

netflix dataanalysis

August 19, 2021

```
[1]: #import panda
import pandas as pd
pd.read_csv(r"C:\Users\megha\Desktop\Netflix_Dataset.csv.csv")
```

```
[1]:      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      Moez 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]

```
[2]: data = pd.read_csv(r"C:\Users\megha\Desktop\Netflix_Dataset.csv.csv")
```

0.0.1 Getting some basic information about the dataset

1.head()

```
[3]: data.head() #to show top5 records
      ↳ of the dataset
```

```
[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
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...

2.tail()

```
[4]: data.tail()
```

```
[4]:
```

	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...

3.shape

```
[9]: data.shape #to show no of rows and columns
```

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

4.size

```
[7]: data.size #to show no of total  
↪ values in the dataset
```

```
[7]: 85679
```

5.columns

```
[8]: data.columns
```

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

6.dtypes

```
[10]: data.dtypes #to show the data type  
↪ of each column
```

```
[10]: 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

```

8.Info()

```

[11]: data.info()                                     #to show indexes,columns,data-types of
      ↪ each column,memory at once

```

```

<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

```

0.0.2 Checking for duplicate record in this dataset

0.0.3 duplicate()

```

[13]: data[data.duplicated()]                         #to check row wise and detect the duplicate
      ↪ rows

```

```

[13]:   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...

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

→ #to remove the duplicate rows permanently

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

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

```
[17]: data.shape
```

```
[17]: (7787, 11)
```

Checking for null value

isnull()

```
[18]: data.head()
```

```
[18]: 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...

```
[19]: data.isnull() #to show where null value is present
```

```
[19]:
```

	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]

```
[20]: data.isnull().sum()           #to show the count of null values in each column
      ↪column
```

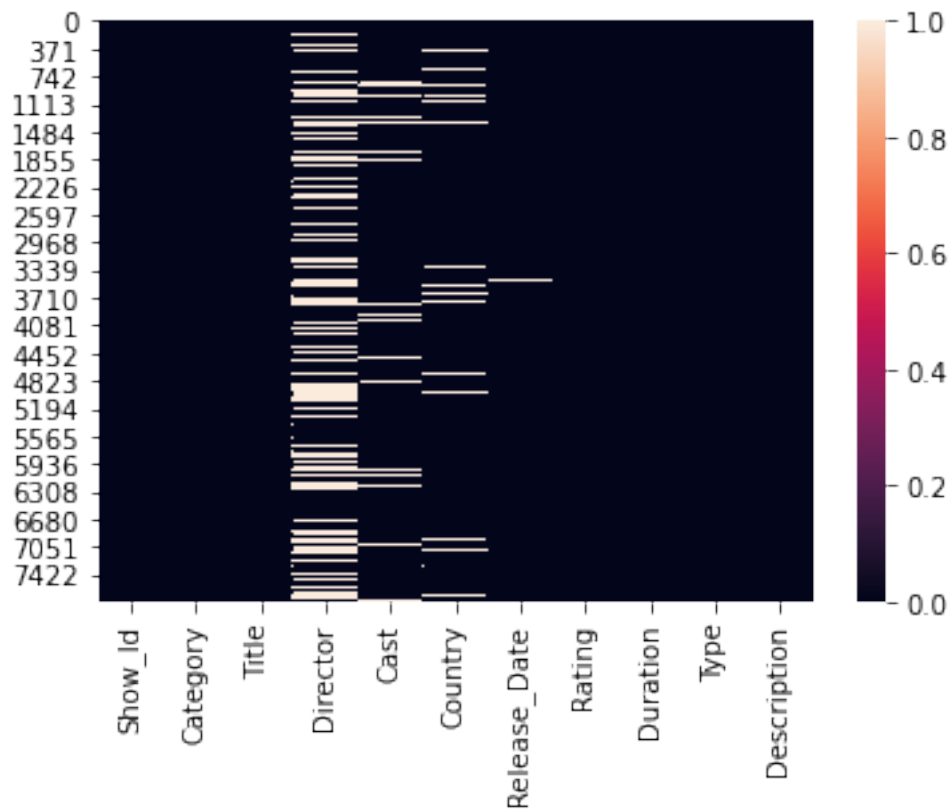
```
[20]: Show_Id           0
      Category         0
      Title            0
      Director        2388
      Cast             718
      Country          507
      Release_Date     10
      Rating           7
      Duration         0
      Type             0
      Description      0
      dtype: int64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

seaborn library

```
[21]: import seaborn as sns           #to import seaborn library
```

```
[22]: sns.heatmap(data.isnull())      #using heat-map
      ↪to show null values count
```

```
[22]: <AxesSubplot:>
```

0.0.4 For 'House of Cards', what is the Show Id and who is the director of this show?

isin()

```
[30]: data[data['Title'].isin(['House of Cards'])] #to show all records of a particular item in any column
```

```
[30]:      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 ...
```

0.0.5 str.contains()

```
[27]: data[data['Title'].str.contains('House of Cards')]
```

```
[27]:      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 ...
```

0.0.6 In which year highest number of tv shows & Movies were released ?

```
[31]: data['Date_N'] = pd.to_datetime(data['Release_Date'])
```

```
[32]: data.head()
```

```
[32]:      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      Date_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
3 In a postapocalyptic world, rag-doll robots hi... 2017-11-16
4 A brilliant group of students become card-coun... 2020-01-01

```

```
[33]: data.dtypes
```

```

[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
      Date_N        datetime64[ns]
      dtype: object

```

```
dt.year.value_counts()
```

```

[34]: data['Date_N'].dt.year.value_counts() #It_
      ↪ counts the occurrence of all individual years in date column

```

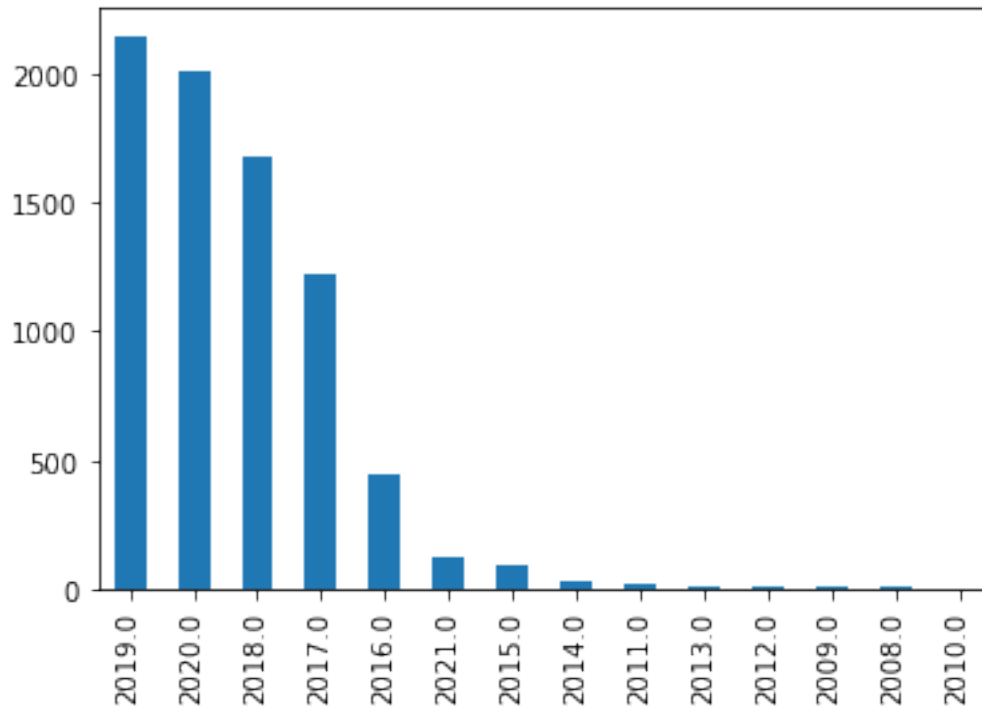
```

[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
      2009.0       2
      2008.0       2
      2010.0       1
      Name: Date_N, dtype: int64

```

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

```
[35]: <AxesSubplot:>
```



0.0.7 How many Movies & Tv shows are present in the dataset

groupby()

```
[42]: data.head(2)
```

```
[42]: 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	Date_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

```
[44]: data.groupby('Category').Category.count()           #To group all unique items
      ↪ of a column and show their count
```

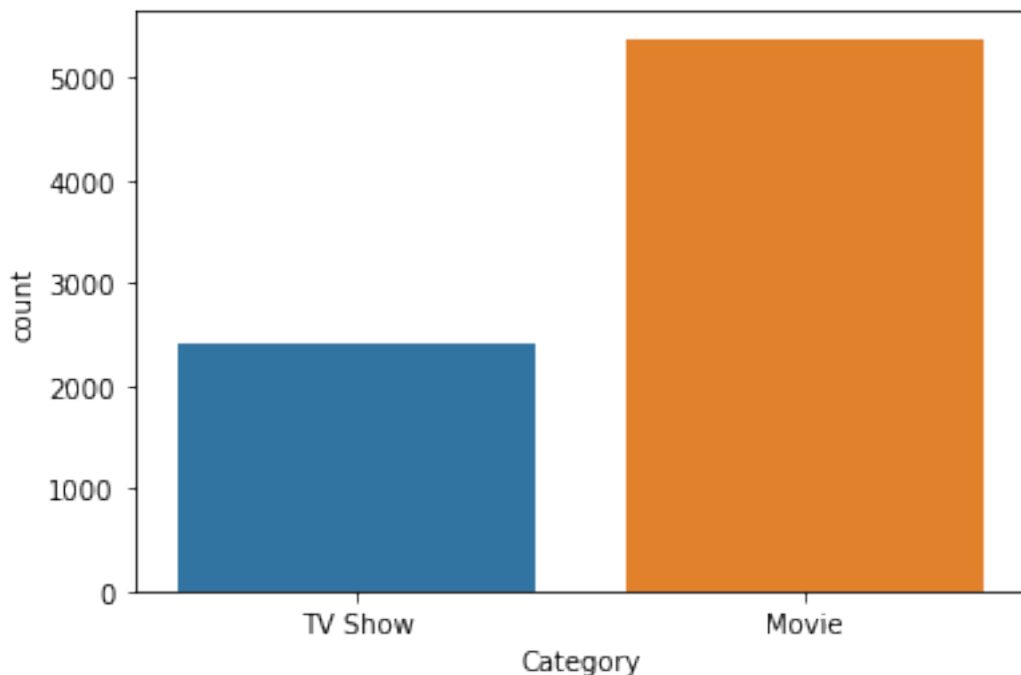
```
[44]: Category
      Movie      5377
      TV Show    2410
      Name: Category, dtype: int64
```

countplot()

```
[45]: sns.countplot(data['Category'])
```

C:\Users\megha\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(

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



0.0.8 All the movies that released in the year 2018

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

```
[47]: data.head(2)
```

```
[47]: 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 Date_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
```

Filtering

```
[49]: data[(data['Category'] == 'Movie') & (data['Year'] == 2018)]
```

```
[49]: Show_Id Category Title Director \
2 s3 Movie 23:59 Gilbert Chan
17 s18 Movie 22-Jul Paul Greengrass
19 s20 Movie '89 NaN
20 s21 Movie Kuch Bheege Alfaaz Onir
21 s22 Movie Goli Soda 2 Vijay Milton
... ... ... ... ...
7765 s7764 Movie Zenda Avadhoot Gupte
7770 s7769 Movie Zindagi Kitni Haseen Hay Anjum Shahzad
7773 s7772 Movie Zion Floyd Russ
7778 s7777 Movie Zokkomon Satyajit Bhatkal
7782 s7781 Movie Zoo Shlok Sharma

Cast \
2 Tedd Chan, Stella Chung, Henley Hii, Lawrence ...
17 Anders Danielsen Lie, Jon Øigarden, Jonas Stra...
19 Lee Dixon, Ian Wright, Paul Merson
20 Geetanjali Thapa, Zain Khan Durrani, Shray Rai...
```

21 Samuthirakani, Bharath Seeni, Vinoth, Esakki B...

...

7765 Santosh Juvekar, Siddharth Chandekar, Sachit P...

7770 Feroze Khan, Sajal Ali, Jibrayl Ahmed Rajput, ...

7773 Zion Clark

7778 Darsheel Safary, Anupam Kher, Manjari Fadnis, ...

7782 Shashank Arora, Shweta Tripathi, Rahul Kumar, ...

	Country	Release_Date	Rating	Duration	\
2	Singapore	December 20, 2018	R	78 min	
17	Norway, Iceland, United States	October 10, 2018	R	144 min	
19	United Kingdom	May 16, 2018	TV-PG	87 min	
20	India	September 1, 2018	TV-14	110 min	
21	India	September 15, 2018	TV-14	128 min	
...
7765	India	February 15, 2018	TV-14	120 min	
7770	Pakistan	October 1, 2018	TV-14	126 min	
7773	United States	August 10, 2018	TV-PG	12 min	
7778	India	November 1, 2018	PG	104 min	
7782	India	July 1, 2018	TV-MA	94 min	

	Type	\
2	Horror Movies, International Movies	
17	Dramas, Thrillers	
19	Sports Movies	
20	Dramas, Independent Movies, International Movies	
21	Action & Adventure, Dramas, International Movies	
...
7765	Dramas, International Movies	
7770	Dramas, International Movies, Romantic Movies	
7773	Documentaries, Sports Movies	
7778	Children & Family Movies, Dramas	
7782	Dramas, Independent Movies, International Movies	

	Description	Date_N	Year
2	When an army recruit is found dead, his fellow...	2018-12-20	2018.0
17	After devastating terror attacks in Norway, a ...	2018-10-10	2018.0
19	Mixing old footage with interviews, this is th...	2018-05-16	2018.0
20	After accidentally connecting over the Interne...	2018-09-01	2018.0
21	A taxi driver, a gangster and an athlete strug...	2018-09-15	2018.0
...
7765	A change in the leadership of a political part...	2018-02-15	2018.0
7770	Two young parents struggle to keep their marri...	2018-10-01	2018.0
7773	Born without legs and stuck in foster care for...	2018-08-10	2018.0
7778	When his cruel uncle abandons him, a young orp...	2018-11-01	2018.0
7782	A drug dealer starts having doubts about his t...	2018-07-01	2018.0

[1255 rows x 13 columns]

```
[53]: data[(data['Category'] == 'Movie') & (data['Year'] > 2018)]
```

```
[53]:
```

	Show_Id	Category	Title \
4	s5	Movie	21
6	s7	Movie	122
7	s8	Movie	187
8	s9	Movie	706
13	s14	Movie	2,215
...
7783	s7782	Movie	Zoom
7784	s7783	Movie	Zozo
7785	s7784	Movie	Zubaan
7786	s7785	Movie	Zulu Man in Japan
7788	s7787	Movie	ZZ TOP: THAT LITTLE OL' BAND FROM TEXAS

	Director	Cast \
4	Robert Luketic	Jim Sturgess, Kevin Spacey, Kate Bosworth, Aar...
6	Yasir Al Yasiri	Amina Khalil, Ahmed Dawood, Tarek Lotfy, Ahmed...
7	Kevin Reynolds	Samuel L. Jackson, John Heard, Kelly Rowan, Cl...
8	Shravan Kumar	Divya Dutta, Atul Kulkarni, Mohan Agashe, Anup...
13	Nottapon Boonprakob	Artiwara Kongmalai
...
7783	Peter Hewitt	Tim Allen, Courteney Cox, Chevy Chase, Kate Ma...
7784	Josef Fares	Imad Creidi, Antoinette Turk, Elias Gergi, Car...
7785	Mozez Singh	Vicky Kaushal, Sarah-Jane Dias, Raaghav Chanan...
7786	NaN	Nasty C
7788	Sam Dunn	NaN

	Country	Release_Date \
4	United States	January 1, 2020
6	Egypt	June 1, 2020
7	United States	November 1, 2019
8	India	April 1, 2019
13	Thailand	March 1, 2019
...
7783	United States	January 11, 2020
7784	Sweden, Czech Republic, United Kingdom, Denmar...	October 19, 2020
7785	India	March 2, 2019
7786	NaN	September 25, 2020
7788	United Kingdom, Canada, United States	March 1, 2020

	Rating	Duration	Type \
4	PG-13	123 min	Dramas
6	TV-MA	95 min	Horror Movies, International Movies
7	R	119 min	Dramas

8	TV-14	118 min	Horror Movies, International Movies
13	TV-MA	89 min	Documentaries, International Movies, Sports Mo...
...
7783	PG	88 min	Children & Family Movies, Comedies
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...
7788	TV-MA	90 min	Documentaries, Music & Musicals

		Description	Date_N	Year
4	A brilliant group of students become card-coun...	2020-01-01	2020.0	
6	After an awful accident, a couple admitted to ...	2020-06-01	2020.0	
7	After one of his high school students attacks ...	2019-11-01	2019.0	
8	When a doctor goes missing, his psychiatrist w...	2019-04-01	2019.0	
13	This intimate documentary follows rock star Ar...	2019-03-01	2019.0	
...	
7783	Dragged from civilian life, a former superhero...	2020-01-11	2020.0	
7784	When Lebanon's Civil War deprives Zozo of his ...	2020-10-19	2020.0	
7785	A scrappy but poor boy worms his way into a ty...	2019-03-02	2019.0	
7786	In this documentary, South African rapper Nast...	2020-09-25	2020.0	
7788	This documentary delves into the mystique behi...	2020-03-01	2020.0	

[2897 rows x 13 columns]

```
[52]: data[(data['Category'] == 'Movie') & (data['Year'] < 2018)]
```

```
[52]:
```

	Show_Id	Category	Title \
1	s2	Movie	07:19
3	s4	Movie	9
9	s10	Movie	1920
10	s11	Movie	1922
25	s26	Movie	(T)ERROR
...
7731	s7730	Movie	You Get Me
7739	s7738	Movie	Young Tiger
7763	s7762	Movie	Zapped
7772	s7771	Movie	Zinzana
7774	s7773	Movie	Zipi & Zape y la Isla del Capitan
		Director \	
1		Jorge Michel Grau	
3		Shane Acker	
9		Vikram Bhatt	
10		Zak Hilditch	
25		Lyric R. Cabral, David Felix Sutcliffe	
...		...	
7731		Brent Bonacorso	

7739	Mu Chu
7763	Peter DeLuise
7772	Majid Al Ansari
7774	Oskar Santos

	Cast \
1	Demián Bichir, Héctor Bonilla, Oscar Serrano, ...
3	Elijah Wood, John C. Reilly, Jennifer Connelly...
9	Rajneesh Duggal, Adah Sharma, Indraneil Sengup...
10	Thomas Jane, Molly Parker, Dylan Schmid, Kaitl...
25	NaN
...	...
7731	Bella Thorne, Halston Sage, Taylor John Smith,...
7739	Qiu Yuen, Charlie Chin, Jackie Chan, Hu Chin, ...
7763	Zendaya, Chanelle Peloso, Spencer Boldman, Emi...
7772	Ali Suliman, Saleh Bakri, Yasa, Ali Al-Jabri, ...
7774	Teo Planell, Toni Gómez, Elena Anaya, Iria Cas...

	Country	Release_Date	Rating	Duration \
1	Mexico	December 23, 2016	TV-MA	93 min
3	United States	November 16, 2017	PG-13	80 min
9	India	December 15, 2017	TV-MA	143 min
10	United States	October 20, 2017	TV-MA	103 min
25	United States	June 30, 2016	NR	84 min
...
7731	United States	June 23, 2017	TV-MA	89 min
7739	Hong Kong	November 1, 2016	NR	81 min
7763	Canada, United States	February 1, 2017	TV-Y	92 min
7772	United Arab Emirates, Jordan	March 9, 2016	TV-MA	96 min
7774	Spain	July 1, 2017	TV-PG	105 min

	Type \
1	Dramas, International Movies
3	Action & Adventure, Independent Movies, Sci-Fi...
9	Horror Movies, International Movies, Thrillers
10	Dramas, Thrillers
25	Documentaries
...	...
7731	Dramas, Thrillers
7739	Action & Adventure, International Movies
7763	Children & Family Movies, Comedies
7772	Dramas, International Movies, Thrillers
7774	Children & Family Movies, Comedies

	Description	Date_N	Year
1	After a devastating earthquake hits Mexico Cit...	2016-12-23	2016.0
3	In a postapocalyptic world, rag-doll robots hi...	2017-11-16	2017.0

9	An architect and his wife move into a castle t...	2017-12-15	2017.0
10	A farmer pens a confession admitting to his wi...	2017-10-20	2017.0
25	This real-life look at FBI counterterrorism op...	2016-06-30	2016.0
...
7731	After a one-night stand, Holly develops a dang...	2017-06-23	2017.0
7739	Aided only by a tough female police officer, a...	2016-11-01	2016.0
7763	A girl discovers a dog-training app that can g...	2017-02-01	2017.0
7772	Recovering alcoholic Talal wakes up inside a s...	2016-03-09	2016.0
7774	At Christmas, Zip and Zap take a trip with the...	2017-07-01	2017.0

[1225 rows x 13 columns]

0.0.9 Find only the titles of all tv shows that were released in india only

```
[57]: data[(data['Category']=='TV Show')&(data['Country']=='India')]
```

```
[57]:
```

	Show_Id	Category	Title	Director	\
86	s87	TV Show	21 Sarfarosh: Saragarhi 1897	NaN	
132	s133	TV Show	7 (Seven)	Nizar Shafi	
340	s341	TV Show	Agent Raghav	NaN	
364	s365	TV Show	Akbar Birbal	NaN	
533	s534	TV Show	Anjaan: Rural Myths	NaN	
...	
6249	s6249	TV Show	The Creative Indians	NaN	
6400	s6399	TV Show	The Golden Years with Javed Akhtar	NaN	
6469	s6468	TV Show	The House That Made Me	NaN	
7294	s7293	TV Show	Typewriter	NaN	
7705	s7704	TV Show	Yeh Meri Family	NaN	

		Cast	Country	\
86		Luke Kenny, Mohit Raina, Mukul Dev	India	
132		Rahman, Havish, Regina Cassandra, Nandita Swet...	India	
340		Sharad Kelkar, Aahana Kumra, Mahesh Manjrekar,...	India	
364		Kiku Sharda, Vishal Kotian, Delnaaz Irani	India	
533		NaN	India	
...		
6249		NaN	India	
6400		NaN	India	
6469		Vinay Pathak	India	
7294		Aarna Sharma, Aaryansh Malviya, Mikail Gandhi,...	India	
7705		Vishesh Bansal, Mona Singh, Akarsh Khurana, Ah...	India	

	Release_Date	Rating	Duration	\
86	December 1, 2018	TV-14	1 Season	
132	July 30, 2019	TV-14	1 Season	
340	April 15, 2017	TV-14	1 Season	
364	March 31, 2020	TV-G	1 Season	

533	December 15, 2018	TV-14	1 Season
...
6249	August 24, 2020	TV-MA	2 Seasons
6400	June 1, 2017	TV-G	1 Season
6469	March 31, 2017	TV-PG	3 Seasons
7294	July 19, 2019	TV-MA	1 Season
7705	August 31, 2018	TV-PG	1 Season

	Type \
86	International TV Shows, TV Dramas
132	TV Shows
340	Crime TV Shows, International TV Shows, TV Act...
364	Kids' TV, TV Comedies, TV Dramas
533	International TV Shows, TV Horror, TV Thrillers
...	...
6249	Docuseries, International TV Shows
6400	Docuseries, International TV Shows
6469	International TV Shows, Reality TV
7294	International TV Shows, TV Horror, TV Mysteries
7705	International TV Shows, TV Comedies

	Description	Date_N	Year
86	In one of history's greatest last stands, a ba...	2018-12-01	2018.0
132	Multiple women report their husbands as missin...	2019-07-30	2019.0
340	A mix of brilliance, erudition and skill enabl...	2017-04-15	2017.0
364	From battles of wit to fights for justice, Emp...	2020-03-31	2020.0
533	Spine-chilling stories of malevolent spirits u...	2018-12-15	2018.0
...
6249	From chefs and comedians to filmmakers and fas...	2020-08-24	2020.0
6400	Writer, poet and lyricist Javed Akhtar hosts t...	2017-06-01	2017.0
6469	With host Vinay Pathak, Indian celebrities ret...	2017-03-31	2017.0
7294	Three young friends in Goa plan to search an o...	2019-07-19	2019.0
7705	In the summer of 1998, middle child Harshu bal...	2018-08-31	2018.0

[71 rows x 13 columns]

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

```
[58]: 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

```

0.0.10 Top 10 directors,who gave the highest numbet of Tv shows & Movies to Netflix

value_counts

```
[61]: data['Director'].value_counts().head(10)
```

```

[61]: 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
      Kunle Afolayan              8
Name: Director, dtype: int64

```

0.0.11 Finding all Records ,where “Category is movies and Type is comedies” or “country is united kingdom”

Filtering(And,Or operators)

```
[12]: data[ (data['Category']=='Movie') & (data['Type']=='Comedies')]
```

```

[12]:   Show_Id Category      Title      Director \
33      s34   Movie  #realityhigh  Fernando Lebrija
72      s73   Movie      17 Again    Burr Steers
84      s85   Movie  21 & Over  Jon Lucas, Scott Moore
148     s149   Movie  A Bad Moms Christmas  Jon Lucas, Scott Moore
174     s175   Movie  A Futile and Stupid Gesture  David Wain
...     ...     ...
7341    s7340   Movie  Undercover Brother 2    Leslie Small
7590    s7589   Movie  Where's the Money    Scott Zabielski
7623    s7622   Movie  Wild Oats    Andy Tennant
7634    s7633   Movie  Wine Country    Amy Poehler
7664    s7663   Movie  Work It    Laura Terruso

```

```

Cast \
33  Nesta Cooper, Kate Walsh, John Michael Higgins...
72  Zac Efron, Leslie Mann, Matthew Perry, Thomas ...
84  Miles Teller, Skylar Astin, Justin Chon, Sarah...
148  Mila Kunis, Kristen Bell, Kathryn Hahn, Susan ...
174  Will Forte, Domhnall Gleeson, Martin Mull, Joe...
...
7341  Michael Jai White, Vince Swann, Barry Bostwick...

```

7590 Andrew Bachelor, Kat Graham, Mike Epps, Terry ...
 7623 Shirley MacLaine, Jessica Lange, Billy Connoll...
 7634 Amy Poehler, Maya Rudolph, Ana Gasteyer, Rache...
 7664 Sabrina Carpenter, Jordan Fisher, Liza Koshy, ...

		Country	Release_Date	Rating	Duration	Type \
33		United States	September 8, 2017	TV-14	99 min	Comedies
72		United States	January 1, 2021	PG-13	102 min	Comedies
84		United States	April 16, 2019	R	93 min	Comedies
148	United States, China		February 14, 2020	R	104 min	Comedies
174		United States	January 26, 2018	TV-MA	102 min	Comedies
...	
7341		United States	November 5, 2019	R	85 min	Comedies
7590		United States	January 22, 2018	R	86 min	Comedies
7623	Germany, United States		May 13, 2017	PG-13	86 min	Comedies
7634		United States	May 10, 2019	R	104 min	Comedies
7664		United States	August 7, 2020	TV-14	94 min	Comedies

	Description
33	When nerdy high schooler Dani finally attracts...
72	Nearing a midlife crisis, thirty-something Mik...
84	Jeff's straight-and-narrow life changes abrupt...
148	Stressed-out moms Amy, Carla and Kiki are back...
174	In a brief life full of triumph and failure, "...
...	...
7341	When a beloved secret agent falls deep into a ...
7590	Hunting for a stash of stolen money, a sharp-w...
7623	When insurance accidentally pays her millions,...
7634	When longtime friends meet up for a wine-soake...
7664	A brilliant but clumsy high school senior vows...

[97 rows x 11 columns]

```
[21]: data[ (data['Category']=='Movie') &
        ↪(data['Type']=='Comedies')|(data['Country']=='United kingdom")]
```

[21]:	Show_Id	Category	Title	Director \
33	s34	Movie	#realityhigh	Fernando Lebrija
72	s73	Movie	17 Again	Burr Steers
84	s85	Movie	21 & Over	Jon Lucas, Scott Moore
148	s149	Movie	A Bad Moms Christmas	Jon Lucas, Scott Moore
174	s175	Movie	A Futile and Stupid Gesture	David Wain
...
7341	s7340	Movie	Undercover Brother 2	Leslie Small
7590	s7589	Movie	Where's the Money	Scott Zabielski
7623	s7622	Movie	Wild Oats	Andy Tennant
7634	s7633	Movie	Wine Country	Amy Poehler

7664	s7663	Movie	Work It	Laura Terruso
------	-------	-------	---------	---------------

33	Nesta Cooper, Kate Walsh, John Michael Higgins...
72	Zac Efron, Leslie Mann, Matthew Perry, Thomas ...
84	Miles Teller, Skylar Astin, Justin Chon, Sarah...
148	Mila Kunis, Kristen Bell, Kathryn Hahn, Susan ...
174	Will Forte, Domhnall Gleeson, Martin Mull, Joe...
...	...
7341	Michael Jai White, Vince Swann, Barry Bostwick...
7590	Andrew Bachelor, Kat Graham, Mike Epps, Terry ...
7623	Shirley MacLaine, Jessica Lange, Billy Connoll...
7634	Amy Poehler, Maya Rudolph, Ana Gasteyer, Rache...
7664	Sabrina Carpenter, Jordan Fisher, Liza Koshy, ...

	Country	Release_Date	Rating	Duration	Type \
33	United States	September 8, 2017	TV-14	99 min	Comedies
72	United States	January 1, 2021	PG-13	102 min	Comedies
84	United States	April 16, 2019	R	93 min	Comedies
148	United States, China	February 14, 2020	R	104 min	Comedies
174	United States	January 26, 2018	TV-MA	102 min	Comedies
...
7341	United States	November 5, 2019	R	85 min	Comedies
7590	United States	January 22, 2018	R	86 min	Comedies
7623	Germany, United States	May 13, 2017	PG-13	86 min	Comedies
7634	United States	May 10, 2019	R	104 min	Comedies
7664	United States	August 7, 2020	TV-14	94 min	Comedies

Description

```

33      When nerdy high schooler Dani finally attracts...
72      Nearing a midlife crisis, thirty-something Mik...
84      Jeff's straight-and-narrow life changes abrupt...
148     Stressed-out moms Amy, Carla and Kiki are back...
174     In a brief life full of triumph and failure, "...
...
7341    When a beloved secret agent falls deep into a ...
7590    Hunting for a stash of stolen money, a sharp-w...
7623    When insurance accidentally pays her millions,...
7634    When longtime friends meet up for a wine-soake...
7664    A brilliant but clumsy high school senior vows...

```

```
[97 rows x 11 columns]
```

0.0.12 Finding the records where Tom Cruise was cast

```
[22]: data[data['Cast']=='Tom Cruise']
```

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

```
[23]: data[data['Cast'].str.contains('Tom Cruise')]
```

```
-----
ValueError                                Traceback (most recent call last)
<ipython-input-23-99100bfe290c> in <module>
----> 1 data[data['Cast'].str.contains('Tom Cruise')]

~\anaconda3\lib\site-packages\pandas\core\frame.py in __getitem__(self, key)
    3012
    3013         # Do we have a (boolean) 1d indexer?
-> 3014         if com.is_bool_indexer(key):
    3015             return self._getitem_bool_array(key)
    3016

~\anaconda3\lib\site-packages\pandas\core\common.py in is_bool_indexer(key)
    112             # Don't raise on e.g. ["A", "B", np.nan], see
    113             # 
-> test_loc_getitem_list_of_labels_categoricalindex_with_na
--> 114             raise ValueError(msg)
    115             return False
    116             return True

ValueError: Cannot mask with non-boolean array containing NA / NaN values
```

Creating a new data frame

```
[24]: data_new= data.dropna()                                #It drops the rows that
      ↪contains all or any missing values
```

```
[25]: data_new.head(2)
```

```
[25]:   Show_Id  Category  Title      Director \
1         s2    Movie  07:19  Jorge Michel Grau
2         s3    Movie  23:59    Gilbert Chan

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


	Release_Date	Rating	Duration	Type \
1	December 23, 2016	TV-MA	93 min	Dramas, International Movies
2	December 20, 2018	R	78 min	Horror Movies, International Movies

	Description
1	After a devastating earthquake hits Mexico Cit...
2	When an army recruit is found dead, his fellow...

```
[26]: data_new[data_new['Cast'].str.contains('Tom Cruise')]
```

```
[26]:      Show_Id Category      Title      Director \
3860    s3861    Movie  Magnolia  Paul Thomas Anderson
5071    s5071    Movie   Rain Man      Barry Levinson
```

	Cast	Country \
3860	Jeremy Blackman, Tom Cruise, Melinda Dillon, A...	United States
5071	Dustin Hoffman, Tom Cruise, Valeria Golino, Ge...	United States

	Release_Date	Rating	Duration	Type \
3860	January 1, 2020	R	189 min	Dramas, Independent Movies
5071	July 1, 2019	R	134 min	Classic Movies, Dramas

	Description
3860	Through chance, human action, past history and...
5071	A fast-talking yuppie is forced to slow down w...

0.0.13 Getting the different ratings given by netflix

`nunique()`

```
[27]: data['Rating'].nunique() #shows different kinds of ratings
```

```
[27]: 14
```

`unique`

```
[28]: data['Rating'].unique() #shows exact result from column
```

```
[28]: 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)
```

How many Movies got the 'TV-14' Rating in USA and Canada?

```
[29]: data[(data['Category']=='Movie') & (data['Rating']=='TV-14')].shape
```

```
[29]: (1272, 11)
```

```
[30]: data[(data['Category']=='Movie') & (data['Rating']=='TV-14')
        ↪&(data['Country']=='Canada')]
```

[30]:

	Show_Id	Category	Title \
30	s31	Movie	#cats_the_mewvie
34	s35	Movie	#Roxy
608	s609	Movie	At First Light
1506	s1507	Movie	Counterfeiting in Suburbia
3713	s3714	Movie	Long Time Running
3956	s3957	Movie	Martin Matte: La vie, la mort...eh la la..!
5336	s5336	Movie	Sadie's Last Days on Earth
5393	s5393	Movie	Sardaar ji
6062	s6062	Movie	The Accountant of Auschwitz
7025	s7024	Movie	The Wrong Babysitter
7041	s7040	Movie	There's Something in the Water

	Director \
30	Michael Margolis
34	Michael Kennedy
608	Jason Stone
1506	Jason Bourque
3713	Jennifer Baichwal, Nicholas de Pencier
3956	Jean-François Blais
5336	Michael Seater
5393	Rohit Jugraj
6062	Matthew Shoychet
7025	George Mendeluk
7041	Ellen Page, Ian Daniel

	Cast Country \
30	NaN Canada
34	Jake Short, Sarah Fisher, Booboo Stewart, Dann... Canada
608	Stefanie Scott, Theodore Pellerin, Percy Hynes... Canada
1506	Sarah Butler, Larissa Albuquerque, Kayla Walla... Canada
3713	Gord Downie, Paul Langlois, Gord Sinclair, Rob... Canada
3956	Martin Matte Canada
5336	Morgan Taylor Campbell, Clark Backo, Ricardo H... Canada
5393	Diljit Dosanjh, Neeru Bajwa, Mandy Takhar, Jas... Canada
6062	NaN Canada
7025	Daphne Zuniga, Seann Gallagher, Lisa Marie Car... Canada
7041	Ellen Page Canada

	Release_Date	Rating	Duration \
30	February 5, 2020	TV-14	90 min
34	April 10, 2019	TV-14	105 min
608	December 27, 2018	TV-14	91 min
1506	July 1, 2018	TV-14	88 min
3713	November 12, 2017	TV-14	96 min
3956	October 14, 2019	TV-14	62 min
5336	August 22, 2017	TV-14	94 min

5393	December 1, 2017	TV-14	140 min
6062	July 1, 2019	TV-14	78 min
7025	June 18, 2019	TV-14	89 min
7041	March 27, 2020	TV-14	72 min

	Type \
30	Documentaries, International Movies
34	Comedies, Romantic Movies
608	Dramas, Sci-Fi & Fantasy
1506	Dramas, Thrillers
3713	Documentaries, International Movies, Music & M...
3956	Stand-Up Comedy
5336	Comedies, Sci-Fi & Fantasy
5393	Comedies, International Movies, Music & Musicals
6062	Documentaries, International Movies
7025	Thrillers
7041	Documentaries, International Movies

	Description
30	This pawesome documentary explores how our fel...
34	A teenage hacker with a huge nose helps a cool...
608	After mysterious lights imbue her with extraor...
1506	Two teenagers print counterfeit money in their...
3713	This documentary follows the 2016 tour of belo...
3956	Quebecois comedy star Martin Matte serves up e...
5336	High schooler Sadie Mitchell believes the worl...
5393	When a palatial wedding venue turns out to be ...
6062	Decades after WWII, a former SS officer stands...
7025	A widow searches for her missing teenage daugh...
7041	This documentary spotlights the struggle of mi...

```
[32]: data[ (data['Category']=='Movie') & (data['Rating']=='TV-14') &
      ↪&(data['Country']=='United States')]
```

```
[32]:
```

	Show_Id	Category	Title \
33	s34	Movie	#realityhigh
47	s48	Movie	1 Mile to You
56	s57	Movie	100 Years: One Woman's Fight for Justice
184	s185	Movie	A Haunting at Silver Falls: The Return
223	s224	Movie	A Secret Love
...
7563	s7562	Movie	What Still Remains
7571	s7570	Movie	What Would Sophia Loren Do?
7588	s7587	Movie	When We First Met
7644	s7643	Movie	Wish Man
7664	s7663	Movie	Work It

	Director	Cast \
33	Fernando Lebrija	Nesta Cooper, Kate Walsh, John Michael Higgins...
47	Leif Tilden	Billy Crudup, Graham Rogers, Liana Liberato, S...
56	Melinda Janko	NaN
184	Teo Konuralp	Laura Flannery, James Cavlo, Harry Hains, Clem...
223	Chris Bolan	NaN
...
7563	Josh Mendoza	Lulu Antariksa, Colin O'Donoghue, Mimi Rogers,...
7571	Ross Kauffman	Nancy "Vincenza Careri" Kulik, Sophia Loren
7588	Ari Sandel	Adam DeVine, Alexandra Daddario, Shelley Henn...
7644	Theo Davies	Andrew Steel, Kirby Bliss Blanton, Tom Sizemor...
7664	Laura Terruso	Sabrina Carpenter, Jordan Fisher, Liza Koshy, ...

	Country	Release_Date	Rating	Duration \
33	United States	September 8, 2017	TV-14	99 min
47	United States	July 7, 2017	TV-14	105 min
56	United States	March 20, 2018	TV-14	75 min
184	United States	September 17, 2019	TV-14	80 min
223	United States	April 29, 2020	TV-14	83 min
...
7563	United States	December 21, 2018	TV-14	91 min
7571	United States	January 15, 2021	TV-14	32 min
7588	United States	February 9, 2018	TV-14	97 min
7644	United States	December 3, 2019	TV-14	108 min
7664	United States	August 7, 2020	TV-14	94 min

	Type \
33	Comedies
47	Dramas, Romantic Movies, Sports Movies
56	Documentaries
184	Horror Movies, Independent Movies
223	Documentaries, LGBTQ Movies
...	...
7563	Dramas, Thrillers
7571	Documentaries
7588	Comedies, Romantic Movies
7644	Children & Family Movies, Dramas
7664	Comedies

	Description
33	When nerdy high schooler Dani finally attracts...
47	After escaping the bus accident that killed hi...
56	This documentary chronicles Elouise Cobell's l...
184	When the ghost of her serial killer aunt seemi...
223	Amid shifting times, two women kept their deca...
...	...
7563	Struggling to survive alone post-apocalypse, a...

```

7571 In this delightful short documentary, an Itali...
7588 Using a magical photo booth that sends him bac...
7644 After surviving a life-threatening accident, a...
7664 A brilliant but clumsy high school senior vows...

```

```
[200 rows x 11 columns]
```

```
[35]: data[(data['Category']=='Movie') & (data['Rating']=='TV-14') &
      →(data['Country']=='United States')].shape
```

```
[35]: (200, 11)
```

How many Tv shows got the rating 'R'

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

```
[68]:
```

	Show_Id	Category	Title	Director	\
4497	s4498	TV Show	Nobel	NaN	
6437	s6436	TV Show	The Hateful Eight: Extended Version	Quentin Tarantino	

		Cast	Country	\
4497	Aksel Hennie, Tuva Novotny, Anders Danielsen L...	Norway		
6437	Samuel L. Jackson, Kurt Russell, Jennifer Jaso...	NaN		

	Release_Date	Rating	Duration	\
4497	December 10, 2016	R	1 Season	
6437	April 25, 2019	R	1 Season	

	Type	\
4497	International TV Shows, TV Dramas, TV Thrillers	
6437	TV Shows	

	Description	Minutes	Unit	\
4497	A series of incidents in Afghanistan set compl...	1	Season	
6437	Trapped at a stagecoach stop as a storm rages ...	1	Season	

	Date_N	Year
4497	2016-12-10	2016.0
6437	2019-04-25	2019.0

```
[ ]:
```

What is the Maximum duration of a Movie/Show on Netflix?

```
[41]: data['Duration'].unique()
```

```
[41]: 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)
```

```
[42]: data.Duration.dtypes
```

```
[42]: dtype('O')
```

```
str.split()
```

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

```
[44]: data.head(2)
```

```
[44]:   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	Minutes	Unit
0	In a future where the elite inhabit an island ...	4	Seasons
1	After a devastating earthquake hits Mexico Cit...	93	min

max()

```
[45]: data['Minutes'].max()
```

```
[45]: '99'
```

```
[46]: data['Minutes'].min()
```

```
[46]: '1'
```

0.0.14 Which individual country has the Highest No of TV Shows?

```
[47]: data_tvshow = data[data['Category']== 'TV Show']
```

```
[48]: data_tvshow.head(2)
```

```
[48]: Show_Id Category Title      Director \
0      s1  TV Show      3%          NaN
5      s6  TV Show      46  Serdar Akar
```

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

	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	Minutes	Unit
0	In a future where the elite inhabit an island ...	4	Seasons
5	A genetics professor experiments with a treatm...	1	Season

```
[49]: data_tvshow.Country.value_counts()
```

```
[49]: United States      705
      United Kingdom    204
      Japan             157
      South Korea       147
      India             71
      ...
      Croatia           1
      United Arab Emirates 1
      France, Canada    1
      Denmark, Singapore, Canada, United States 1
      Canada, United Kingdom, United States 1
      Name: Country, Length: 183, dtype: int64
```

```
[50]: data_tvshow.Country.value_counts().head(1)
```

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

How can we sort the dataset by Year?

```
[56]: data.sort_values(by='Year').head(2)
```

```
[56]:   Show_Id  Category  Title  Director \
7115   s7114   Movie  To and From New York  Sorin Dan Mihalcescu
1765   s1766  TV Show    Dinner for Five          NaN

                                     Cast  Country \
7115  Barbara King, Shaana Diya, John Krisiukenas, Y...  United States
1765                                     NaN  United States

      Release_Date  Rating  Duration \
7115   January 1, 2008  TV-MA    81 min
1765  February 4, 2008  TV-MA  1 Season

                                     Type \
7115  Dramas, Independent Movies, Thrillers
1765          Stand-Up Comedy & Talk Shows

                                     Description  Minutes  Unit \
7115  While covering a story in New York City, a Sea...    81    min
1765  In each episode, four celebrities join host Jo...     1  Season

      Date_N  Year
7115  2008-01-01  2008.0
1765  2008-02-04  2008.0
```



```
[57]: data.sort_values(by='Year')
```

```
[57]:
```

	Show_Id	Category	Title	Director	\
7115	s7114	Movie	To and From New York	Sorin Dan Mihalcescu	
1765	s1766	TV Show	Dinner for Five	NaN	
5766	s5766	Movie	Splatter	Joe Dante	
3248	s3249	Movie	Just Another Love Story	Ole Bornedal	
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	
5766	Corey Feldman, Tony Todd, Tara Leigh, Erin Way...	United States	
3248	Anders W. Berthelsen, Rebecka Hemse, Nikolaj L...	Denmark	
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	
5766	November 18, 2009	TV-MA	29 min	
3248	May 5, 2009	TV-MA	104 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	
5766	Horror Movies	
3248	Dramas, International 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 Minutes Unit \
7115 While covering a story in New York City, a Sea... 81 min
1765 In each episode, four celebrities join host Jo... 1 Season
5766 After committing suicide, a washed-up rocker r... 29 min
3248 When he causes a car accident that leaves a yo... 104 min
3840 This collection cherry-picks trailers, forgott... 84 min
...
3374 A wacky rabbit and his gang of animal pals hav... 2 Seasons
3492 This irreverent sitcom featues Ludovico, Feder... 3 Seasons
3946 Marc Maron stars as Marc Maron, who interviews... 4 Seasons
5138 This parody of first-person shooter games, mil... 13 Seasons
6066 Imagine your worst fears, then multiply them: ... 2 Seasons

Date_N Year
7115 2008-01-01 2008.0
1765 2008-02-04 2008.0
5766 2009-11-18 2009.0
3248 2009-05-05 2009.0
3840 2010-11-01 2010.0
...
3374 NaT NaN
3492 NaT NaN
3946 NaT NaN
5138 NaT NaN
6066 NaT NaN

```

[7789 rows x 15 columns]

```
[58]: data.sort_values(by='Year', ascending = False)
```

```

[58]: Show_Id Category Title \
7353 s7352 Movie Unknown
2013 s2014 Movie Enter the Dragon
2349 s2350 Movie Gangaaajal
1497 s1498 Movie Cool Hand Luke
1194 s1195 Movie Can't Hardly Wait
...
3374 s3375 TV Show Kikoriki
3492 s3493 TV Show La Familia P. Luche
3946 s3947 TV Show Maron

```

5138	s5138	TV Show	Red vs. Blue
6066	s6066	TV Show	The Adventures of Figaro Pho

	Director \
7353	Jaume Collet-Serra
2013	Robert Clouse
2349	Prakash Jha
1497	Stuart Rosenberg
1194	Harry Elfont, Deborah Kaplan
...	...
3374	NaN
3492	NaN
3946	NaN
5138	NaN
6066	NaN

	Cast \
7353	Liam Neeson, Diane Kruger, January Jones, Aida...
2013	Bruce Lee, John Saxon, Jim Kelly, Ahna Capri, ...
2349	Ajay Devgn, Gracy Singh, Mohan Agashe, Mohan J...
1497	Paul Newman, George Kennedy, J.D. Cannon, Lou ...
1194	Jennifer Love Hewitt, Ethan Embry, Charlie Kor...
...	...
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	Rating \
7353	United Kingdom, Germany, France, United States	January 1, 2021	PG-13
2013	Hong Kong, United States	January 1, 2021	R
2349	India	January 8, 2021	TV-MA
1497	United States	January 1, 2021	TV-14
1194	United States	January 1, 2021	PG-13
...
3374	NaN	NaN	TV-Y
3492	United States	NaN	TV-14
3946	United States	NaN	TV-MA
5138	United States	NaN	NR
6066	Australia	NaN	TV-Y7

	Duration	Type \
7353	113 min	Action & Adventure, Thrillers
2013	103 min	Action & Adventure, Classic Movies
2349	148 min	Dramas, International Movies
1497	127 min	Classic Movies, Dramas

1194	101 min		Comedies, Romantic Movies
...
3374	2 Seasons		Kids' TV
3492	3 Seasons	International TV Shows, Spanish-Language TV Sh...	
3946	4 Seasons		TV Comedies
5138	13 Seasons	TV Action & Adventure, TV Comedies, TV Sci-Fi ...	
6066	2 Seasons		Kids' TV, TV Comedies

	Description	Minutes	Unit	\
7353	Liam Neeson stars as a man who regains conscio...	113	min	
2013	Recruited by a British agent, Shaolin master L...	103	min	
2349	Posted to a small, crime-ridden town, a cop so...	148	min	
1497	Luke Jackson likes to do things his own way, w...	127	min	
1194	At a wild high school graduation party, aspiri...	101	min	
...	
3374	A wacky rabbit and his gang of animal pals hav...	2	Seasons	
3492	This irreverent sitcom featues Ludovico, Feder...	3	Seasons	
3946	Marc Maron stars as Marc Maron, who interviews...	4	Seasons	
5138	This parody of first-person shooter games, mil...	13	Seasons	
6066	Imagine your worst fears, then multiply them: ...	2	Seasons	

	Date_N	Year
7353	2021-01-01	2021.0
2013	2021-01-01	2021.0
2349	2021-01-08	2021.0
1497	2021-01-01	2021.0
1194	2021-01-01	2021.0
...
3374	NaT	NaN
3492	NaT	NaN
3946	NaT	NaN
5138	NaT	NaN
6066	NaT	NaN

[7789 rows x 15 columns]

0.0.15 Category is 'Movie' and Type is 'Dramas'

0.0.16 or

0.0.17 Category is 'TV Show' & Type is 'Kids Tv'

```
[60]: data[(data['Category']=='Movie') & (data['Type']=='Dramas')].head(2)
```

```
[60]: Show_Id Category Title      Director \
4      s5      Movie      21  Robert Luketic
7      s8      Movie     187  Kevin Reynolds
```

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

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

	Description	Minutes	Unit	Date_N \
4	A brilliant group of students become card-coun...	123	min	2020-01-01
7	After one of his high school students attacks ...	119	min	2019-11-01

	Year
4	2020.0
7	2019.0

```
[62]: data[(data['Category']=='TV Show') & (data['Type']=='Kids' TV)]
```

```
[62]:
```

	Show_Id	Category	Title	Director \
111	s112	TV Show	44 Cats	NaN
276	s277	TV Show	Abby Hatcher	Kyran Kelly
434	s435	TV Show	Alphablocks	NaN
598	s599	TV Show	Ask the StoryBots	NaN
706	s707	TV Show	Bal Ganesh	Vijay S. Bhanushali
...
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 \
111	Sarah Natochenny, Suzy Myers, Simona Berman, E...
276	Macy Drouin, Wyatt White, Paul Sun-Hyung Lee, ...
434	Teresa Gallagher, David Holt, Lizzie Waterworth
598	Judy Greer, Erin Fitzgerald, Fred Tatasciore, ...
706	Meghna Erande Joshi, Parminder Ghumman
...	...
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 \
111	Italy	October 1, 2020
276	United States, Canada	July 1, 2020

434	United Kingdom	May 25, 2020
598	United States	August 2, 2019
706	NaN	March 31, 2020
...
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 \
111	TV-Y7	2 Seasons	Kids' TV
276	TV-Y	1 Season	Kids' TV
434	TV-Y	5 Seasons	Kids' TV
598	TV-Y	3 Seasons	Kids' TV
706	TV-Y7	1 Season	Kids' TV
...
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	Minutes	Unit \
111	Paw-esome tales abound when singing furry frie...	2	Seasons
276	A big-hearted girl helps her Fuzzly friends wh...	1	Season
434	The letters of the alphabet come to life in Al...	5	Seasons
598	Five curious little creatures track down the a...	3	Seasons
706	Watch Ganesh destroy demons, disarm invaders a...	1	Season
...
7668	The reality show "WOW!" engages the Winx in th...	2	Seasons
7717	Friends Mai, Oto and Vik's games at the park b...	1	Season
7719	With the mind of a human being, and the body o...	1	Season
7758	Fading music biz veteran Zé realizes he has ju...	2	Seasons
7761	Teen surfer Zak Storm is mysteriously transpor...	3	Seasons

	Date_N	Year
111	2020-10-01	2020.0
276	2020-07-01	2020.0
434	2020-05-25	2020.0
598	2019-08-02	2019.0
706	2020-03-31	2020.0
...
7668	2017-06-16	2017.0
7717	2018-06-23	2018.0
7719	2018-06-07	2018.0
7758	2019-02-22	2019.0

7761 2018-09-13 2018.0

[205 rows x 15 columns]

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

```
[63]:      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	Minutes	Unit	\
4		A brilliant group of students become card-coun...	123	min	
7		After one of his high school students attacks ...	119	min	
111		Paw-esome tales abound when singing furry frie...	2	Seasons	
170		A ruthless corporate headhunter battles his ri...	110	min	
232		After reckless teens kill an Amish child, a pr...	95	min	
...		
7668		The reality show "WOW!" engages the Winx in th...	2	Seasons	
7717		Friends Mai, Oto and Vik's games at the park b...	1	Season	
7719		With the mind of a human being, and the body o...	1	Season	
7758		Fading music biz veteran Zé realizes he has ju...	2	Seasons	
7761		Teen surfer Zak Storm is mysteriously transpor...	3	Seasons	

	Date_N	Year
4	2020-01-01	2020.0
7	2019-11-01	2019.0
111	2020-10-01	2020.0
170	2019-12-15	2019.0
232	2011-10-01	2011.0
...
7668	2017-06-16	2017.0
7717	2018-06-23	2018.0
7719	2018-06-07	2018.0
7758	2019-02-22	2019.0
7761	2018-09-13	2018.0

[322 rows x 15 columns]

By Meghana Vagdevi Korada

[]: