netflix-tv-shows-movies-analysis

November 12, 2024

IMPORTING LIBRARIES

Release_Date Rating

TV-MA

August 14, 2020

1 December 23, 2016 TV-MA

```
[101]: import pandas as pd
       import numpy as np
       import seaborn as sns
       import matplotlib.pyplot as plt
      IMPORTING DATASET
[102]: data = pd.read_csv(r"H:\DA. Python\14. Netflix TV shows and movies_

¬Analysis\Netflix Dataset.csv")
      Getting some basic information about the dataset
[103]: data.shape
[103]: (7789, 11)
[104]: data.head()
[104]:
         Show_Id Category
                           Title
                                            Director
                  TV Show
                               3%
       0
              s1
                                                 NaN
       1
              s2
                    Movie 07:19
                                   Jorge Michel Grau
       2
              s3
                    Movie 23:59
                                        Gilbert Chan
       3
                                         Shane Acker
              s4
                    Movie
                               9
                               21
                                      Robert Luketic
       4
              s5
                    Movie
                                                         Cast
                                                                     Country \
       O 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
```

Duration \

93 min

4 Seasons

```
November 16, 2017
                                        80 min
                             PG-13
       4
            January 1, 2020
                             PG-13
                                       123 min
                                                         Type \
          International TV Shows, TV Dramas, TV Sci-Fi &...
       0
       1
                                Dramas, International Movies
       2
                        Horror Movies, International Movies
         Action & Adventure, Independent Movies, Sci-Fi...
       3
       4
                                                       Dramas
                                                 Description
         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...
         A brilliant group of students become card-coun...
[105]: data.tail()
[105]:
            Show_Id Category
                                                                  Title
                                                                             Director
                                                                         Josef Fares
       7784
              s7783
                       Movie
                                                                   Zozo
       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 \
             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
                                                                       March 2, 2019
                                                           India
       7786
                                                             NaN
                                                                  September 25, 2020
       7787
                                                                    October 31, 2020
                                                       Australia
       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
                      90 min
       7788 TV-MA
                                                 Documentaries, Music & Musicals
```

78 min

R

2 December 20, 2018

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... [106]: data.columns [106]: Index(['Show_Id', 'Category', 'Title', 'Director', 'Cast', 'Country', 'Release_Date', 'Rating', 'Duration', 'Type', 'Description'], dtype='object') [107]: data.dtypes [107]: Show_Id object Category object Title object Director object Cast object Country object Release_Date object Rating object Duration object Type object

[108]: data.info()

Description

dtype: object

<class 'pandas.core.frame.DataFrame'>
RangeIndex: 7789 entries, 0 to 7788
Data columns (total 11 columns):

object

#	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	Туре	7789 non-null	object
10	Description	7789 non-null	object

```
Removing Duplicate Values.
[109]: data.head()
[109]:
         Show_Id Category
                            Title
                                            Director
       0
                  TV Show
                               3%
                                                  NaN
              s1
       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 \
          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
                                        93 min
                              TV-MA
       2 December 20, 2018
                                  R
                                        78 min
       3 November 16, 2017
                             PG-13
                                        80 min
            January 1, 2020
                             PG-13
                                       123 min
                                                         Type \
          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
       O 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...
[110]: data.shape
```

dtypes: object(11)
memory usage: 669.5+ KB

[110]: (7789, 11)

```
[111]: data[data.duplicated()]
            Show_Id Category
                                            Title
                                                         Director \
[111]:
               s684
                        Movie
                                         Backfire
                                                      Dave Patten
       6300
       6622
              s6621
                        Movie
                               The Lost Okoroshi
                                                   Abba T. Makama
                                                            Cast
                                                                         Country \
       6300
             Black Deniro, Byron "Squally" Vinson, Dominic ... United States
             Seun Ajayi, Judith Audu, Tope Tedela, Ifu Enna...
       6622
                                                                       Nigeria
                  Release Date Rating Duration \
       6300
                 April 5, 2019
                                 TV-MA
                                         97 min
             September 4, 2020
       6622
                                          94 min
                                 TV-MA
                                                Type
             Dramas, Independent Movies, Thrillers
       6300
       6622
              Comedies, Dramas, Independent Movies
                                                     Description
             When two would-be robbers accidentally kill a ...
             A disillusioned security guard transforms into...
[112]: data.drop_duplicates(inplace=True)
[113]:
       data.shape
[113]: (7787, 11)
      Showing the null values with heatmap.
[114]: data.head()
[114]:
         Show_Id Category
                            Title
                                             Director
       0
              s1
                  TV Show
                               3%
                                                  NaN
       1
              s2
                                   Jorge Michel Grau
                    Movie
                            07:19
       2
              s3
                    Movie
                           23:59
                                         Gilbert Chan
       3
                                          Shane Acker
              s4
                    Movie
                                9
                               21
                                      Robert Luketic
       4
              ธ5
                    Movie
                                                         Cast
                                                                      Country \
          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
```

```
August 14, 2020
       0
                             TV-MA
                                     4 Seasons
         December 23, 2016
                                        93 min
          December 20, 2018
                                        78 min
                                  R
       3 November 16, 2017
                                        80 min
                             PG-13
            January 1, 2020
                                       123 min
                            PG-13
                                                        Type \
          International TV Shows, TV Dramas, TV Sci-Fi &...
       0
       1
                                Dramas, International Movies
                        Horror Movies, International Movies
       3
         Action & Adventure, Independent Movies, Sci-Fi...
                                                      Dramas
                                                 Description
          In a future where the elite inhabit an island ...
         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...
[115]: data.isnull() #checking for the null values
                                Title Director
[115]:
                                                   Cast
                                                         Country
                                                                   Release_Date \
             Show_Id Category
       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
                         False False
                                           False
                                                            False
       7788
               False
                                                   True
                                                                          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
                        False False
       7786
              False
                                             False
       7787
              False
                        False False
                                             False
```

Duration \

Release_Date Rating

[7787 rows x 11 columns] [116]: data.isnull().sum() #showing count of null values [116]: Show_Id 0 Category 0 Title 0 Director 2388 Cast 718 Country 507 Release_Date 10 Rating 7 Duration 0 Туре 0 Description 0 dtype: int64 [117]: sns.heatmap(data.isnull())

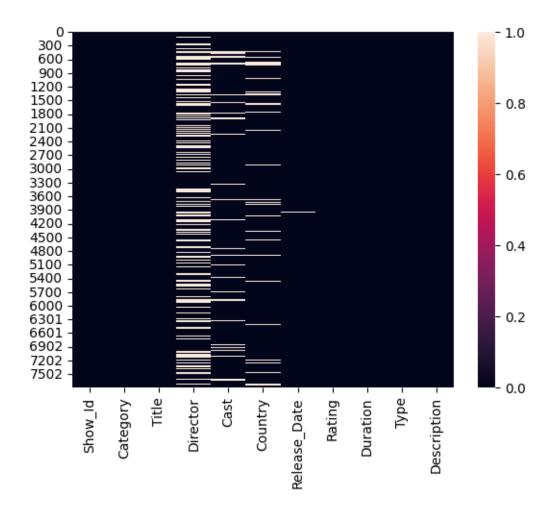
False

False False

7788

[117]: <Axes: >

False



For HOUSE OF CARDS, what is the SHOW ID who is the DIRECTOR.

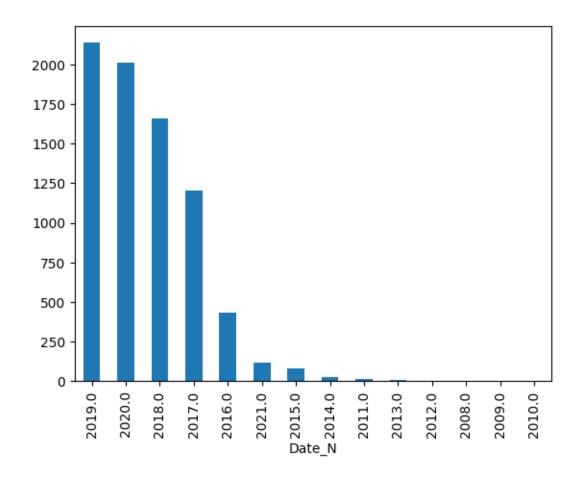
```
[119]: data[data['Title'].isin(['House of Cards'])] # to show all records of a_
        ⇒particular item in any column
[119]:
            Show_Id Category
                                       Title \
              s2833 TV Show House of Cards
       2832
                                                      Director \
       2832 Robin Wright, David Fincher, Gerald McRaney, J...
                                                          Cast
                                                                      Country \
       2832 Kevin Spacey, Robin Wright, Kate Mara, Corey S... United States
                                       Duration
                 Release Date Rating
                                                                     Type \
       2832 November 2, 2018 TV-MA 6 Seasons TV Dramas, TV Thrillers
                                                   Description
       2832 A ruthless politician will stop at nothing to ...
[120]: data[data['Title'].str.contains('House of Cards')]
[120]:
            Show_Id Category
                                       Title \
             s2833 TV Show House of Cards
       2832
                                                      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 ...
      In which year highest number of TV shows and Movies were released? Show with bar graph.
[121]: data.dtypes
[121]: Show_Id
                       object
       Category
                       object
       Title
                       object
      Director
                       object
       Cast
                       object
       Country
                       object
       Release Date
                       object
```

```
Duration
                       object
       Туре
                       object
       Description
                       object
       dtype: object
[122]: data['Date_N'] = pd.to_datetime(data['Release_Date'], errors = 'coerce')
       # create new column - data['Date_N']
       # in to_datetime function need to pass the original column "Release Date" in_{f U}
        ⇒which we can work.
[123]: data.head(2)
        Show_Id Category Title
                                            Director \
[123]:
              s1 TV Show
                                                 NaN
                              3%
              s2
       1
                    Movie 07:19
                                  Jorge Michel Grau
                                                        Cast Country \
       O João Miguel, Bianca Comparato, Michel Gomes, R... Brazil
       1 Demián Bichir, Héctor Bonilla, Oscar Serrano, ... Mexico
               Release_Date Rating
                                     Duration \
            August 14, 2020 TV-MA
       0
                                    4 Seasons
       1 December 23, 2016 TV-MA
                                        93 min
                                                        Type \
       O International TV Shows, TV Dramas, TV Sci-Fi &...
                               Dramas, International Movies
       1
                                                 Description
                                                                 Date N
       O In a future where the elite inhabit an island ... 2020-08-14
       1 After a devastating earthquake hits Mexico Cit... 2016-12-23
[124]: data.dtypes
[124]: Show_Id
                               object
       Category
                               object
       Title
                               object
      Director
                               object
       Cast
                               object
       Country
                               object
       Release_Date
                               object
       Rating
                               object
       Duration
                               object
       Type
                               object
       Description
                               object
```

Rating

object

```
Date_N
                       datetime64[ns]
       dtype: object
[125]: data['Date_N'].dt.year.value_counts()
       # dt.year - we've considered year only from this date time column
       # value_counts() - to show occurrence of all individual elements in a column
[125]: Date_N
       2019.0
                 2136
       2020.0
                 2008
       2018.0
                 1661
       2017.0
                 1201
       2016.0
                  432
       2021.0
                  117
      2015.0
                  79
      2014.0
                   24
       2011.0
                   13
      2013.0
                   10
       2012.0
                    3
      2008.0
                    2
       2009.0
       2010.0
                    1
       Name: count, dtype: int64
[126]: data['Date_N'].dt.year.value_counts().plot(kind='bar')
[126]: <Axes: xlabel='Date_N'>
```



How many TV shows and MOVIES are there in the dataset? Show with Bar Chart

```
[127]: data.head(2)
[127]:
         Show_Id Category
                                           Director
                           Title
              s1
                  TV Show
                              3%
       1
              s2
                    Movie
                           07:19
                                  Jorge Michel Grau
                                                        Cast Country \
        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
         December 23, 2016 TV-MA
                                       93 min
                                                        Type \
        International TV Shows, TV Dramas, TV Sci-Fi &...
```

Description Date_N

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

```
[128]: data.groupby('Category').Category.count()
```

[128]: Category

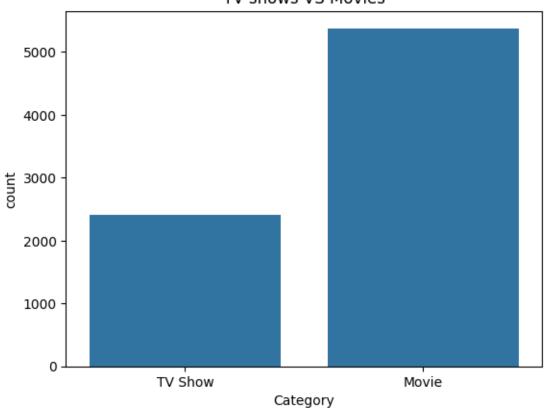
Movie 5377 TV Show 2410

plt.show()

Name: Category, dtype: int64

[129]: sns.countplot(x = 'Category', data=data) plt.title("TV shows VS Movies")

TV shows VS Movies



Show all the MOVIES that were released in 2020?

```
[130]: data.head(2)
        Show_Id Category
                                           Director \
[130]:
                           Title
                  TV Show
              s1
                                                 NaN
       1
              s2
                    Movie 07:19
                                  Jorge Michel Grau
                                                        Cast Country \
       O João Miguel, Bianca Comparato, Michel Gomes, R... Brazil
       1 Demián Bichir, Héctor Bonilla, Oscar Serrano, ... Mexico
               Release Date Rating
                                     Duration \
            August 14, 2020 TV-MA
                                    4 Seasons
       1 December 23, 2016 TV-MA
                                        93 min
                                                        Type \
      O International TV Shows, TV Dramas, TV Sci-Fi &...
       1
                               Dramas, International Movies
                                                 Description
                                                                 \mathtt{Date}_{\mathtt{N}}
       O In a future where the elite inhabit an island ... 2020-08-14
       1 After a devastating earthquake hits Mexico Cit... 2016-12-23
[131]: data['Year'] = data['Date_N'].dt.year # to create new Year column, it will_
        ⇔consider only year
[132]: data.head(2)
[132]:
         Show_Id Category
                           Title
                                           Director \
                  TV Show
              s1
                                                 NaN
       1
              s2
                    Movie 07:19 Jorge Michel Grau
                                                        Cast Country \
       O João Miguel, Bianca Comparato, Michel Gomes, R... Brazil
       1 Demián Bichir, Héctor Bonilla, Oscar Serrano, ... Mexico
               Release_Date Rating
                                     Duration \
            August 14, 2020 TV-MA
                                    4 Seasons
       1 December 23, 2016 TV-MA
                                        93 min
                                                        Type \
        International TV Shows, TV Dramas, TV Sci-Fi &...
       1
                               Dramas, International Movies
                                                 Description
                                                                 Date N
       O 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
```

```
[133]: data[(data['Category'] == 'Movie') & (data['Year'] == 2020)] #filtering out_
        →Movies from categories and year as 2020
[133]:
            Show_Id Category
                                                                   Title
       4
                 s5
                        Movie
                                                                      21
       6
                  s7
                        Movie
                                                                      122
       14
                s15
                        Movie
                                                                    3022
       27
                s28
                        Movie
                                                                  #Alive
       28
                s29
                        Movie
                                          #AnneFrank - Parallel Stories
       7762
              s7761
                        Movie
                                                               Zaki Chan
       7783
              s7782
                        Movie
                                                                    Zoom
       7784
                        Movie
              s7783
                                                                    Zozo
       7786
              s7785
                        Movie
                                                       Zulu Man in Japan
       7788
              s7787
                        Movie
                               ZZ TOP: THAT LITTLE OL' BAND FROM TEXAS
                                 Director
       4
                           Robert Luketic
       6
                          Yasir Al Yasiri
       14
                               John Suits
       27
                                   Cho Il
             Sabina Fedeli, Anna Migotto
       28
       7762
                               Wael Ihsan
       7783
                             Peter Hewitt
       7784
                              Josef Fares
       7786
                                       NaN
       7788
                                 Sam Dunn
                                                             Cast \
       4
             Jim Sturgess, Kevin Spacey, Kate Bosworth, Aar...
       6
             Amina Khalil, Ahmed Dawood, Tarek Lotfy, Ahmed...
       14
             Omar Epps, Kate Walsh, Miranda Cosgrove, Angus...
       27
                                        Yoo Ah-in, Park Shin-hye
       28
                                    Helen Mirren, Gengher Gatti
       7762 Ahmed Helmy, Yasmin Abdulaziz, Hassan Hosny, H...
             Tim Allen, Courteney Cox, Chevy Chase, Kate Ma...
       7783
             Imad Creidi, Antoinette Turk, Elias Gergi, Car...
       7784
       7786
                                                          Nasty C
       7788
                                                              NaN
                                                                          Release_Date
                                                          Country
                                                                      January 1, 2020
       4
                                                   United States
                                                                          June 1, 2020
       6
                                                            Egypt
       14
                                                   United States
                                                                       March 19, 2020
       27
                                                     South Korea
                                                                    September 8, 2020
```

```
7762
                                                           Egypt
                                                                         May 19, 2020
       7783
                                                   United States
                                                                     January 11, 2020
             Sweden, Czech Republic, United Kingdom, Denmar...
       7784
                                                                   October 19, 2020
       7786
                                                                   September 25, 2020
                                                                        March 1, 2020
       7788
                          United Kingdom, Canada, United States
            Rating Duration
                                                                             Type
             PG-13
       4
                    123 min
                                                                           Dramas
       6
             TV-MA
                      95 min
                                             Horror Movies, International Movies
                      91 min
                                Independent Movies, Sci-Fi & Fantasy, Thrillers
                 R
       27
             TV-MA
                     99 min
                                 Horror Movies, International Movies, Thrillers
       28
             TV-14
                     95 min
                                             Documentaries, International Movies
       7762
             TV-PG
                    109 min
                                Comedies, International Movies, Romantic Movies
       7783
                PG
                                              Children & Family Movies, Comedies
                     88 min
       7784
             TV-MA
                      99 min
                                                    Dramas, International Movies
       7786
             TV-MA
                      44 min
                              Documentaries, International Movies, Music & M...
       7788
             TV-MA
                                                 Documentaries, Music & Musicals
                     90 min
                                                     Description
                                                                      Date N
                                                                                Year
       4
             A brilliant group of students become card-coun... 2020-01-01
                                                                            2020.0
             After an awful accident, a couple admitted to ... 2020-06-01
       6
             Stranded when the Earth is suddenly destroyed ... 2020-03-19
       14
       27
             As a grisly virus rampages a city, a lone man ... 2020-09-08
       28
             Through her diary, Anne Frank's story is retol... 2020-07-01
                                                                            2020.0
       7762 An unqualified young man has his work cut out ... 2020-05-19
                                                                            2020.0
       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
             In this documentary, South African rapper Nast... 2020-09-25
                                                                            2020.0
             This documentary delves into the mystique behi... 2020-03-01
                                                                            2020.0
       [1312 rows x 13 columns]
      Show only the titles of TV shows that were released INDIA only.
[134]: data.head(2)
         Show_Id Category
[134]:
                            Title
                                             Director \
       0
              s1
                  TV Show
                               3%
                                                  NaN
              s2
                    Movie
                            07:19
                                   Jorge Michel Grau
                                                         Cast Country \
          João Miguel, Bianca Comparato, Michel Gomes, R... Brazil
```

July 1, 2020

Italy

28

```
Release_Date Rating
                                     Duration
            August 14, 2020
                            TV-MA
                                    4 Seasons
       1 December 23, 2016 TV-MA
                                        93 min
                                                        Type \
        International TV Shows, TV Dramas, TV Sci-Fi &...
                               Dramas, International Movies
       1
                                                 Description
                                                                 Date N
       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
[135]: data[(data['Category'] == 'TV Show') & (data['Country'] == 'India')]['Title']
[135]: 86
                     21 Sarfarosh: Saragarhi 1897
       132
                                         7 (Seven)
       340
                                      Agent Raghav
                                      Akbar Birbal
       364
       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
      Show top 10 directors, who gave the highest number of TV Shows & Movies to Netflix?
[136]: data.head(2)
[136]:
         Show_Id Category
                           Title
                                            Director \
                  TV Show
                              3%
                                                 NaN
       0
              s1
              s2
                    Movie
                           07:19
                                 Jorge Michel Grau
                                                        Cast Country \
       O João Miguel, Bianca Comparato, Michel Gomes, R... Brazil
       1 Demián Bichir, Héctor Bonilla, Oscar Serrano, ... Mexico
               Release_Date Rating
                                     Duration \
            August 14, 2020 TV-MA
                                    4 Seasons
       1 December 23, 2016 TV-MA
                                        93 min
```

1 Demián Bichir, Héctor Bonilla, Oscar Serrano, ... Mexico

Type \

```
Dramas, International Movies
       1
                                                                 Date_N
                                                 Description
       O In a future where the elite inhabit an island ... 2020-08-14
       1 After a devastating earthquake hits Mexico Cit... 2016-12-23 2016.0
[137]: data['Director'].value_counts().head(10)
[137]: Director
       Raúl Campos, Jan Suter
                                  18
       Marcus Raboy
                                  16
       Jay Karas
                                  14
       Cathy Garcia-Molina
                                 13
       Youssef Chahine
                                 12
       Jay Chapman
                                 12
       Martin Scorsese
                                  12
       Steven Spielberg
                                  10
      David Dhawan
                                  9
      Lance Bangs
       Name: count, dtype: int64
      Show all the Records, where "Category is Movie and Type is Comedies" or "Country is United
      Kingdom"?
[138]: data.head(2)
[138]:
         Show_Id Category
                           Title
                                            Director \
              s1
                  TV Show
                              3%
                                                 NaN
       1
              s2
                    Movie 07:19
                                  Jorge Michel Grau
                                                        Cast Country \
       O João Miguel, Bianca Comparato, Michel Gomes, R... Brazil
       1 Demián Bichir, Héctor Bonilla, Oscar Serrano, ... Mexico
               Release_Date Rating
                                     Duration
            August 14, 2020
                             TV-MA
                                    4 Seasons
       1 December 23, 2016 TV-MA
                                        93 min
                                                        Type \
         International TV Shows, TV Dramas, TV Sci-Fi &...
                               Dramas, International Movies
       1
                                                 Description
                                                                 Date N
       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
```

International TV Shows, TV Dramas, TV Sci-Fi &...

```
[139]: data[(data['Category'] == 'Movie') & (data['Type'] == 'Comedies')]
[139]:
            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
                                      A Bad Moms Christmas
                        Movie
                                                              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
                                                                         Amy Poehler
              s7633
                        Movie
                                               Wine Country
       7664
              s7663
                        Movie
                                                    Work It
                                                                       Laura Terruso
                                                             Cast
                                                                  \
       33
             Nesta Cooper, Kate Walsh, John Michael Higgins...
       72
             Zac Efron, Leslie Mann, Matthew Perry, Thomas ...
             Miles Teller, Skylar Astin, Justin Chon, Sarah...
       84
             Mila Kunis, Kristen Bell, Kathryn Hahn, Susan ...
       148
             Will Forte, Domhnall Gleeson, Martin Mull, Joe ...
       174
       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...
             Sabrina Carpenter, Jordan Fisher, Liza Koshy, ...
       7664
                             Country
                                            Release_Date Rating Duration
                                                                               Type
       33
                       United States
                                      September 8, 2017
                                                          TV-14
                                                                           Comedies
                                                                   99 min
                       United States
       72
                                         January 1, 2021
                                                          PG-13
                                                                  102 min
                                                                           Comedies
       84
                       United States
                                         April 16, 2019
                                                                   93 min
                                                                           Comedies
                                                               R
       148
               United States, China February 14, 2020
                                                               R
                                                                  104 min
                                                                           Comedies
       174
                                        January 26, 2018
                       United States
                                                          TV-MA
                                                                  102 min
                                                                           Comedies
                                       November 5, 2019
       7341
                       United States
                                                               R
                                                                   85 min
                                                                           Comedies
       7590
                       United States
                                        January 22, 2018
                                                                   86 min
                                                                           Comedies
                                                              R
                                            May 13, 2017
       7623
             Germany, United States
                                                          PG-13
                                                                   86 min
                                                                           Comedies
       7634
                       United States
                                            May 10, 2019
                                                               R
                                                                  104 min
                                                                           Comedies
                                                                   94 min
       7664
                       United States
                                          August 7, 2020
                                                          TV-14
                                                                           Comedies
                                                     Description
                                                                      Date N
                                                                                 Year
       33
             When nerdy high schooler Dani finally attracts... 2017-09-08
                                                                            2017.0
       72
             Nearing a midlife crisis, thirty-something Mik... 2021-01-01
       84
             Jeff's straight-and-narrow life changes abrupt... 2019-04-16
                                                                            2019.0
       148
             Stressed-out moms Amy, Carla and Kiki are back... 2020-02-14
                                                                            2020.0
       174
             In a brief life full of triumph and failure, "... 2018-01-26
                                                                            2018.0
```

```
When a beloved secret agent falls deep into a ... 2019-11-05
       7341
                                                                         2019.0
            Hunting for a stash of stolen money, a sharp-w... 2018-01-22
            When insurance accidentally pays her millions,... 2017-05-13
                                                                         2017.0
       7634 When longtime friends meet up for a wine-soake... 2019-05-10
                                                                         2019.0
            A brilliant but clumsy high school senior vows... 2020-08-07
       7664
                                                                         2020.0
       [97 rows x 13 columns]
[140]: |data['Category'] == 'Movie') & (data['Type'] == 'Comedies') | ___
        [140]:
            Show_Id Category
                                               Title
                                                              Director
       19
                s20
                       Movie
                                                 189
                                                                   NaN
       33
                s34
                       Movie
                                        #realityhigh
                                                      Fernando Lebrija
                                         100% Hotter
       58
                s59
                    TV Show
       72
                s73
                                            17 Again
                                                           Burr Steers
                      Movie
       82
                s83
                       Movie
                                 2036 Origin Unknown
                                                         Hasraf Dulull
                    TV Show World War II in Colour
       7670
              s7669
                                                                   NaN
       7671
              s7670
                    TV Show World's Busiest Cities
                                                                   NaN
      7688
                      Movie XV: Beyond the Tryline
              s7687
                                                      Pierre Deschamps
      7725
              s7724
                      Movie
                                        You Can Tutu
                                                           James Brown
       7740
              s7739
                    TV Show
                                     Young Wallander
                                                                   NaN
                                                          Cast
                                                                       Country \
       19
                            Lee Dixon, Ian Wright, Paul Merson United Kingdom
       33
             Nesta Cooper, Kate Walsh, John Michael Higgins...
                                                               United States
       58
             Daniel Palmer, Melissa Sophia, Karen Williams,...
                                                             United Kingdom
       72
             Zac Efron, Leslie Mann, Matthew Perry, Thomas ...
                                                               United States
       82
             Katee Sackhoff, Ray Fearon, Julie Cox, Steven ...
                                                              United Kingdom
      7670
                                                 Robert Powell United Kingdom
       7671
                            Anita Rani, Ade Adepitan, Dan Snow
                                                                United Kingdom
       7688
                                                                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
                                         99 min
                                TV-14
       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
                                      1 Season
                               TV-MA
       7671
             February 1, 2019
                               TV-PG
                                      1 Season
```

```
7688
                March 18, 2020
                                TV-14
                                          91 min
             December 31, 2017
       7725
                                  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
            British TV Shows, Docuseries, International TV...
       7670
       7671
                                   British TV Shows, Docuseries
       7688
                                   Documentaries, Sports Movies
       7725
                                       Children & Family Movies
       7740
            Crime TV Shows, International TV Shows, TV Dramas
                                                     Description
                                                                     \mathtt{Date}_{\mathtt{N}}
       19
             Mixing old footage with interviews, this is th... 2018-05-16
       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
             Nearing a midlife crisis, thirty-something Mik... 2021-01-01
       72
                                                                            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
             Set against the 2015 Rugby World Cup, this doc... 2020-03-18
       7688
                                                                            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]
      In how many movies/shows, Tom Cruise was casted?
[141]: data.head(2)
[141]:
         Show_Id Category
                           Title
                                            Director \
       0
              s1
                  TV Show
                               3%
                                                  NaN
       1
              s2
                    Movie 07:19
                                  Jorge Michel Grau
                                                         Cast Country \
       O João Miguel, Bianca Comparato, Michel Gomes, R... Brazil
       1 Demián Bichir, Héctor Bonilla, Oscar Serrano, ... Mexico
               Release_Date Rating
                                      Duration \
            August 14, 2020 TV-MA 4 Seasons
       0
```

```
1 December 23, 2016 TV-MA
                                        93 min
                                                         Type \
          International TV Shows, TV Dramas, TV Sci-Fi &...
       1
                                Dramas, International Movies
                                                 Description
                                                                  Date_N
       O 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
[142]: data['Cast'].str.contains('Tom Cruise').sum()
[142]: 2
      What are the different Ratings defined by Netflix?
[143]: data.head(2)
[143]:
         Show_Id Category
                           Title
                                            Director
                  TV Show
              s1
                               3%
                                                  NaN
       1
              s2
                    Movie
                           07:19
                                  Jorge Michel Grau
                                                         Cast Country \
       O João Miguel, Bianca Comparato, Michel Gomes, R... Brazil
       1 Demián Bichir, Héctor Bonilla, Oscar Serrano, ... Mexico
               Release_Date Rating
                                      Duration \
            August 14, 2020 TV-MA
                                     4 Seasons
       1 December 23, 2016 TV-MA
                                        93 min
                                                         Type \
         International TV Shows, TV Dramas, TV Sci-Fi &...
       1
                                Dramas, International Movies
                                                  Description
                                                                  \mathtt{Date}_{\mathtt{N}}
       O 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
[144]: data['Rating'].nunique()
[144]: 14
[145]: data['Rating'].unique()
[145]: 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)
```

[146]: data.head(2) Director [146]: Show_Id Category Title s1 TV Show NaN 3% 1 s2 Movie 07:19 Jorge Michel Grau Cast Country \ O 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 \ International TV Shows, TV Dramas, TV Sci-Fi &... Dramas, International Movies Description $\mathtt{Date}_{\mathtt{N}}$ 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 [147]: data['Category'] == 'Movie') & (data['Rating'] == 'TV-14') &__ [147]: (11, 13) How many TV Show got the 'R' rating, after year 2018? [148]: data.head(2) Director \ [148]: Show_Id Category Title 0 s1 TV Show 3% 1 s2 07:19 Jorge Michel Grau Movie Cast Country \ O João Miguel, Bianca Comparato, Michel Gomes, R... Brazil 1 Demián Bichir, Héctor Bonilla, Oscar Serrano, ... Mexico Release_Date Rating Duration August 14, 2020 TV-MA 4 Seasons 1 December 23, 2016 TV-MA 93 min

How many Movies got the 'TV-14' rating in Canada?

```
Type \
      O International TV Shows, TV Dramas, TV Sci-Fi &...
       1
                               Dramas, International Movies
                                                 Description
                                                                 \mathtt{Date}_{\mathtt{N}}
       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
[149]: |data[(data['Category'] == 'TV Show') & (data['Rating'] == 'R') & (data['Year']
        →> 2018)]
[149]:
            Show_Id Category
                                                             Title
                                                                             Director
              s6436 TV Show The Hateful Eight: Extended Version Quentin Tarantino
                                                           Cast Country \
      6437 Samuel L. Jackson, Kurt Russell, Jennifer Jaso...
                                                                  NaN
               Release_Date Rating Duration
       6437 April 25, 2019
                                 R 1 Season TV Shows
                                                   Description
                                                                    Date_N
       6437 Trapped at a stagecoach stop as a storm rages ... 2019-04-25 2019.0
      What is the maximum duration of a Movie/Show on Netflix?
[150]: data.head(2)
[150]:
        Show_Id Category
                           Title
                                           Director \
              s1 TV Show
                              3%
                                                 NaN
       1
              s2
                    Movie 07:19 Jorge Michel Grau
                                                        Cast Country \
       O João Miguel, Bianca Comparato, Michel Gomes, R... Brazil
       1 Demián Bichir, Héctor Bonilla, Oscar Serrano, ... Mexico
               Release_Date Rating
                                     Duration \
            August 14, 2020 TV-MA 4 Seasons
       1 December 23, 2016 TV-MA
                                        93 min
                                                        Type \
       O 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 2020.0
       1 After a devastating earthquake hits Mexico Cit... 2016-12-23 2016.0
```

```
[151]: 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)
[152]: data.Duration.dtypes
[152]: dtype('0')
[153]: data.head(2)
```

[151]: data['Duration'].unique()

```
[153]:
        Show_Id Category Title
                                           Director \
       0
              s1
                  TV Show
                              3%
                                                 NaN
                    Movie 07:19 Jorge Michel Grau
              s2
       1
                                                        Cast Country \
       O 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 \
         International TV Shows, TV Dramas, TV Sci-Fi &...
                               Dramas, International Movies
                                                 Description
                                                                 Date_N
       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
[154]: | data[['Minutes' , 'Unit']] = data['Duration'].str.split(' ', expand=True)
       # column names - data[['Minutes', 'Unit']]
       \# str.split() - pass the separator in str.split function. Here separator is \sqcup
        ⇔blank space.
[155]: data.head(2)
        Show_Id Category
                                            Director \
[155]:
                           Title
              s1
                  TV Show
                              3%
                                                 NaN
              s2
                    Movie 07:19
                                 Jorge Michel Grau
                                                        Cast Country \
       O João Miguel, Bianca Comparato, Michel Gomes, R... Brazil
       1 Demián Bichir, Héctor Bonilla, Oscar Serrano, ... Mexico
               Release_Date Rating
                                     Duration \
            August 14, 2020 TV-MA 4 Seasons
       1 December 23, 2016 TV-MA
                                        93 min
                                                        Type \
         International TV Shows, TV Dramas, TV Sci-Fi &...
       1
                               Dramas, International Movies
                                                 Description
                                                                 \mathtt{Date}_{\mathtt{N}}
       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
              93
       1
                      min
[156]: data.Minutes.max()
[156]: '99'
[157]: data.Minutes.min()
[157]: '1'
      Which country has the highest number of TV Shows?
[158]: data.head(2)
[158]:
        Show_Id Category Title
                                           Director \
              s1 TV Show
       0
                              3%
       1
              s2
                    Movie 07:19
                                 Jorge Michel Grau
                                                        Cast Country \
       O João Miguel, Bianca Comparato, Michel Gomes, R... Brazil
       1 Demián Bichir, Héctor Bonilla, Oscar Serrano, ... Mexico
               Release_Date Rating
                                     Duration \
            August 14, 2020 TV-MA 4 Seasons
       0
       1 December 23, 2016 TV-MA
                                       93 min
                                                        Type \
         International TV Shows, TV Dramas, TV Sci-Fi &...
       1
                               Dramas, International Movies
                                                Description
                                                                 Date_N
       O 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
              93
                      min
[160]: data_tvshow = data[data['Category'] == 'TV Show'] #creating a new column named_
        →TV show
[161]: data_tvshow.head(2)
```

```
[161]:
         Show_Id Category Title
                                    Director \
       0
              s1
                  TV Show
                             3%
                                          NaN
       5
              s6 TV Show
                             46
                                 Serdar Akar
                                                        Cast Country
                                                                         Release Date \
        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 \
                            International TV Shows, TV Dramas, TV Sci-Fi &...
       O TV-MA
                 4 Seasons
       5 TV-MA
                              International TV Shows, TV Dramas, TV Mysteries
                  1 Season
                                                                           Year \
                                                 Description
                                                                 Date_N
       0 In a future where the elite inhabit an island ... 2020-08-14 2020.0
       5 A genetics professor experiments with a treatm... 2017-07-01 2017.0
         Minutes
                     Unit
       0
               4 Seasons
       5
               1
                   Season
[162]: data_tvshow.Country.value_counts()
[162]: Country
                                                         705
       United States
       United Kingdom
                                                         204
       Japan
                                                         157
       South Korea
                                                         147
       India
                                                          71
      United Kingdom, Ireland, United States
                                                           1
       United Kingdom, Spain
                                                           1
       Italy, United States
                                                           1
       Japan, Canada
                                                           1
       United States, France, South Korea, Indonesia
                                                           1
       Name: count, Length: 183, dtype: int64
[163]: data_tvshow.Country.value_counts().head(1)
[163]: Country
       United States
                        705
       Name: count, dtype: int64
      How can we sort the dataset by Year?
[165]: data.head(2)
```

```
[165]:
        Show_Id Category Title
                                          Director \
      0
             s1
                 TV Show
                             3%
                                               NaN
                   Movie 07:19 Jorge Michel Grau
              s2
      1
                                                      Cast Country \
      O 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 \
        International TV Shows, TV Dramas, TV Sci-Fi &...
                              Dramas, International Movies
                                               Description
                                                               Date_N
      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
             93
                     min
[166]: data.sort_values(by = 'Year').head(2)
                                            Title
           Show_Id Category
                                                               Director \
[166]:
                      Movie To and From New York Sorin Dan Mihalcescu
             s7114
      7115
      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 \
              January 1, 2008 TV-MA
      7115
                                       81 min
      1765 February 4, 2008 TV-MA 1 Season
                                              Type \
      7115 Dramas, Independent Movies, Thrillers
      1765
                     Stand-Up Comedy & Talk Shows
                                                  Description
                                                                  Date_N
      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
           Minutes
                      Unit
```

```
1765
                  1
                     Season
[167]: data.sort_values(by = 'Year', ascending = False).head(2)
[167]:
            Show_Id Category
                                         Title
                                                                         Director
               s602
                       Movie
                              Asphalt Burning
                                                                   Hallvard Bræin
       601
       5060
              s5060
                       Movie
                                  Radium Girls Lydia Dean Pilcher, Ginny Mohler
                                                            Cast
                                                                        Country \
             Anders Baasmo, Kathrine Thorborg Johansen, Ida...
       601
                                                                       Norway
       5060
             Joey King, Abby Quinn, Cara Seymour, Scott She... United States
                 Release_Date Rating Duration \
       601
              January 2, 2021 TV-14 101 min
       5060
             January 16, 2021 TV-14
                                       103 min
                                                            Type \
       601
             Action & Adventure, Comedies, International Mo...
       5060
                                     Dramas, Independent Movies
                                                    Description
                                                                     Date N
       601
             When the brakes slam on his wedding, Roy accep... 2021-01-02 2021.0
             When the women at a radium factory begin to fa... 2021-01-16 2021.0
       5060
            Minutes Unit
       601
                101 min
       5060
                103 min
      Find all instances where: Category is 'Movie' and Type is 'Dramas' or Category is 'TV Show' and
      Type is 'Kids TV'
[168]: data.head(2)
         Show_Id Category
                                            Director \
[168]:
                           Title
                  TV Show
                               3%
       0
              s1
              s2
                    Movie
                           07:19
                                  Jorge Michel Grau
                                                         Cast Country \
       O João Miguel, Bianca Comparato, Michel Gomes, R... Brazil
       1 Demián Bichir, Héctor Bonilla, Oscar Serrano, ... Mexico
               Release_Date Rating
                                      Duration
            August 14, 2020 TV-MA
                                     4 Seasons
       1 December 23, 2016 TV-MA
                                        93 min
```

7115

81

min

```
International TV Shows, TV Dramas, TV Sci-Fi &...
       1
                               Dramas, International Movies
                                                Description
                                                                 \mathtt{Date}_{\mathtt{N}}
                                                                           Year \
        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
                     Unit
        Minutes
                  Seasons
       0
               4
       1
              93
                      min
[170]: | data[(data['Category'] == 'Movie') & (data['Type'] == 'Dramas') | |
        Title
[170]:
            Show_Id Category
                                                                    Director
                       Movie
                                                       21
                                                              Robert Luketic
       4
                 s5
       7
                 s8
                       Movie
                                                      187
                                                              Kevin Reynolds
                                                               Mark Williams
       170
               s171
                       Movie
                                            A Family Man
       232
               s233
                       Movie
                             A Stoning in Fulham County
                                                               Larry Elikann
       295
               s296
                       Movie
                                      Across Grace Alley
                                                               Ralph Macchio
       7417
              s7416
                       Movie
                                                  Victor
                                                           Brandon Dickerson
      7422
              s7421
                       Movie
                                                            Philip Barantini
                                                  Villain
      7449
              s7448
                       Movie
                                                      VS.
                                                                    Ed Lilly
      7465
              s7464
                       Movie
                                               Wakefield
                                                               Robin Swicord
       7480
              s7479
                       Movie
                                               War Horse
                                                            Steven Spielberg
       4
             Jim Sturgess, Kevin Spacey, Kate Bosworth, Aar...
       7
             Samuel L. Jackson, John Heard, Kelly Rowan, Cl ...
             Gerard Butler, Gretchen Mol, Alison Brie, Will...
       170
             Ken Olin, Jill Eikenberry, Maureen Mueller, Gr...
       232
       295
             Ben Hyland, Marsha Mason, Karina Smirnoff, Col...
       7417 Patrick Davis, Lisa Vidal, Josh Pence, José Zú...
       7422 Craig Fairbrass, George Russo, Robert Gleniste...
       7449 Connor Swindells, Fola Evans-Akingbola, Nichol...
       7465 Bryan Cranston, Jennifer Garner, Jason O'Mara,...
       7480
            Emily Watson, David Thewlis, Peter Mullan, Nie...
                           Country
                                         Release_Date Rating Duration
                                                                          Type \
       4
                     United States
                                      January 1, 2020
                                                       PG-13
                                                               123 min
                                                                        Dramas
                     United States
       7
                                     November 1, 2019
                                                            R.
                                                               119 min
                                                                        Dramas
       170
             Canada, United States
                                    December 15, 2019
                                                            R
                                                               110 min
                                                                        Dramas
       232
                                      October 1, 2011
                     United States
                                                       TV-14
                                                                        Dramas
                                                                95 min
       295
                     United States
                                     December 1, 2016 TV-PG
                                                                24 min
                                                                        Dramas
```

Type \

```
7417
              United States
                                  July 24, 2017
                                                  PG-13
                                                         110 min
                                                                   Dramas
7422
             United Kingdom
                              September 5, 2020
                                                      R
                                                          97 min
                                                                   Dramas
7449
             United Kingdom
                                  June 19, 2019
                                                  TV-MA
                                                          99 min
                                                                   Dramas
7465
              United States
                                  March 2, 2019
                                                         109 min
                                                      R
                                                                   Dramas
7480
       United States, India
                                    May 6, 2019
                                                  PG-13
                                                         147 min
                                                                   Dramas
                                              Description
                                                               Date_N
                                                                         Year \
4
      A brilliant group of students become card-coun... 2020-01-01
7
      After one of his high school students attacks ... 2019-11-01
170
      A ruthless corporate headhunter battles his ri... 2019-12-15
232
      After reckless teens kill an Amish child, a pr... 2011-10-01
295
      A young boy, upset by his parents' divorce, be... 2016-12-01
                                                                     2016.0
7417
      In 1962 Brooklyn, a Puerto Rican teen who join... 2017-07-24
                                                                     2017.0
7422 Fresh out of prison, an ex-con tries to save h... 2020-09-05
                                                                     2020.0
7449 A young man in foster care finds his voice in ... 2019-06-19
                                                                     2019.0
7465
      An unhappy father and lawyer quits his suburba... 2019-03-02
                                                                     2019.0
7480 During World War I, the bond between a young E... 2019-05-06
                                                                     2019.0
     Minutes Unit
4
         123
             min
7
         119
              min
170
         110
              min
232
          95
              min
295
          24
              min
7417
         110
              min
7422
          97
              min
7449
          99
              min
7465
         109
              min
7480
         147
              min
```

[117 rows x 15 columns]

[]: