

```
#import dataset
import pandas as pd
data=pd.read_csv("8. Netflix Dataset.csv")
data
```

	Show_Id	Category	Title
0	s1	TV Show	3% \
1	s2	Movie	07:19
2	s3	Movie	23:59
3	s4	Movie	9
4	s5	Movie	21
...	...	...	...
7784	s7783	Movie	Zozo
7785	s7784	Movie	Zubaan
7786	s7785	Movie	Zulu Man in Japan
7787	s7786	TV Show	Zumbo's Just Desserts
7788	s7787	Movie	ZZ TOP: THAT LITTLE OL' BAND FROM TEXAS

	Director	Cast
0	NaN	João Miguel, Bianca Comparato, Michel Gomes, R...
1	Jorge Michel Grau	Demián Bichir, Héctor Bonilla, Oscar Serrano, ...
2	Gilbert Chan	Tedd Chan, Stella Chung, Henley Hii, Lawrence ...
3	Shane Acker	Elijah Wood, John C. Reilly, Jennifer Connelly...
4	Robert Luketic	Jim Sturgess, Kevin Spacey, Kate Bosworth, Aar...
...	...	...
...	...	...
7784	Josef Fares	Imad Creidi, Antoinette Turk, Elias Gergi, Car...
7785	Mozez Singh	Vicky Kaushal, Sarah-Jane Dias, Raaghav Chanan...
7786	NaN	Nasty C
7787	NaN	Adriano Zumbo, Rachel Khoo
7788	Sam Dunn	NaN

	Country	Release_Date
0	Brazil	August 14, 2020 \
1	Mexico	December 23, 2016
2	Singapore	December 20,

2018			
3		United States	November 16,
2017			
4		United States	January 1,
2020			
...		...	
...			
7784	Sweden, Czech Republic, United Kingdom, Denmar...		October 19,
2020			
7785		India	March 2,
2019			
7786		NaN	September 25,
2020			
7787		Australia	October 31,
2020			
7788	United Kingdom, Canada, United States		March 1,
2020			

	Rating	Duration	
Type			
0	TV-MA	4 Seasons	International TV Shows, TV Dramas, TV Sci-Fi &...
1	TV-MA	93 min	Dramas, International Movies
2	R	78 min	Horror Movies, International Movies
3	PG-13	80 min	Action & Adventure, Independent Movies, Sci-Fi...
4	PG-13	123 min	Dramas
...	...	...	
...			
7784	TV-MA	99 min	Dramas, International Movies
7785	TV-14	111 min	Dramas, International Movies, Music & Musicals
7786	TV-MA	44 min	Documentaries, International Movies, Music & M...
7787	TV-PG	1 Season	International TV Shows, Reality TV
7788	TV-MA	90 min	Documentaries, Music & Musicals

	Description
0	In a future where the elite inhabit an island ...
1	After a devastating earthquake hits Mexico Cit...
2	When an army recruit is found dead, his fellow...
3	In a postapocalyptic world, rag-doll robots hi...
4	A brilliant group of students become card-coun...

```

...
7784 When Lebanon's Civil War deprives Zozo of his ...
7785 A scrappy but poor boy worms his way into a ty...
7786 In this documentary, South African rapper Nast...
7787 Dessert wizard Adriano Zumbo looks for the nex...
7788 This documentary delves into the mystique behi...

[7789 rows x 11 columns]

```

## Basic Information About The Dataset

*#Top 5 records of the dataset*  
data.head()

	Show_Id	Category	Title	Director
0	s1	TV Show	3%	NaN \
1	s2	Movie	07:19	Jorge Michel Grau
2	s3	Movie	23:59	Gilbert Chan
3	s4	Movie	9	Shane Acker
4	s5	Movie	21	Robert Luketic

	Cast	Country
0	João Miguel, Bianca Comparato, Michel Gomes, R...	Brazil \
1	Demián Bichir, Héctor Bonilla, Oscar Serrano, ...	Mexico
2	Tedd Chan, Stella Chung, Henley Hii, Lawrence ...	Singapore
3	Elijah Wood, John C. Reilly, Jennifer Connelly...	United States
4	Jim Sturgess, Kevin Spacey, Kate Bosworth, Aar...	United States

	Release_Date	Rating	Duration
0	August 14, 2020	TV-MA	4 Seasons \
1	December 23, 2016	TV-MA	93 min
2	December 20, 2018	R	78 min
3	November 16, 2017	PG-13	80 min
4	January 1, 2020	PG-13	123 min

	Type
0	International TV Shows, TV Dramas, TV Sci-Fi &... \
1	Dramas, International Movies
2	Horror Movies, International Movies
3	Action & Adventure, Independent Movies, Sci-Fi...
4	Dramas

	Description
0	In a future where the elite inhabit an island ...
1	After a devastating earthquake hits Mexico Cit...
2	When an army recruit is found dead, his fellow...
3	In a postapocalyptic world, rag-doll robots hi...
4	A brilliant group of students become card-coun...

#Bottom 5 rows of the dataset

data.tail()

	Show_Id	Category	Title	Director
7784	s7783	Movie	Zozo	Josef Fares
7785	s7784	Movie	Zubaan	Mozez Singh
7786	s7785	Movie	Zulu Man in Japan	NaN
7787	s7786	TV Show	Zumbo's Just Desserts	NaN
7788	s7787	Movie	ZZ TOP: THAT LITTLE OL' BAND FROM TEXAS	Sam Dunn

	Cast
7784	Imad Creidi, Antoinette Turk, Elias Gergi, Car...
7785	Vicky Kaushal, Sarah-Jane Dias, Raaghav Chanan...
7786	Nasty C
7787	Adriano Zumbo, Rachel Khoo
7788	NaN

	Country	Release_Date
7784	Sweden, Czech Republic, United Kingdom, Denmar...	October 19, 2020
7785	India	March 2, 2019
7786	NaN	September 25, 2020
7787	Australia	October 31, 2020
7788	United Kingdom, Canada, United States	March 1, 2020

	Rating	Duration	Type
7784	TV-MA	99 min	Dramas, International Movies
7785	TV-14	111 min	Dramas, International Movies, Music & Musicals
7786	TV-MA	44 min	Documentaries, International Movies, Music & M...
7787	TV-PG	1 Season	International TV Shows, Reality TV
7788	TV-MA	90 min	Documentaries, Music & Musicals

Description

```
7784 When Lebanon's Civil War deprives Zozo of his ...
7785 A scrappy but poor boy worms his way into a ty...
7786 In this documentary, South African rapper Nast...
7787 Dessert wizard Adriano Zumbo looks for the nex...
7788 This documentary delves into the mystique behi...
```

```
#Show the number of rows and columns
```

```
data.shape
```

```
(7789, 11)
```

```
#Show each columns
```

```
data.columns
```

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

```
#Show the datatypes of each columns
```

```
data.dtypes
```

```
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
```

```
#Show the index, columns and datatypes at once
```

```
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
```

Finding out duplicate records, if any then remove the duplicate records.

```
data.shape
```

```
(7789, 11)
```

```
#To check duplicate data
```

```
data[data.duplicated()]
```

	Show_Id	Category	Title	Director
6300	s684	Movie	Backfire	Dave Patten \
6622	s6621	Movie	The Lost Okoroshi	Abba T. Makama

		Cast	Country
6300	Black Deniro, Byron "Squally" Vinson, Dominic ...		United States \
6622	Seun Ajayi, Judith Audu, Tope Tedela, Ifu Enna...		Nigeria

	Release_Date	Rating	Duration
6300	April 5, 2019	TV-MA	97 min \
6622	September 4, 2020	TV-MA	94 min

	Type
6300	Dramas, Independent Movies, Thrillers \
6622	Comedies, Dramas, Independent Movies

	Description
6300	When two would-be robbers accidentally kill a ...
6622	A disillusioned security guard transforms into...

```
#Remove duplicate data
```

```
data.drop_duplicates(inplace=True)
```

```
data[data.duplicated()]
```

```
Empty DataFrame
```

```
Columns: [Show_Id, Category, Title, Director, Cast, Country, Release_Date, Rating, Duration, Type, Description]
```

```
Index: []
```

```
data.shape
```

```
(7787, 11)
```

Now, there is no duplicate data.

## Finding out Null Values, if any then show it with heatmap.

```
#To show where null value is present  
data.isnull()
```

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

	Rating	Duration	Type	Description
0	False	False	False	False
1	False	False	False	False
2	False	False	False	False
3	False	False	False	False
4	False	False	False	False
...	...	...	...	...
7784	False	False	False	False
7785	False	False	False	False
7786	False	False	False	False
7787	False	False	False	False
7788	False	False	False	False

```
[7787 rows x 11 columns]
```

```
#Show count of null values in each column
```

```
data.isnull().sum()
```

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

```
# Import Visual Library
```

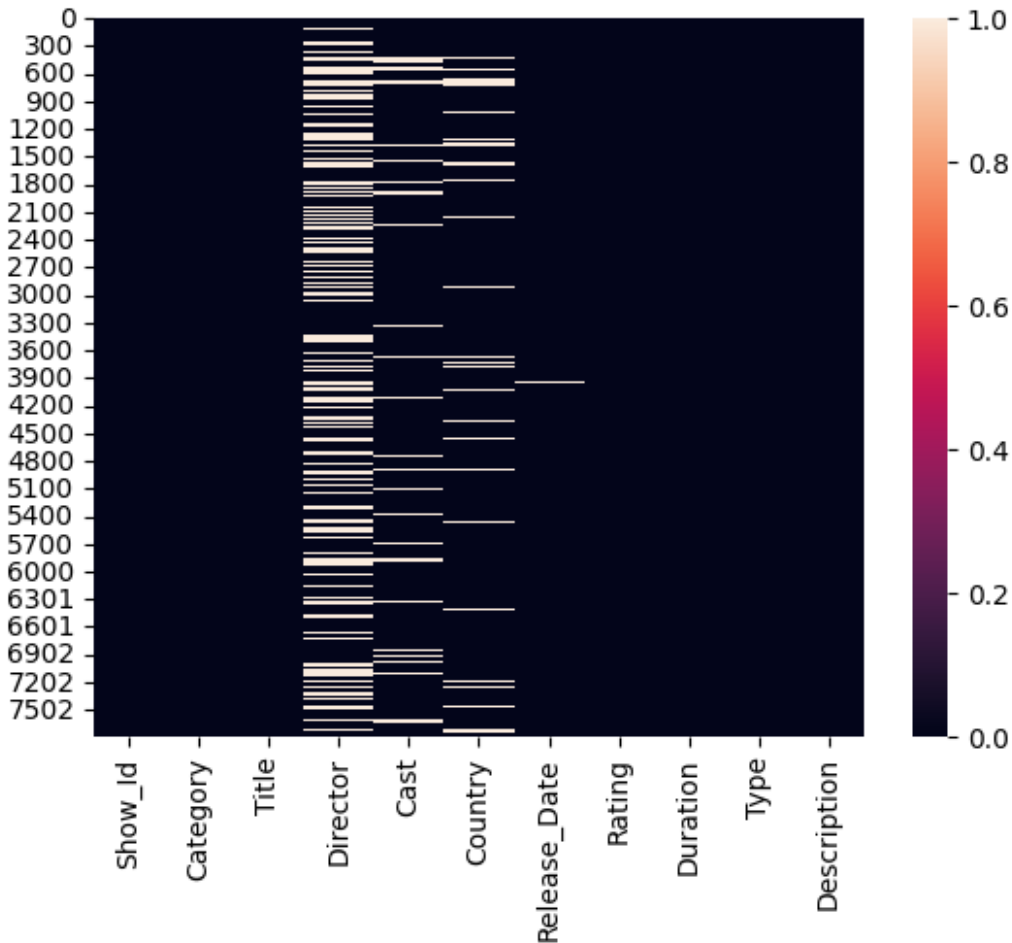
```
import seaborn as sns
```

```
#Using heat-map to show all null values
```

```
sns.heatmap(data.isnull())
```

```
<Axes: >
```





Q. 1) For 'House of Cards', what is the Show Id and Who is the Director of this show ?

```
#Show record of a particular item in any column.
data[data['Title'].isin(['House of Cards'])]
```

Show_Id	Category	Title
2832	s2833	TV Show
House of Cards \		
Director		
2832	Robin Wright, David Fincher, Gerald McRaney, J... \	
Cast		
Country		
2832	Kevin Spacey, Robin Wright, Kate Mara, Corey S... \	
United States		
Release_Date		
Rating		
Duration		
Type		

2832	November 2, 2018	TV-MA	6 Seasons	TV Dramas, TV Thrillers	\
				Description	
2832	A ruthless politician will stop at nothing to ...				

Q. 2) In which year the highest number of the TV Shows & Movies were released ?

```
data['Data_N']=pd.DatetimeIndex(data['Release_Date'])
```

```
data.info()
```

```
<class 'pandas.core.frame.DataFrame'>
```

```
Index: 7787 entries, 0 to 7788
```

```
Data columns (total 12 columns):
```

#	Column	Non-Null Count	Dtype
0	Show_Id	7787 non-null	object
1	Category	7787 non-null	object
2	Title	7787 non-null	object
3	Director	5399 non-null	object
4	Cast	7069 non-null	object
5	Country	7280 non-null	object
6	Release_Date	7777 non-null	object
7	Rating	7780 non-null	object
8	Duration	7787 non-null	object
9	Type	7787 non-null	object
10	Description	7787 non-null	object
11	Data_N	7777 non-null	datetime64[ns]

```
dtypes: datetime64[ns](1), object(11)
```

```
memory usage: 790.9+ KB
```

```
data['Data_N'].dt.year.value_counts()
```

Data_N	Count
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

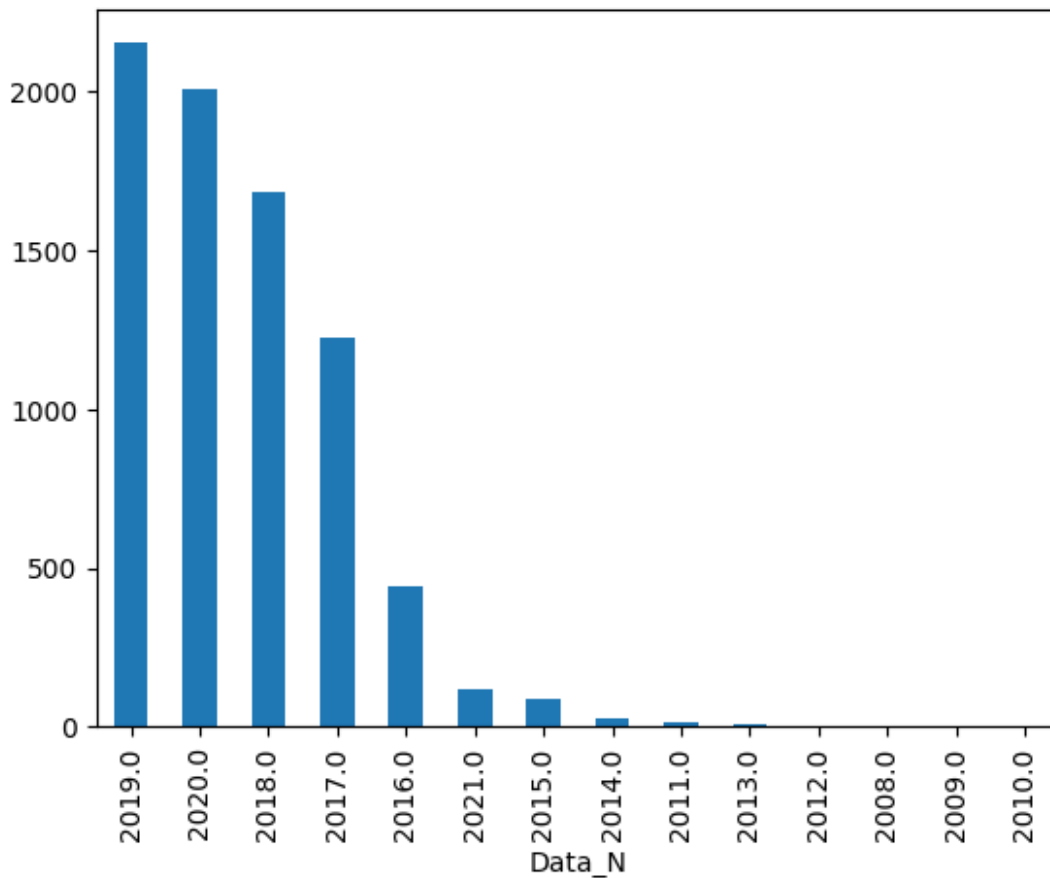
```

2009.0      2
2010.0      1
Name: count, dtype: int64

data['Data_N'].dt.year.value_counts().plot(kind='bar')

<Axes: xlabel='Data_N'>

```



Q. 3) How many Movies & TV Shows are in the dataset ?

```
data.head(3)
```

	Show_Id	Category	Title	Director	
0	s1	TV Show	3%	NaN	\
1	s2	Movie	07:19	Jorge Michel Grau	
2	s3	Movie	23:59	Gilbert Chan	

	Cast	Country	
0	João Miguel, Bianca Comparato, Michel Gomes, R...	Brazil	\

```

1 Demián Bichir, Héctor Bonilla, Oscar Serrano, ... Mexico
2 Tedd Chan, Stella Chung, Henley Hii, Lawrence ... Singapore

```

```

      Release_Date Rating  Duration
0   August 14, 2020  TV-MA  4 Seasons \
1  December 23, 2016  TV-MA    93 min
2  December 20, 2018    R    78 min

```

```

                                     Type
0  International TV Shows, TV Dramas, TV Sci-Fi &... \
1                                     Dramas, International Movies
2                                     Horror Movies, International Movies

```

```

                                     Description  Data_N
0  In a future where the elite inhabit an island ... 2020-08-14
1  After a devastating earthquake hits Mexico Cit... 2016-12-23
2  When an army recruit is found dead, his fellow... 2018-12-20

```

```
data.groupby('Category').Category.count()
```

```

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

```

```
data.Category.value_counts()
```

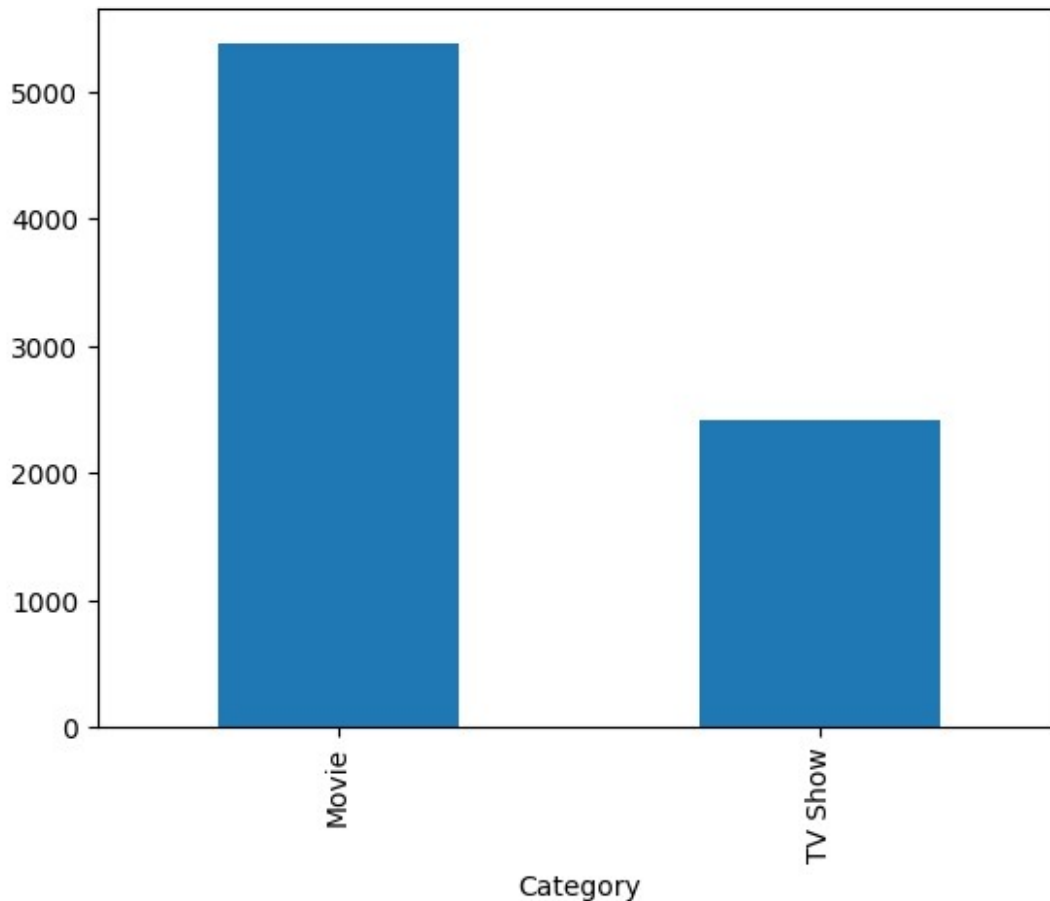
```

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

```

```
data.Category.value_counts().plot(kind="bar")
```

```
<Axes: xlabel='Category'>
```



Q. 4) Show all the Movies that were released in year 2000.

```
data["Year"]=data['Data_N'].dt.year
```

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

	Show_Id	Category	Title	Director
0	s1	TV Show	3%	NaN \
1	s2	Movie	07:19	Jorge Michel Grau

	Cast	Country
0	João Miguel, Bianca Comparato, Michel Gomes, R...	Brazil \
1	Demián Bichir, Héctor Bonilla, Oscar Serrano, ...	Mexico

	Release_Date	Rating	Duration
0	August 14, 2020	TV-MA	4 Seasons \
1	December 23, 2016	TV-MA	93 min

Type

```

0 International TV Shows, TV Dramas, TV Sci-Fi &... \
1 Dramas, International Movies

Description Data_N
Year
0 In a future where the elite inhabit an island ... 2020-08-14
2020.0
1 After a devastating earthquake hits Mexico Cit... 2016-12-23
2016.0

data[(data["Category"]=="Movie") & (data["Year"]==2000)]

Empty DataFrame
Columns: [Show_Id, Category, Title, Director, Cast, Country,
Release_Date, Rating, Duration, Type, Description, Data_N, Year]
Index: []

```

No movies were released in 2000

Q. 5) Show only the Titles of all TV Shows that were released in India only.

```

data[(data["Category"]=="TV Show") & (data["Country"]=="India")]
["Title"]

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

```

Q. 6) Show Top 10 Directors, who gave the highest number of TV Shows & Movies to Netflix ?

```

data.Director.value_counts().head(10)

```

```

Director
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: count, dtype: int64

```

Q. 7) Show all the Records, where "Category is Movie and Type is Comedies" or "Country is United Kingdom".

```

data[(data["Category"]=="Movie") & (data["Type"]=="Comedies") |
(data["Country"]=="United Kingdom")]

```

	Show_Id	Category	Title	Director
19	s20	Movie	'89	NaN
33	s34	Movie	#realityhigh	Fernando Lebrija
58	s59	TV Show	100% Hotter	NaN
72	s73	Movie	17 Again	Burr Steers
82	s83	Movie	2036 Origin Unknown	Hasraf Dulull
...	...	...	...	...
7670	s7669	TV Show	World War II in Colour	NaN
7671	s7670	TV Show	World's Busiest Cities	NaN
7688	s7687	Movie	XV: Beyond the Tryline	Pierre Deschamps
7725	s7724	Movie	You Can Tutu	James Brown
7740	s7739	TV Show	Young Wallander	NaN

	Country	Cast
19	United Kingdom	Lee Dixon, Ian Wright, Paul Merson
33	United States	Nesta Cooper, Kate Walsh, John Michael Higgins...
58	United Kingdom	Daniel Palmer, Melissa Sophia, Karen Williams,...
72	United States	Zac Efron, Leslie Mann, Matthew Perry, Thomas ...
82	United Kingdom	Katee Sackhoff, Ray Fearon, Julie Cox, Steven ...
...	...	...

7670	Robert Powell	United Kingdom
7671	Anita Rani, Ade Adepitan, Dan Snow	United Kingdom
7688	NaN	United Kingdom
7725	Lily O'Regan, Jeannettsy Enriquez Borges, Joel...	United Kingdom
7740	Adam Pålsson, Richard Dillane, Leanne Best, El...	United Kingdom

	Release_Date	Rating	Duration
19	May 16, 2018	TV-PG	87 min \
33	September 8, 2017	TV-14	99 min
58	November 1, 2019	TV-14	1 Season
72	January 1, 2021	PG-13	102 min
82	December 20, 2018	TV-14	95 min
...	...	...	...
7670	August 1, 2017	TV-MA	1 Season
7671	February 1, 2019	TV-PG	1 Season
7688	March 18, 2020	TV-14	91 min
7725	December 31, 2017	TV-G	87 min
7740	September 3, 2020	TV-MA	1 Season

	Type
19	Sports Movies \
33	Comedies
58	British TV Shows, International TV Shows, Real...
72	Comedies
82	Sci-Fi & Fantasy
...	...
7670	British TV Shows, Docuseries, International TV...
7671	British TV Shows, Docuseries
7688	Documentaries, Sports Movies
7725	Children & Family Movies
7740	Crime TV Shows, International TV Shows, TV Dramas

	Description	Data_N
Year		
19	Mixing old footage with interviews, this is th...	2018-05-16
2018.0		
33	When nerdy high schooler Dani finally attracts...	2017-09-08
2017.0		
58	A stylist, a hair designer and a makeup artist...	2019-11-01
2019.0		
72	Nearing a midlife crisis, thirty-something Mik...	2021-01-01
2021.0		
82	Working with an artificial intelligence to inv...	2018-12-20
2018.0		



```

...
...
7670 Footage of the most dramatic moments from Worl... 2017-08-01
2017.0
7671 From Moscow to Mexico City, three BBC journali... 2019-02-01
2019.0
7688 Set against the 2015 Rugby World Cup, this doc... 2020-03-18
2020.0
7725 A gifted young ballet dancer struggles to find... 2017-12-31
2017.0
7740 An incendiary hate crime stirs civil unrest, f... 2020-09-03
2020.0

[485 rows x 13 columns]

```

Q. 8) In how many movies/shows, Tom Cruise was cast ?

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

	Show_Id	Category	Title	Director
0	s1	TV Show	3%	NaN \
1	s2	Movie	07:19	Jorge Michel Grau

	Cast	Country
0	João Miguel, Bianca Comparato, Michel Gomes, R...	Brazil \
1	Demián Bichir, Héctor Bonilla, Oscar Serrano, ...	Mexico

	Release_Date	Rating	Duration
0	August 14, 2020	TV-MA	4 Seasons \
1	December 23, 2016	TV-MA	93 min

	Type
0	International TV Shows, TV Dramas, TV Sci-Fi &... \
1	Dramas, International Movies

	Description	Data_N
Year		
0	In a future where the elite inhabit an island ...	2020-08-14
		2020.0
1	After a devastating earthquake hits Mexico Cit...	2016-12-23
		2016.0

```
data_new=data.dropna() #Drop Null Values
```

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

Show_Id	Category	Title	Director	Cast	Country
3860	s3861	Movie	Magnolia	Paul Thomas Anderson	\
5071	s5071	Movie	Rain Man	Barry Levinson	
Release_Date	Rating	Duration	Type	Description	Data_N
3860	January 1, 2020	R 189 min	Dramas, Independent Movies		\
5071	July 1, 2019	R 134 min	Classic Movies, Dramas		
3860	Through chance, human action, past history and...	2020-01-01			
5071	A fast-talking yuppie is forced to slow down w...	2019-07-01			

Q. 9) What are the different Ratings defined by Netflix ?

```
data["Rating"].nunique()
14
data["Rating"].unique()
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)
```

Q. 9.1) How many Movies got the 'TV-14' rating, in Canada ?

```
data[(data["Category"]=="Movie") & (data["Rating"]=="TV-14") &
      (data["Country"]=="Canada")].shape
(11, 13)
```

Q. 9.2) How many TV Shows got the 'R' rating, after year 2018 ?

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

```
(1, 13)
```

Q. 10) What is the maximum duration of a Movie/Show on Netflix ?

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

```
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',
```

```

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)

```

```

data[["Minutes","Unit"]]=data["Duration"].str.split(" ",expand=True)
data.head(2)

```

	Show_Id	Category	Title	Director
0	s1	TV Show	3%	NaN \
1	s2	Movie	07:19 Jorge Michel Grau	

		Cast	Country
0	João Miguel, Bianca Comparato, Michel Gomes, R...		Brazil \
1	Demián Bichir, Héctor Bonilla, Oscar Serrano, ...		Mexico

	Release_Date	Rating	Duration
0	August 14, 2020	TV-MA	4 Seasons \
1	December 23, 2016	TV-MA	93 min

	Type
0	International TV Shows, TV Dramas, TV Sci-Fi &... \
1	Dramas, International Movies

	Description	Data_N
Year		
0	In a future where the elite inhabit an island ...	2020-08-14
	2020.0 \	
1	After a devastating earthquake hits Mexico Cit...	2016-12-23
	2016.0	

	Minutes	Unit
0	4	Seasons
1	93	min

```

data["Minutes"].max()

```

```
'99'
```

## Q. 11) Which individual country has the Highest No. of TV Shows ?

```
data_Tvshow=data[(data["Category"]=="TV Show")]
```

```
data_Tvshow.head(2)
```

	Show_Id	Category	Title	Director
0	s1	TV Show	3%	NaN \
5	s6	TV Show	46	Serdar Akar

	Release_Date	Cast	Country
0	João Miguel, Bianca Comparato, Michel Gomes, R... 14, 2020 \		Brazil August
5	Erdal Beşikçioğlu, Yasemin Allen, Melis Birkan... 1, 2017		Turkey July

	Rating	Duration	Type
0	TV-MA	4 Seasons	International TV Shows, TV Dramas, TV Sci-Fi &... \
5	TV-MA	1 Season	International TV Shows, TV Dramas, TV Mysteries

	Description	Data_N
0	In a future where the elite inhabit an island ... 2020.0 \	2020-08-14
5	A genetics professor experiments with a treatm... 2017.0	2017-07-01

	Minutes	Unit
0	4	Seasons
5	1	Season

```
data_Tvshow.Country.value_counts().head(1)
```

```
Country
United States    705
Name: count, dtype: int64
```

## Q. 12) How can we sort the dataset by Year ?

```
data.sort_values(by="Year")
```

	Show_Id	Category	Title		
Director					
7115	s7114	Movie	To and From New York	Sorin Dan	
Mihalcescu \					
1765	s1766	TV Show	Dinner for Five		
NaN					
3248	s3249	Movie	Just Another Love Story	Ole	
Bornedal					
5766	s5766	Movie	Splatter	Joe	
Dante					
3840	s3841	Movie	Mad Ron's Prevues from Hell	Jim	
Monaco					
...	...	...	...		
...					
3374	s3375	TV Show	Kikoriki		
NaN					
3492	s3493	TV Show	La Familia P. Luche		
NaN					
3946	s3947	TV Show	Maron		
NaN					
5138	s5138	TV Show	Red vs. Blue		
NaN					
6066	s6066	TV Show	The Adventures of Figaro Pho		
NaN					
			Cast	Country	
7115	Barbara King, Shaana Diya, John Krisiukenas, Y...			United States	
\					
1765			NaN	United States	
3248	Anders W. Berthelsen, Rebecka Hemse, Nikolaj L...			Denmark	
5766	Corey Feldman, Tony Todd, Tara Leigh, Erin Way...			United States	
3840	Nick Pawlow, Jordu Schell, Jay Kushwara, Micha...			United States	
...			...	...	
3374			Igor Dmitriev	NaN	
3492	Eugenio Derbez, Consuelo Duval, Luis Manuel Áv...			United States	
3946	Marc Maron, Judd Hirsch, Josh Brener, Nora Zeh...			United States	
5138	Burnie Burns, Jason Saldaña, Gustavo Sorola, G...			United States	

6066	Luke Jurevicius, Craig Behenna, Charlotte Haml...	Australia
------	---	-----------

	Release_Date	Rating	Duration
7115	January 1, 2008	TV-MA	81 min \
1765	February 4, 2008	TV-MA	1 Season
3248	May 5, 2009	TV-MA	104 min
5766	November 18, 2009	TV-MA	29 min
3840	November 1, 2010	NR	84 min
...	...	...	...
3374	NaN	TV-Y	2 Seasons
3492	NaN	TV-14	3 Seasons
3946	NaN	TV-MA	4 Seasons
5138	NaN	NR	13 Seasons
6066	NaN	TV-Y7	2 Seasons

	Type
7115	Dramas, Independent Movies, Thrillers \
1765	Stand-Up Comedy & Talk Shows
3248	Dramas, International Movies
5766	Horror Movies
3840	Cult Movies, Horror Movies
...	...
3374	Kids' TV
3492	International TV Shows, Spanish-Language TV Sh...
3946	TV Comedies
5138	TV Action & Adventure, TV Comedies, TV Sci-Fi ...
6066	Kids' TV, TV Comedies

	Description	Data_N
Year		
7115	While covering a story in New York City, a Sea...	2008-01-01
2008.0 \		
1765	In each episode, four celebrities join host Jo...	2008-02-04
2008.0		
3248	When he causes a car accident that leaves a yo...	2009-05-05
2009.0		
5766	After committing suicide, a washed-up rocker r...	2009-11-18
2009.0		
3840	This collection cherry-picks trailers, forgott...	2010-11-01
2010.0		
...	...	...
...		
3374	A wacky rabbit and his gang of animal pals hav...	NaT
NaN		
3492	This irreverent sitcom featues Ludovico, Feder...	NaT
NaN		
3946	Marc Maron stars as Marc Maron, who interviews...	NaT
NaN		

```

5138 This parody of first-person shooter games, mil... NaT
NaN
6066 Imagine your worst fears, then multiply them: ... NaT
NaN

```

```

      Minutes      Unit
7115      81      min
1765       1  Season
3248     104      min
5766      29      min
3840      84      min
...      ...      ...
3374       2  Seasons
3492       3  Seasons
3946       4  Seasons
5138      13  Seasons
6066       2  Seasons

```

```
[7787 rows x 15 columns]
```

```
data.sort_values(by="Year",ascending=False)
```

```

      Show_Id Category      Title
Director
5564  s5564    Movie    Sherlock Holmes      Guy
Ritchie \
5919  s5919    Movie    Surf's Up  Ash Brannon,
Chris Buck
980   s981  TV Show    Bling Empire
NaN
5955  s5955    Movie    Taare Zameen Par
Aamir Khan
366   s367    Movie    Al acecho      Francisco
D'Eufemia
...      ...      ...
...
3374  s3375  TV Show    Kikoriki
NaN
3492  s3493  TV Show    La Familia P. Luche
NaN
3946  s3947  TV Show    Maron
NaN
5138  s5138  TV Show    Red vs. Blue
NaN
6066  s6066  TV Show    The Adventures of Figaro Pho
NaN

```

```

Cast
5564  Robert Downey Jr., Jude Law, Rachel McAdams, M... \
5919  Shia LaBeouf, Jeff Bridges, Zooey Deschanel, J...

```



980		NaN
5955	Aamir Khan, Darsheel Safary, Tanay Chheda, Tis...	
366	Rodrigo de la Serna, Belen Blanco, Walter Jako...	
...		...
3374		Igor Dmitriev
3492	Eugenio Derbez, Consuelo Duval, Luis Manuel Áv...	
3946	Marc Maron, Judd Hirsch, Josh Brener, Nora Zeh...	
5138	Burnie Burns, Jason Saldaña, Gustavo Sorola, G...	
6066	Luke Jurevicius, Craig Behenna, Charlotte Haml...	

	Country	Release_Date
5564	United States, Germany, United Kingdom, Australia	January 1, 2021
5919	United States	January 1, 2021
980	NaN	January 15, 2021
5955	India	January 10, 2021
366	NaN	January 12, 2021
...	...	
...		
3374	NaN	
NaN		
3492	United States	
NaN		
3946	United States	
NaN		
5138	United States	
NaN		
6066	Australia	
NaN		

	Rating	Duration	Type
5564	PG-13	128 min	Action & Adventure, Comedies
5919	PG	86 min	Children & Family Movies, Comedies, Sports Movies
980	TV-MA	1 Season	Reality TV
5955	PG	162 min	Dramas, International Movies
366	TV-MA	81 min	International Movies, Thrillers
...	...	...	
...			

3374	TV-Y	2 Seasons	
Kids' TV			
3492	TV-14	3 Seasons	International TV Shows, Spanish-Language TV
Sh...			
3946	TV-MA	4 Seasons	TV
Comedies			
5138	NR	13 Seasons	TV Action & Adventure, TV Comedies, TV Sci-Fi
...			
6066	TV-Y7	2 Seasons	Kids' TV, TV
Comedies			

	Description	Data_N
Year		
5564	The game is afoot for an eccentric detective w...	2021-01-01
2021.0	\	
5919	This Oscar-nominated animated comedy goes behi...	2021-01-01
2021.0		
980	Follow LA's wildly wealthy Asian and Asian Ame...	2021-01-15
2021.0		
5955	When daydreamer Ishaan is sent to boarding sch...	2021-01-10
2021.0		
366	Looking for a fresh start, a park ranger gets ...	2021-01-12
2021.0		
...	...	...
...		
3374	A wacky rabbit and his gang of animal pals hav...	NaT
NaN		
3492	This irreverent sitcom featues Ludovico, Feder...	NaT
NaN		
3946	Marc Maron stars as Marc Maron, who interviews...	NaT
NaN		
5138	This parody of first-person shooter games, mil...	NaT
NaN		
6066	Imagine your worst fears, then multiply them: ...	NaT
NaN		

	Minutes	Unit
5564	128	min
5919	86	min
980	1	Season
5955	162	min
366	81	min
...	...	...
3374	2	Seasons
3492	3	Seasons
3946	4	Seasons
5138	13	Seasons
6066	2	Seasons

[7787 rows x 15 columns]

Q. 13) Find all the instances where: Category is 'Movie' and Type is 'Dramas' or Category is 'TV Show' & Type is 'Kids' TV'.

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

	Show_Id	Category	Title	Director		Cast	Country
0	s1	TV Show	3%	NaN	\		
1	s2	Movie	07:19	Jorge Michel Grau			

	Release_Date	Rating	Duration		Type
0	August 14, 2020	TV-MA	4 Seasons	\	
1	December 23, 2016	TV-MA	93 min		

	Description	Data_N
0	In a future where the elite inhabit an island ...	2020-08-14
1	After a devastating earthquake hits Mexico Cit...	2016-12-23

	Minutes	Unit
0	4	Seasons
1	93	min

```
data[(data["Category"]=="Movie") & (data["Type"]=="Dramas")].head(2)
```

	Show_Id	Category	Title	Director		Cast	Country
4	s5	Movie	21	Robert Luketic	\		
7	s8	Movie	187	Kevin Reynolds			

	Release_Date	Rating	Duration	Type
4	January 1, 2020	PG-13	123 min	Dramas
7	November 1, 2019	R	119 min	Dramas

	Description	Data_N
4	Jim Sturgess, Kevin Spacey, Kate Bosworth, Aar...	United States
7	Samuel L. Jackson, John Heard, Kelly Rowan, Cl...	United States

```

Year
4  A brilliant group of students become card-coun... 2020-01-01
2020.0 \
7  After one of his high school students attacks ... 2019-11-01
2019.0

```

```

Minutes Unit
4      123  min
7      119  min

```

```

data[(data["Category"]=="TV Show") & (data["Type"]=="Kids'
TV")].head(2)

```

```

Show_Id Category      Title      Director
111      s112  TV Show      44 Cats      NaN \
276      s277  TV Show  Abby Hatcher  Kyran Kelly

```

Cast

```

Country
111  Sarah Natochenny, Suzy Myers, Simona Berman, E...
Italy \
276  Macy Drouin, Wyatt White, Paul Sun-Hyung Lee, ...  United States,
Canada

```

```

Release_Date Rating  Duration      Type
111  October 1, 2020  TV-Y7  2 Seasons  Kids' TV \
276   July 1, 2020   TV-Y    1 Season  Kids' TV

```

Description Data\_N

```

Year
111  Paw-esome tales abound when singing furry frie... 2020-10-01
2020.0 \
276  A big-hearted girl helps her Fuzzly friends wh... 2020-07-01
2020.0

```

```

Minutes      Unit
111          2  Seasons
276          1  Season

```

```

data[(data["Category"]=="Movie") & (data["Type"]=="Dramas") |
(data["Category"]=="TV Show") & (data["Type"]=="Kids' TV")]

```

```

Show_Id Category      Title      Director
4      s5      Movie      21  Robert Luketic \
7      s8      Movie      187  Kevin Reynolds
111     s112  TV Show      44 Cats      NaN
170     s171  Movie      A Family Man  Mark Williams
232     s233  Movie  A Stoning in Fulham County  Larry Elikann
...      ...      ...      ...      ...
7668    s7667  TV Show      World of Winx  Iginio Straffi
7717    s7716  TV Show      Yoko      NaN

```

7719	s7718	TV Show	YOM	NaN
7758	s7757	TV Show	Z4	NaN
7761	s7760	TV Show	Zak Storm	NaN

#### Cast

4	Jim Sturgess, Kevin Spacey, Kate Bosworth, Aar...	\
7	Samuel L. Jackson, John Heard, Kelly Rowan, Cl...	
111	Sarah Natochenny, Suzy Myers, Simona Berman, E...	
170	Gerard Butler, Gretchen Mol, Alison Brie, Will...	
232	Ken Olin, Jill Eikenberry, Maureen Mueller, Gr...	
...	...	
7668	Haven Paschall, Alysha Deslorieux, Jessica Paq...	
7717	Eileen Stevens, Alyson Leigh Rosenfeld, Sarah ...	
7719	Sairaj, Devyani Dagaonkar, Ketan Singh, Mayur ...	
7758	Apollo Costa, Gabriel Santana, Matheus Lustosa...	
7761	Michael Johnston, Jessica Gee-George, Christin...	

#### Country

Release_Date		
4	United States	January 1,
2020 \		
7	United States	November 1,
2019		
111	Italy	October 1,
2020		
170	Canada, United States	December 15,
2019		
232	United States	October 1,
2011		
...	...	..
.		
7668	Italy, United States	June 16,
2017		
7717	NaN	June 23,
2018		
7719	NaN	June 7,
2018		
7758	Brazil	February 22,
2019		
7761	United States, France, South Korea, Indonesia	September 13,
2018		

	Rating	Duration	Type	
4	PG-13	123 min	Dramas	\
7	R	119 min	Dramas	
111	TV-Y7	2 Seasons	Kids' TV	
170	R	110 min	Dramas	
232	TV-14	95 min	Dramas	
...	...	...	...	
7668	TV-Y7	2 Seasons	Kids' TV	

7717	TV-Y	1 Season	Kids' TV
7719	TV-Y7	1 Season	Kids' TV
7758	TV-PG	2 Seasons	Kids' TV
7761	TV-Y7	3 Seasons	Kids' TV

		Description	Data_N
Year			
4	A brilliant group of students become card-coun...	2020-01-01	
2020.0	\		
7	After one of his high school students attacks ...	2019-11-01	
2019.0			
111	Paw-esome tales abound when singing furry frie...	2020-10-01	
2020.0			
170	A ruthless corporate headhunter battles his ri...	2019-12-15	
2019.0			
232	After reckless teens kill an Amish child, a pr...	2011-10-01	
2011.0			
...	...	...	...
...			
7668	The reality show "WOW!" engages the Winx in th...	2017-06-16	
2017.0			
7717	Friends Mai, Oto and Vik's games at the park b...	2018-06-23	
2018.0			
7719	With the mind of a human being, and the body o...	2018-06-07	
2018.0			
7758	Fading music biz veteran Zé realizes he has ju...	2019-02-22	
2019.0			
7761	Teen surfer Zak Storm is mysteriously transpor...	2018-09-13	
2018.0			

	Minutes	Unit
4	123	min
7	119	min
111	2	Seasons
170	110	min
232	95	min
...	...	...
7668	2	Seasons
7717	1	Season
7719	1	Season
7758	2	Seasons
7761	3	Seasons

[322 rows x 15 columns]