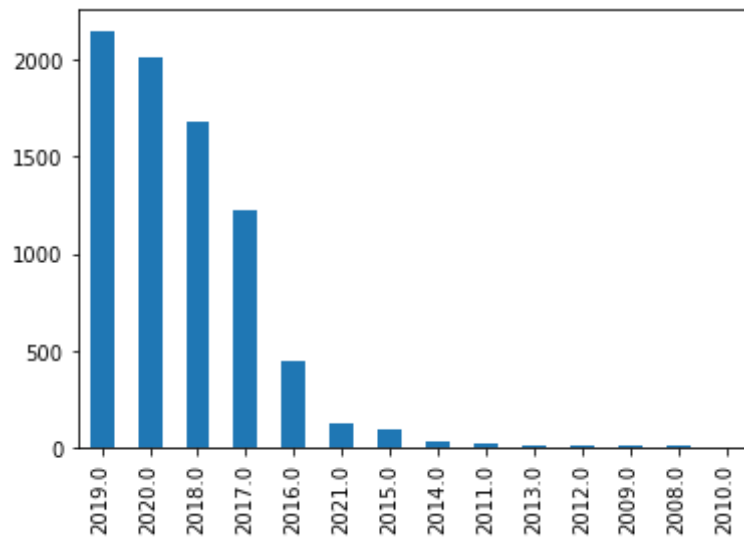
```

2015.0      88
2014.0      25
2011.0      13
2013.0      11
2012.0       3
2009.0       2
2008.0       2
2010.0       1
Name: Date_N, dtype: int64

```

```
In [51]: data['Date_N'].dt.year.value_counts().plot(kind='bar')
```

```
Out[51]: <AxesSubplot:>
```



3- How many Movies and TV shows in the dataset?

```
In [169... data.head(1)
```

```
Out[169... Show_Id  Category  Title  Director  Cast  Country  Release_Date  Rating  Duration  Type  Description  Data_N  Date_N  Year  Min
```

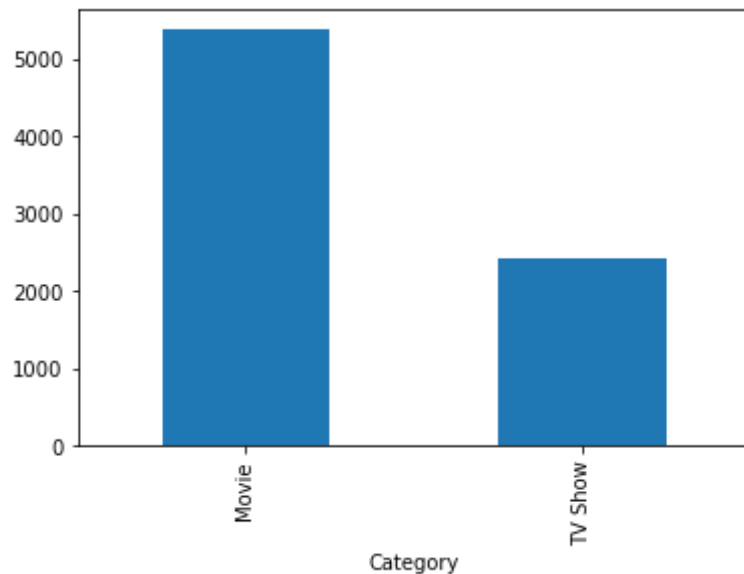
	Show_Id	Category	Title	Director	Cast	Country	Release_Date	Rating	Duration	Type	Description	Data_N	Date_N	Year	Min
0	s1	TV Show	3%	NaN	João Miguel, Bianca Comparato, Michel Gomes, R...	Brazil	August 14, 2020	TV-MA	4 Seasons	International TV Shows, TV Dramas, TV Sci-Fi &...	In a future where the elite inhabit an island ...	2020-08-14	2020-08-14	2020.0	4

```
In [54]: data.groupby("Category").Category.count()
```

```
Out[54]: Category
Movie      5379
TV Show    2410
Name: Category, dtype: int64
```

```
In [55]: data.groupby("Category").Category.count().plot(kind='bar')
```

```
Out[55]: <AxesSubplot:xlabel='Category'>
```



4 Show the movies released in year 2000

```
In [61]: data['Year'] = data['Date_N'].dt.year
```

```
In [62]: data.head(2)
```

```
Out[62]:
```

	Show_Id	Category	Title	Director	Cast	Country	Release_Date	Rating	Duration	Type	Description	Data_N	Date_N	Year
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 future where the elite inhabit an island ...	2020-08-14	2020-08-14	2020.0
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	After a devastating earthquake hits Mexico Cit...	2016-12-23	2016-12-23	2016.0

```
In [81]: data[ (data['Category']=='Movie') & (data['Year']==2000)]
```

```
Out[81]:
```

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

```
In [82]: data[ (data['Category']=='Movie') & (data['Year']==2020)] #filtering
```

```
Out[82]:
```

Show_Id	Category	Title	Director	Cast	Country	Release_Date	Rating	Duration	Type	Description	Data_N	Date_N	
4	s5	Movie	21	Robert Luketic	Jim Sturgess, Kevin Spacey, Kate Bosworth, Aar...	United States	January 1, 2020	PG-13	123 min	Dramas	A brilliant group of students become card-coun...	2020-01-01	2020-01-01

Show_Id	Category	Title	Director	Cast	Country	Release_Date	Rating	Duration	Type	Description	Data_N	Date_N	
6	s7	Movie	122	Yasir Al Yasiri	Amina Khalil, Ahmed Dawood, Tarek Lotfy, Ahmed...	Egypt	June 1, 2020	TV-MA	95 min	Horror Movies, International Movies	After an awful accident, a couple admitted to ...	2020-06-01	2020-06-01
14	s15	Movie	3022	John Suits	Omar Epps, Kate Walsh, Miranda Cosgrove, Angus...	United States	March 19, 2020	R	91 min	Independent Movies, Sci-Fi & Fantasy, Thrillers	Stranded when the Earth is suddenly destroyed ...	2020-03-19	2020-03-19
27	s28	Movie	#Alive	Cho Il	Yoo Ah-in, Park Shin-hye	South Korea	September 8, 2020	TV-MA	99 min	Horror Movies, International Movies, Thrillers	As a grisly virus rampages a city, a lone man ...	2020-09-08	2020-09-08
28	s29	Movie	#AnneFrank - Parallel Stories	Sabina Fedeli, Anna Migotto	Helen Mirren, Gengher Gatti	Italy	July 1, 2020	TV-14	95 min	Documentaries, International Movies	Through her diary, Anne Frank's story is retol...	2020-07-01	2020-07-01
...
7762	s7761	Movie	Zaki Chan	Wael Ihsan	Ahmed Helmy, Yasmin Abdulaziz, Hassan Hosny, H...	Egypt	May 19, 2020	TV-PG	109 min	Comedies, International Movies, Romantic Movies	An unqualified young man has his work cut out ...	2020-05-19	2020-05-19
7783	s7782	Movie	Zoom	Peter Hewitt	Tim Allen, Courteney Cox, Chevy Chase, Kate Ma...	United States	January 11, 2020	PG	88 min	Children & Family Movies, Comedies	Dragged from civilian life, a former superhero...	2020-01-11	2020-01-11

	Show_Id	Category	Title	Director	Cast	Country	Release_Date	Rating	Duration	Type	Description	Data_N	Date_N
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	Dramas, International Movies	When Lebanon's Civil War deprives Zozo of his ...	2020-10-19	2020-10-19
7786	s7785	Movie	Zulu Man in Japan	NaN	Nasty C	NaN	September 25, 2020	TV-MA	44 min	Documentaries, International Movies, Music & M...	In this documentary, South African rapper Nast...	2020-09-25	2020-09-25
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 & Musicals	This documentary delves into the mystique behi...	2020-03-01	2020-03-01

1313 rows × 14 columns



5- Show the TV Shows released on India

```
In [89]: data[(data['Country']=='India') & (data['Category']=="TV Show")]['Title']
```

```
Out[89]: 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
```

6- Show top 10 directors who gave the highest no. of tv shows and movies to Netflix?

```
In [168... data.head(1)
```

```
Out[168... Show_Id Category Title Director Cast Country Release_Date Rating Duration Type Description Data_N Date_N Year Min
```

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 future where the elite inhabit an island ...	2020-08-14	2020-08-14	2020.0	4
---	----	---------	----	-----	---	--------	-----------------	-------	-----------	---	---	------------	------------	--------	---

```
In [150... data["Director"].value_counts().head(10)
```

```
Out[150... Raúl Campos, Jan Suter      18
Marcus Raboy                  16
Jay Karas                     14
Cathy Garcia-Molina           13
Youssef Chahine                12
Martin Scorsese                12
Jay Chapman                   12
Steven Spielberg              10
David Dhawan                   9
Hakan Algül                   8
Name: Director, dtype: int64
```

7 Show the records where category is movies and type is comedy or country is United Kingdom

```
In [99]: data.head(1)
```

```
Out[99]: Show_Id Category Title Director Cast Country Release_Date Rating Duration Type Description Data_N Date_N Year
```

	Show_Id	Category	Title	Director	Cast	Country	Release_Date	Rating	Duration	Type	Description	Data_N	Date_N	Year
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 future where the elite inhabit an island ...	2020-08-14	2020-08-14	2020.0

```
In [105... data[(data["Category"]=="Movie") & (data['Type']=='Comedies') | (data['Country']=='United Kingdom')]
```

	Show_Id	Category	Title	Director	Cast	Country	Release_Date	Rating	Duration	Type	Description	Data_N	Date_N	Year
19	s20	Movie	'89	NaN	Lee Dixon, Ian Wright, Paul Merson	United Kingdom	May 16, 2018	TV-PG	87 min	Sports Movies	Mixing old footage with interviews, this is th...	2018-05-16	2018-05-16	2018
33	s34	Movie	#realityhigh	Fernando Lebrija	Nesta Cooper, Kate Walsh, John Michael Higgins...	United States	September 8, 2017	TV-14	99 min	Comedies	When nerdy high schooler Dani finally attracts...	2017-09-08	2017-09-08	2017
58	s59	TV Show	100% Hotter	NaN	Daniel Palmer, Melissa Sophia, Karen Williams,...	United Kingdom	November 1, 2019	TV-14	1 Season	British TV Shows, International TV Shows, Real...	A stylist, a hair designer and a makeup artist...	2019-11-01	2019-11-01	2019
72	s73	Movie	17 Again	Burr Steers	Zac Efron, Leslie Mann, Matthew Perry, Thomas ...	United States	January 1, 2021	PG-13	102 min	Comedies	Nearing a midlife crisis, thirty-something Mik...	2021-01-01	2021-01-01	2021
82	s83	Movie	2036 Origin Unknown	Hasraf Dulull	Katee Sackhoff, Ray Fearon, Julie Cox, Steven ...	United Kingdom	December 20, 2018	TV-14	95 min	Sci-Fi & Fantasy	Working with an artificial intelligence to inv...	2018-12-20	2018-12-20	2018

	Show_Id	Category	Title	Director	Cast	Country	Release_Date	Rating	Duration	Type	Description	Data_N	Date_M

7670	s7669	TV Show	World War II in Colour	NaN	Robert Powell	United Kingdom	August 1, 2017	TV-MA	1 Season	British TV Shows, Docuseries, International TV...	Footage of the most dramatic moments from Worl...	2017-08-01	2017-08-01
7671	s7670	TV Show	World's Busiest Cities	NaN	Anita Rani, Ade Adepitan, Dan Snow	United Kingdom	February 1, 2019	TV-PG	1 Season	British TV Shows, Docuseries	From Moscow to Mexico City, three BBC journali...	2019-02-01	2019-02-01
7688	s7687	Movie	XV: Beyond the Tryline	Pierre Deschamps	NaN	United Kingdom	March 18, 2020	TV-14	91 min	Documentaries, Sports Movies	Set against the 2015 Rugby World Cup, this doc...	2020-03-18	2020-03-18
7725	s7724	Movie	You Can Tutu	James Brown	Lily O'Regan, Jeannettsy Enriquez Borges, Joel...	United Kingdom	December 31, 2017	TV-G	87 min	Children & Family Movies	A gifted young ballet dancer struggles to find...	2017-12-31	2017-12-31
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	An incendiary hate crime stirs civil unrest, f...	2020-09-03	2020-09-03

485 rows × 14 columns



8 In how many movie Tom Cruise was cast

In [107... data.head(1)

Out[107...

Show_Id	Category	Title	Director	Cast	Country	Release_Date	Rating	Duration	Type	Description	Data_N	Date_N	Year	
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 future where the elite inhabit an island ...	2020-08-14	2020-08-14	2020.0

```
In [120]: data_new=data.dropna()
```

```
In [167]: data_new.head(1)
```

Out[167]	Show_Id	Category	Title	Director	Cast	Country	Release_Date	Rating	Duration	Type	Description	Data_N	Date_N	Year	
	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	After a devastating earthquake hits Mexico Cit...	2016-12-23	2016-12-23	2016.0

```
In [124]: data_new[data_new["Cast"].str.contains("Tom Cruise")]
```

Out [124...]	Show_Id	Category	Title	Director	Cast	Country	Release_Date	Rating	Duration	Type	Description	Data_N	Date_N	Year	
	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	Through chance, human action, past history and...	2020-01-01	2020-01-01	2020.
	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	A fast-talking yuppie is forced to slow down w...	2019-07-01	2019-07-01	2019.

9 what are rating defined by netflix

```
In [127... data['Rating'].nunique() #count
```

```
Out[127... 14
```

```
In [128... data['Rating'].unique() #exact result
```

```
Out[128... 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)
```

10 how many tv shows got R rating after 2018?

```
In [134... data[(data['Category']=="TV Show") & (data["Rating"]=="R") & (data['Year']>2018)]
```

```
Out[134...
```

	Show_Id	Category	Title	Director	Cast	Country	Release_Date	Rating	Duration	Type	Description	Data_N	Date_N	Year	
	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	Trapped at a stagecoach stop as a storm rages ...	2019- 04-25	2019- 04-25	2019.0

11-what is max duration of movies/show?

```
In [137... data['Duration'].nunique()
```

```
Out[137... 216
```

```
In [139... data.Duration.dtypes
```

```
Out[139... dtype('O')
```

```
In [143... data[['Min','Unit']] = data['Duration'].str.split(' ',expand = True)
```

```
In [152... data.head(1)
```

```
Out[152...
```

	Show_Id	Category	Title	Director	Cast	Country	Release_Date	Rating	Duration	Type	Description	Data_N	Date_N	Year	Min
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 future where the elite inhabit an island ...	2020-08-14	2020-08-14	2020.0	4



```
In [145... data['Min'].max()
```

```
Out[145... '99'
```

```
In [157... data.head(2)
```

```
Out[157...
```

	Show_Id	Category	Title	Director	Cast	Country	Release_Date	Rating	Duration	Type	Description	Data_N	Date_N	Year	Mir
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 future where the elite inhabit an island ...	2020-08-14	2020-08-14	2020.0	4
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	After a devastating earthquake hits Mexico Cit...	2016-12-23	2016-12-23	2016.0	93



```
In [166... data['Type'].value_counts().head(10).plot(kind='bar')
```

```
Out[166... <AxesSubplot:>
```

