

Netflix__Data__Exploration____Basic

February 18, 2023

```
[44]: import numpy as np
import pandas as pd
import seaborn as sns
import matplotlib.pyplot as plt
```

```
[45]: df=pd.read_csv('netflix.csv')
```

```
[46]: df.head(10)
```

```
[46]:  show_id      type      title \
0      s1      Movie      Dick Johnson Is Dead
1      s2  TV Show      Blood & Water
2      s3  TV Show      Ganglands
3      s4  TV Show      Jailbirds New Orleans
4      s5  TV Show      Kota Factory
5      s6  TV Show      Midnight Mass
6      s7      Movie  My Little Pony: A New Generation
7      s8      Movie      Sankofa
8      s9  TV Show      The Great British Baking Show
9     s10      Movie      The Starling
```

```
      director \
0      Kirsten Johnson
1              NaN
2      Julien Leclercq
3              NaN
4              NaN
5      Mike Flanagan
6  Robert Cullen, José Luis Ucha
7      Haile Gerima
8      Andy Devonshire
9      Theodore Melfi
```

```
      cast \
0              NaN
1  Ama Qamata, Khosi Ngema, Gail Mabalane, Thaban...
2  Sami Bouajila, Tracy Gotoas, Samuel Jouy, Nabi...
3              NaN
```

4 Mayur More, Jitendra Kumar, Ranjan Raj, Alam K...
 5 Kate Siegel, Zach Gilford, Hamish Linklater, H...
 6 Vanessa Hudgens, Kimiko Glenn, James Marsden, ...
 7 Kofi Ghanaba, Oyafunmike Ogunlano, Alexandra D...
 8 Mel Giedroyc, Sue Perkins, Mary Berry, Paul Ho...
 9 Melissa McCarthy, Chris O'Dowd, Kevin Kline, T...

	country	date_added \
0	United States	September 25, 2021
1	South Africa	September 24, 2021
2	NaN	September 24, 2021
3	NaN	September 24, 2021
4	India	September 24, 2021
5	NaN	September 24, 2021
6	NaN	September 24, 2021
7	United States, Ghana, Burkina Faso, United Kin...	September 24, 2021
8	United Kingdom	September 24, 2021
9	United States	September 24, 2021

	release_year	rating	duration \
0	2020	PG-13	90 min
1	2021	TV-MA	2 Seasons
2	2021	TV-MA	1 Season
3	2021	TV-MA	1 Season
4	2021	TV-MA	2 Seasons
5	2021	TV-MA	1 Season
6	2021	PG	91 min
7	1993	TV-MA	125 min
8	2021	TV-14	9 Seasons
9	2021	PG-13	104 min

	listed_in \
0	Documentaries
1	International TV Shows, TV Dramas, TV Mysteries
2	Crime TV Shows, International TV Shows, TV Act...
3	Docuseries, Reality TV
4	International TV Shows, Romantic TV Shows, TV ...
5	TV Dramas, TV Horror, TV Mysteries
6	Children & Family Movies
7	Dramas, Independent Movies, International Movies
8	British TV Shows, Reality TV
9	Comedies, Dramas

	description
0	As her father nears the end of his life, filmm...
1	After crossing paths at a party, a Cape Town t...
2	To protect his family from a powerful drug lor...

```

3 Feuds, flirtations and toilet talk go down amo...
4 In a city of coaching centers known to train I...
5 The arrival of a charismatic young priest brin...
6 Equestria's divided. But a bright-eyed hero be...
7 On a photo shoot in Ghana, an American model s...
8 A talented batch of amateur bakers face off in...
9 A woman adjusting to life after a loss contend...

```

```
[47]: df.info()
```

```

<class 'pandas.core.frame.DataFrame'>
RangeIndex: 8807 entries, 0 to 8806
Data columns (total 12 columns):
#   Column          Non-Null Count  Dtype
---  -
0   show_id         8807 non-null   object
1   type            8807 non-null   object
2   title           8807 non-null   object
3   director        6173 non-null   object
4   cast            7982 non-null   object
5   country         7976 non-null   object
6   date_added      8797 non-null   object
7   release_year    8807 non-null   int64
8   rating          8803 non-null   object
9   duration        8804 non-null   object
10  listed_in       8807 non-null   object
11  description      8807 non-null   object
dtypes: int64(1), object(11)
memory usage: 825.8+ KB

```

```
[48]: df.shape
```

```
[48]: (8807, 12)
```

```
[49]: df.describe()
```

```

[49]:      release_year
count    8807.000000
mean     2014.180198
std        8.819312
min       1925.000000
25%       2013.000000
50%       2017.000000
75%       2019.000000
max       2021.000000

```

```
[50]: df.describe(include='object').T
```

```
[50]:
```

	count	unique	top	\
show_id	8807	8807		s1
type	8807	2		Movie
title	8807	8807	Dick Johnson Is Dead	
director	6173	4528	Rajiv Chilaka	
cast	7982	7692	David Attenborough	
country	7976	748	United States	
date_added	8797	1767	January 1, 2020	
rating	8803	17	TV-MA	
duration	8804	220	1 Season	
listed_in	8807	514	Dramas, International Movies	
description	8807	8775	Paranormal activity at a lush, abandoned prope...	

	freq
show_id	1
type	6131
title	1
director	19
cast	19
country	2818
date_added	109
rating	3207
duration	1793
listed_in	362
description	4

```
[51]: df.isnull().sum()/len(df)*100
```

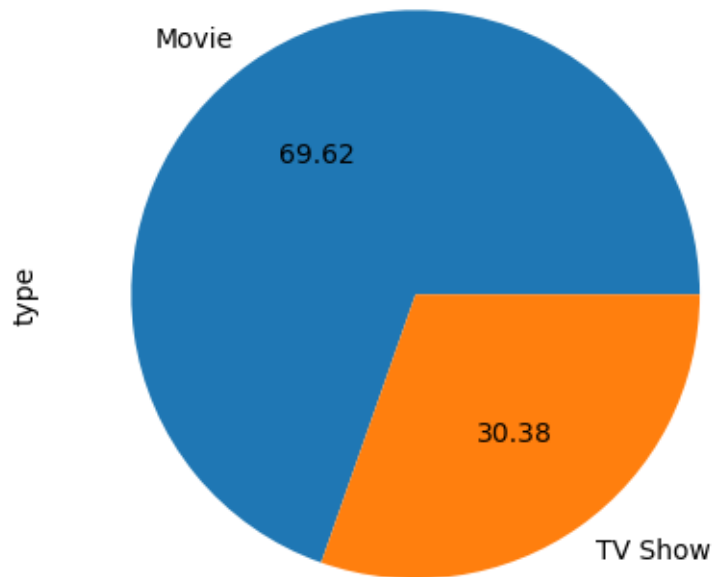
```
[51]: show_id      0.000000
      type       0.000000
      title      0.000000
      director   29.908028
      cast       9.367549
      country    9.435676
      date_added  0.113546
      release_year 0.000000
      rating     0.045418
      duration   0.034064
      listed_in  0.000000
      description 0.000000
      dtype: float64
```

```
[52]: df['type'].value_counts(normalize=True)*100
```

```
[52]: Movie      69.615079
      TV Show   30.384921
      Name: type, dtype: float64
```

```
[53]: df['type'].value_counts().plot(kind='pie',autopct="%.2f")
```

```
[53]: <AxesSubplot:ylabel='type'>
```



```
[54]: df.head()
```

```
[54]:
```

	show_id	type	title	director \
0	s1	Movie	Dick Johnson Is Dead	Kirsten Johnson
1	s2	TV Show	Blood & Water	NaN
2	s3	TV Show	Ganglands	Julien Leclercq
3	s4	TV Show	Jailbirds New Orleans	NaN
4	s5	TV Show	Kota Factory	NaN

	cast	country \
0	NaN	United States
1	Ama Qamata, Khosi Ngema, Gail Mabalane, Thaban...	South Africa
2	Sami Bouajila, Tracy Gotoas, Samuel Jouy, Nabi...	NaN
3	NaN	NaN
4	Mayur More, Jitendra Kumar, Ranjan Raj, Alam K...	India

	date_added	release_year	rating	duration \
0	September 25, 2021	2020	PG-13	90 min
1	September 24, 2021	2021	TV-MA	2 Seasons

2	September 24, 2021	2021	TV-MA	1 Season
3	September 24, 2021	2021	TV-MA	1 Season
4	September 24, 2021	2021	TV-MA	2 Seasons

	listed_in \
0	Documentaries
1	International TV Shows, TV Dramas, TV Mysteries
2	Crime TV Shows, International TV Shows, TV Act...
3	Docuseries, Reality TV
4	International TV Shows, Romantic TV Shows, TV ...

	description
0	As her father nears the end of his life, filmm...
1	After crossing paths at a party, a Cape Town t...
2	To protect his family from a powerful drug lor...
3	Feuds, flirtations and toilet talk go down amo...
4	In a city of coaching centers known to train I...

```
[85]: constraint=df['cast'].apply(lambda x: str(x).split(',')).tolist()

df_new=pd.DataFrame(constraint,index=df['title'])

df_new=df_new.stack()

df_new=pd.DataFrame(df_new)

df_new.reset_index(inplace=True)

df_new=df_new[['title',0]]

df_new.columns=['title','cast']

df_new
```

```
[85]:
```

	title	cast
0	Dick Johnson Is Dead	nan
1	Blood & Water	Ama Qamata
2	Blood & Water	Khosi Ngema
3	Blood & Water	Gail Mabalane
4	Blood & Water	Thabang Molaba
...
64946	Zubaan	Manish Chaudhary
64947	Zubaan	Meghna Malik
64948	Zubaan	Malkeet Rauni
64949	Zubaan	Anita Shabdish

64950 Zubaan Chittaranjan Tripathy

[64951 rows x 2 columns]

```
[84]: df_new[df_new["cast"] == "Anupam Kher"]
```

```
[84]:
```

	title	cast
1606	C Kkompany	Anupam Kher
1704	Kyaa Kool Hai Hum	Anupam Kher
1718	Kyaa Super Kool Hain Hum	Anupam Kher
1728	Kyo Kii... Main Jhuth Nahin Bolta	Anupam Kher
5985	Silver Linings Playbook	Anupam Kher
15063	Dil	Anupam Kher
18151	Chashme Baddoor	Anupam Kher
18315	Special 26	Anupam Kher
18650	Prem Ratan Dhan Payo	Anupam Kher
18662	Vivah	Anupam Kher
20434	One Day: Justice Delivered	Anupam Kher
21603	Gori Tere Pyaar Mein	Anupam Kher
21610	Gumrah	Anupam Kher
21685	Kuch Kuch Hota Hai	Anupam Kher
23391	Hum Aapke Hain Koun	Anupam Kher
24818	Game	Anupam Kher
34309	Zokkomon	Anupam Kher
35340	Wake Up Sid	Anupam Kher
35876	Naam Shabana	Anupam Kher
35967	Toilet: Ek Prem Katha	Anupam Kher
36257	Rang De Basanti	Anupam Kher
37011	Aiyaary	Anupam Kher
37592	Paheli	Anupam Kher
38002	Judwaa 2	Anupam Kher
38673	The Indian Detective	Anupam Kher
41062	Oh Darling Yeh Hai India	Anupam Kher
41297	Chaahat	Anupam Kher
44745	A Family Man	Anupam Kher
44961	A Wednesday	Anupam Kher
47815	Chashme Buddoor	Anupam Kher
51126	Hamara Dil Aapke Paas Hai	Anupam Kher
51292	Haseena Maan Jaayegi	Anupam Kher
52503	Jaan-E-Mann: Let's Fall in Love... Again	Anupam Kher
52758	Judwaa	Anupam Kher
53060	Khalnayak	Anupam Kher
53074	Khosla Ka Ghosla	Anupam Kher
53516	Kya Kehna	Anupam Kher
54440	Mahabharat	Anupam Kher
59857	Super Nani	Anupam Kher
59989	Tahaan	Anupam Kher

62696	The Shaukeens	Anupam Kher
64642	Y.M.I.: Yeh Mera India	Anupam Kher
64685	Yamla Pagla Deewana 2	Anupam Kher

```
[57]: df_new.columns=['title','cast']
```

```
[81]: df_new[df_new['cast']=='Rupa Bhimani']
```

```
[81]:
```

	title	cast
313	Chhota Bheem	Rupa Bhimani
708	Mighty Raju	Rupa Bhimani
3373	Chhota Bheem - Dinosaur World	Rupa Bhimani
3379	Chhota Bheem - Neeli Pahaadi	Rupa Bhimani
3386	Chhota Bheem & Ganesh	Rupa Bhimani
3393	Chhota Bheem & Krishna: Mayanagari	Rupa Bhimani
3400	Chhota Bheem & Krishna: Pataliputra- City of t...	Rupa Bhimani
3407	Chhota Bheem And The Broken Amulet	Rupa Bhimani
3414	Chhota Bheem And The Crown of Valhalla	Rupa Bhimani
3421	Chhota Bheem and the Incan Adventure	Rupa Bhimani
3428	Chhota Bheem and The ShiNobi Secret	Rupa Bhimani
3435	Chhota Bheem Aur Hanuman	Rupa Bhimani
3442	Chhota Bheem aur Krishna	Rupa Bhimani
3449	Chhota Bheem aur Krishna vs Zimbara	Rupa Bhimani
3455	Chhota Bheem in African Safari	Rupa Bhimani
3463	Chhota Bheem Ka Roosie Romanch	Rupa Bhimani
3471	Chhota Bheem: Bheem vs Aliens	Rupa Bhimani
3478	Chhota Bheem: Dholakpur to Kathmandu	Rupa Bhimani
3485	Chhota Bheem: Dus Pe Dus	Rupa Bhimani
3492	Chhota Bheem: Journey to Petra	Rupa Bhimani
3498	Chhota Bheem: Master of Shaolin	Rupa Bhimani
3504	Chhota Bheem: The Rise of Kirmada	Rupa Bhimani
45767	Antariksha Ke Rakhwale	Rupa Bhimani
47895	Chhota Bheem Aur Kaala Yodha	Rupa Bhimani
47904	Chhota Bheem Ka Romani Adventure	Rupa Bhimani
47913	Chhota Bheem Ka Troll Se Takkar	Rupa Bhimani
47920	Chhota Bheem Kungfu Dhamaka	Rupa Bhimani
53418	Krishna Balram	Rupa Bhimani
58346	Samudri Lootere	Rupa Bhimani
59835	Super Bheem	Rupa Bhimani
59841	Super Bheem Bana Vajraveer	Rupa Bhimani

```
[59]: df_new[df_new.cast.str.contains('Rupa')]
```

```
[59]:
```

	title	cast
313	Chhota Bheem	Rupa Bhimani
708	Mighty Raju	Rupa Bhimani
2108	Pahuna	Rupa Tamang

3373	Chhota Bheem - Dinosaur World	Rupa Bhimani
3379	Chhota Bheem - Neeli Pahaadi	Rupa Bhimani
3386	Chhota Bheem & Ganesh	Rupa Bhimani
3393	Chhota Bheem & Krishna: Mayanagari	Rupa Bhimani
3400	Chhota Bheem & Krishna: Pataliputra- City of t...	Rupa Bhimani
3407	Chhota Bheem And The Broken Amulet	Rupa Bhimani
3414	Chhota Bheem And The Crown of Valhalla	Rupa Bhimani
3421	Chhota Bheem and the Incan Adventure	Rupa Bhimani
3428	Chhota Bheem and The ShiNobi Secret	Rupa Bhimani
3435	Chhota Bheem Aur Hanuman	Rupa Bhimani
3442	Chhota Bheem aur Krishna	Rupa Bhimani
3449	Chhota Bheem aur Krishna vs Zimbara	Rupa Bhimani
3455	Chhota Bheem in African Safari	Rupa Bhimani
3463	Chhota Bheem Ka Rooski Romanch	Rupa Bhimani
3471	Chhota Bheem: Bheem vs Aliens	Rupa Bhimani
3478	Chhota Bheem: Dholakpur to Kathmandu	Rupa Bhimani
3485	Chhota Bheem: Dus Pe Dus	Rupa Bhimani
3492	Chhota Bheem: Journey to Petra	Rupa Bhimani
3498	Chhota Bheem: Master of Shaolin	Rupa Bhimani
3504	Chhota Bheem: The Rise of Kirmada	Rupa Bhimani
34026	Barfi!	Rupa Ganguly
35016	Haani	Rupa Bal
43471	X: Past Is Present	Pooja Ruparel
45767	Antariksha Ke Rakhwale	Rupa Bhimani
47895	Chhota Bheem Aur Kaala Yodha	Rupa Bhimani
47904	Chhota Bheem Ka Romani Adventure	Rupa Bhimani
47913	Chhota Bheem Ka Troll Se Takkar	Rupa Bhimani
47920	Chhota Bheem Kungfu Dhamaka	Rupa Bhimani
53418	Krishna Balram	Rupa Bhimani
58346	Samudri Lootere	Rupa Bhimani
59835	Super Bheem	Rupa Bhimani
59841	Super Bheem Bana Vajraveer	Rupa Bhimani

```
[60]: df_new.cast.value_counts()
```

```
[60]: nan                825
      Anupam Kher         43
      Shah Rukh Khan      35
      Julie Tejwani       33
      Naseeruddin Shah    32
      ...
      Melanie Straub      1
      Gabriela Maria Schmeide 1
      Helena Zengel       1
      Daniel Valenzuela    1
      Chittaranjan Tripathy 1
      Name: cast, Length: 36440, dtype: int64
```

```
[61]: df.cast.value_counts()
```

```
[61]: David Attenborough
19
Vatsal Dubey, Julie Tejwani, Rupa Bhimani, Jigna Bhardwaj, Rajesh Kava, Mousam,
Swapnil
14
Samuel West
10
Jeff Dunham
7
David Spade, London Hughes, Fortune Feimster
6
..
Michael Peña, Diego Luna, Tenoch Huerta, Joaquin Cosio, José María Yazpik, Matt
Letscher, Alyssa Diaz
1
Nick Lachey, Vanessa Lachey
1
Takeru Sato, Kasumi Arimura, Haru, Kentaro Sakaguchi, Takayuki Yamada, Kendo
Kobayashi, Ken Yasuda, Arata Furuta, Suzuki Matsuo, Koichi Yamadera, Arata Iura,
Chikako Kaku, Kotaro Yoshida      1
Toyin Abraham, Sambasa Nzeribe, Chioma Chukwuka Akpotha, Chioma Omeruah,
Chiwetalu Agu, Dele Odule, Femi Adebayo, Bayray McNwizu, Biodun Stephen
1
Vicky Kaushal, Sarah-Jane Dias, Raaghav Chanana, Manish Chaudhary, Meghna Malik,
Malkeet Rauni, Anita Shabdish, Chittaranjan Tripathy
1
Name: cast, Length: 7692, dtype: int64
```

```
[62]: df_cast=df.reset_index().merge(df_new, on='title', how='inner')
```

```
[63]: df_cast[df_cast['cast_y']=='Anupam Kher']
```

```
[63]:
```

	index	show_id	type	title \
1606	192	s193	Movie	C Kkompany
1704	202	s203	Movie	Kyaa Kool Hai Hum
1718	204	s205	Movie	Kyaa Super Kool Hain Hum
1728	205	s206	Movie	Kyo Kii... Main Jhuth Nahin Bolta
5985	702	s703	Movie	Silver Linings Playbook
15063	1861	s1862	Movie	Dil
18151	2270	s2271	Movie	Chashme Baddoor
18315	2289	s2290	Movie	Special 26
18650	2339	s2340	Movie	Prem Ratan Dhan Payo
18662	2340	s2341	Movie	Vivah
20434	2564	s2565	Movie	One Day: Justice Delivered
21603	2724	s2725	Movie	Gori Tere Pyaar Mein

21610	2725	s2726	Movie	Gumrah
21685	2734	s2735	Movie	Kuch Kuch Hota Hai
23391	2957	s2958	Movie	Hum Aapke Hain Koun
24818	3136	s3137	Movie	Game
34309	4466	s4467	Movie	Zokkomon
35340	4612	s4613	Movie	Wake Up Sid
35876	4679	s4680	Movie	Naam Shabana
35967	4694	s4695	Movie	Toilet: Ek Prem Katha
36257	4732	s4733	Movie	Rang De Basanti
37011	4860	s4861	Movie	Aiyaary
37592	4955	s4956	Movie	Paheli
38002	5009	s5010	Movie	Judwaa 2
38673	5118	s5119	TV Show	The Indian Detective
41062	5460	s5461	Movie	Oh Darling Yeh Hai India
41297	5499	s5500	Movie	Chaaht
44745	6034	s6035	Movie	A Family Man
44961	6063	s6064	Movie	A Wednesday
47815	6449	s6450	Movie	Chashme Buddoor
51126	6912	s6913	Movie	Hamara Dil Aapke Paas Hai
51292	6936	s6937	Movie	Haseena Maan Jaayegi
52503	7109	s7110	Movie	Jaan-E-Mann: Let's Fall in Love... Again
52758	7144	s7145	Movie	Judwaa
53060	7183	s7184	Movie	Khalnayak
53074	7186	s7187	Movie	Khosla Ka Ghosla
53516	7247	s7248	Movie	Kya Kehna
54440	7380	s7381	Movie	Mahabharat
59857	8124	s8125	Movie	Super Nani
59989	8145	s8146	Movie	Tahaan
62696	8504	s8505	Movie	The Shaukeens
64642	8769	s8770	Movie	Y.M.I.: Yeh Mera India
64685	8772	s8773	Movie	Yamla Pagla Deewana 2

	director \
1606	Sachin Yardi
1704	Sangeeth Sivan
1718	Sachin Yardi
1728	David Dhawan
5985	David O. Russell
15063	Indra Kumar
18151	David Dhawan
18315	Neeraj Pandey
18650	Sooraj R. Barjatya
18662	Sooraj R. Barjatya
20434	Ashok Nanda
21603	Punit Malhotra
21610	Mahesh Bhatt
21685	Karan Johar

23391	Sooraj R. Barjatya
24818	Abhinay Deo
34309	Satyajit Bhattacharya
35340	Ayaan Mukherji
35876	Shivam Nair
35967	Shree Narayan Singh
36257	Rakeysh Omprakash Mehra
37011	Neeraj Pandey
37592	Amol Palekar
38002	David Dhawan
38673	NaN
41062	Ketan Mehta
41297	Mahesh Bhatt
44745	Mark Williams
44961	Neeraj Pandey
47815	David Dhawan
51126	Satish Kaushik
51292	David Dhawan
52503	Shirish Kunder
52758	David Dhawan
53060	Subhash Ghai
53074	Dibakar Banerjee
53516	Kundan Shah
54440	Amaan Khan
59857	Indra Kumar
59989	Santosh Sivan
62696	Abhishek Sharma
64642	N. Chandra
64685	Sangeeth Sivan

cast_x \

1606	Mithun Chakraborty, Tusshar Kapoor, Anupam Khe...
1704	Tusshar Kapoor, Riteish Deshmukh, Isha Koppika...
1718	Tusshar Kapoor, Riteish Deshmukh, Anupam Kher,...
1728	Govinda, Sushmita Sen, Rambha, Anupam Kher, Sa...
5985	Bradley Cooper, Jennifer Lawrence, Robert De N...
15063	Aamir Khan, Madhuri Dixit, Saeed Jaffrey, Deve...
18151	Rishi Kapoor, Ali Zafar, Taapsee Pannu, Siddha...
18315	Akshay Kumar, Manoj Bajpayee, Anupam Kher, Jim...
18650	Salman Khan, Sonam Kapoor, Anupam Kher, Neil N...
18662	Shahid Kapoor, Amrita Rao, Anupam Kher, Alok N...
20434	Anupam Kher, Esha Gupta, Kumud Mishra, Kashyap...
21603	Imran Khan, Kareena Kapoor, Nizhalgal Ravi, An...
21610	Sanjay Dutt, Sridevi, Anupam Kher, Rahul Roy, ...
21685	Shah Rukh Khan, Kajol, Rani Mukerji, Farida Ja...
23391	Madhuri Dixit, Salman Khan, Mohnish Bahl, Renu...
24818	Abhishek Bachchan, Kangana Ranaut, Anupam Kher...

34309 Darsheel Safary, Anupam Kher, Manjari Fadnis, ...
 35340 Ranbir Kapoor, Konkona Sen Sharma, Shruti Bapn...
 35876 Tapsee Pannu, Akshay Kumar, Manoj Bajpayee, Pr...
 35967 Akshay Kumar, Bhumi Pednekar, Divyendu Sharma,...
 36257 Aamir Khan, Siddharth, Atul Kulkarni, Sharman ...
 37011 Sidharth Malhotra, Manoj Bajpayee, Rakul Preet...
 37592 Shah Rukh Khan, Rani Mukerji, Anupam Kher, Dil...
 38002 Varun Dhawan, Jacqueline Fernandez, Tapsee Pan...
 38673 Russell Peters, Anupam Kher, Christina Cole, M...
 41062 Shah Rukh Khan, Deepa Sahi, Javed Jaffrey, Anu...
 41297 Naseeruddin Shah, Shah Rukh Khan, Pooja Bhatt,...
 44745 Gerard Butler, Gretchen Mol, Alison Brie, Will...
 44961 Anupam Kher, Naseeruddin Shah, Jimmy Shergill,...
 47815 Ali Zafar, Siddharth, Divyendu Sharma, Tapsee ...
 51126 Anil Kapoor, Aishwarya Rai Bachchan, Sonali Be...
 51292 Sanjay Dutt, Govinda, Karisma Kapoor, Pooja Ba...
 52503 Salman Khan, Akshay Kumar, Preity Zinta, Anupa...
 52758 Salman Khan, Karisma Kapoor, Rambha, Kader Kha...
 53060 Sanjay Dutt, Madhuri Dixit, Jackie Shroff, Anu...
 53074 Anupam Kher, Boman Irani, Parvin Dabas, Tara S...
 53516 Preity Zinta, Saif Ali Khan, Anupam Kher, Fari...
 54440 Amitabh Bachchan, Ajay Devgn, Vidya Balan, Sha...
 59857 Rekha, Randhir Kapoor, Sharman Joshi, Anupam K...
 59989 Purav Bhandare, Anupam Kher, Rahul Bose, Victo...
 62696 Akshay Kumar, Annu Kapoor, Piyush Mishra, Lisa...
 64642 Anupam Kher, Atul Kulkarni, Aakash Pandey, Mil...
 64685 Dharmendra, Sunny Deol, Bobby Deol, Neha Sharm...

	country	date_added	release_year	rating	\
1606	India	August 27, 2021	2008	TV-14	
1704	India	August 27, 2021	2005	TV-MA	
1718	India	August 27, 2021	2012	TV-MA	
1728	India	August 27, 2021	2001	TV-14	
5985	United States	June 17, 2021	2012	R	
15063	India	October 12, 2020	1990	TV-14	
18151	India	July 5, 2020	2013	TV-14	
18315	India	July 5, 2020	2013	TV-PG	
18650	India	June 25, 2020	2015	TV-14	
18662	India	June 25, 2020	2006	TV-14	
20434	India	May 3, 2020	2019	TV-14	
21603	India	April 1, 2020	2013	TV-14	
21610	India	April 1, 2020	1993	TV-14	
21685	India	April 1, 2020	1998	TV-14	
23391	India	February 1, 2020	1994	TV-14	
24818	India	December 15, 2019	2011	TV-14	
34309	India	November 1, 2018	2011	PG	
35340	India	October 1, 2018	2009	TV-14	

35876	India	August 28, 2018	2017	TV-14
35967	India	August 21, 2018	2017	TV-14
36257	India	August 2, 2018	2006	TV-14
37011	India	May 15, 2018	2018	TV-MA
37592	India	April 1, 2018	2005	TV-PG
38002	India	March 1, 2018	2017	TV-14
38673	Canada, Germany, South Africa	December 19, 2017	2017	TV-14
41062	India	June 1, 2017	1995	TV-14
41297	India	May 1, 2017	1996	TV-14
44745	Canada, United States	December 15, 2019	2016	R
44961	India	November 1, 2018	2008	TV-MA
47815	India	May 1, 2017	2013	TV-PG
51126	India	March 1, 2018	2000	TV-14
51292	India	March 1, 2018	1999	TV-PG
52503	India	December 31, 2019	2006	TV-14
52758	India	December 31, 2019	1997	TV-14
53060	India	March 1, 2018	1993	TV-14
53074	India	August 2, 2018	2006	TV-14
53516	India	April 1, 2018	2000	TV-PG
54440	India	August 1, 2018	2013	TV-14
59857	India	March 1, 2018	2014	TV-PG
59989	India	July 15, 2018	2008	TV-14
62696	India	March 1, 2018	2014	TV-MA
64642	India	March 1, 2018	2008	TV-MA
64685	India	May 1, 2017	2013	TV-14

	duration	listed_in \
1606	127 min	Action & Adventure, Comedies, International Mo...
1704	165 min	Comedies, International Movies, Music & Musicals
1718	136 min	Comedies, International Movies
1728	150 min	Comedies, International Movies, Sci-Fi & Fantasy
5985	122 min	Comedies, Dramas, Independent Movies
15063	165 min	Comedies, Dramas, International Movies
18151	121 min	Comedies, International Movies, Music & Musicals
18315	137 min	Dramas, International Movies, Thrillers
18650	164 min	Action & Adventure, Dramas, International Movies
18662	166 min	Dramas, International Movies, Romantic Movies
20434	120 min	Dramas, International Movies
21603	144 min	Comedies, Dramas, International Movies
21610	149 min	Action & Adventure, Dramas, International Movies
21685	185 min	Comedies, Dramas, International Movies
23391	193 min	Classic Movies, Dramas, International Movies
24818	135 min	International Movies, Thrillers
34309	104 min	Children & Family Movies, Dramas
35340	132 min	Comedies, International Movies, Romantic Movies
35876	141 min	Action & Adventure, International Movies
35967	145 min	Comedies, Dramas, International Movies

36257	159 min	Dramas, International Movies
37011	158 min	Action & Adventure, Dramas, International Movies
37592	134 min	Dramas, International Movies, Romantic Movies
38002	145 min	Action & Adventure, Comedies, International Mo...
38673	1 Season	Crime TV Shows, International TV Shows, TV Com...
41062	154 min	Action & Adventure, Comedies, International Mo...
41297	148 min	Dramas, International Movies, Romantic Movies
44745	110 min	Dramas
44961	103 min	Action & Adventure, Dramas, International Movies
47815	121 min	Comedies, International Movies, Music & Musicals
51126	158 min	Dramas, International Movies, Music & Musicals
51292	151 min	Action & Adventure, Comedies, Dramas
52503	163 min	Dramas, International Movies, Romantic Movies
52758	133 min	Comedies, International Movies, Romantic Movies
53060	170 min	Action & Adventure, Dramas, International Movies
53074	124 min	Comedies, Dramas, International Movies
53516	149 min	Dramas, International Movies, Romantic Movies
54440	119 min	Action & Adventure, Dramas, International Movies
59857	127 min	Comedies, Dramas, International Movies
59989	95 min	Dramas, International Movies
62696	123 min	Comedies, International Movies, Music & Musicals
64642	137 min	Dramas, Independent Movies, International Movies
64685	147 min	Action & Adventure, Comedies, International Mo...

		description	cast_y
1606	Three broke friends pose as an underworld gang...	Anupam Kher	
1704	Longtime friends Rahul and Karan head to Mumba...	Anupam Kher	
1718	An aspiring actor and a struggling DJ team up ...	Anupam Kher	
1728	The life and career of a lawyer are thrown int...	Anupam Kher	
5985	A man with bipolar disorder moves home with hi...	Anupam Kher	
15063	A miser's scheme to set his son up with a mill...	Anupam Kher	
18151	When pretty new neighbor Seema falls for their...	Anupam Kher	
18315	In this fact-based crime drama, a gang of con ...	Anupam Kher	
18650	While recovering from an assassination attempt...	Anupam Kher	
18662	Set up for an arranged marriage, a young coupl...	Anupam Kher	
20434	A former judge in retirement finds and punishe...	Anupam Kher	
21603	Sriram is concerned only with spending money, ...	Anupam Kher	
21610	Jailed for drug trafficking while searching fo...	Anupam Kher	
21685	Per her mother's last wish, a girl sets out to...	Anupam Kher	
23391	Although Nisha falls for Prem, she agrees to m...	Anupam Kher	
24818	A tycoon accuses three strangers of killing hi...	Anupam Kher	
34309	When his cruel uncle abandons him, a young orp...	Anupam Kher	
35340	A spoiled trust fund brat finds himself stuck ...	Anupam Kher	
35876	A fiery young woman accepts help from a spy ag...	Anupam Kher	
35967	On her first day of marriage, a woman leaves h...	Anupam Kher	
36257	An idealistic English filmmaker casts a group ...	Anupam Kher	
37011	When his protégé goes rogue and poses a grave ...	Anupam Kher	

37592	Traditional Indian folklore comes alive in thi...	Anupam Kher
38002	Separated at birth, twins Raja and Prem couldn...	Anupam Kher
38673	In this crime dramedy, a suspended Canadian co...	Anupam Kher
41062	A penniless actor new to Mumbai and a beautifu...	Anupam Kher
41297	A vulnerable singer is forced to choose betwee...	Anupam Kher
44745	A ruthless corporate headhunter battles his ri...	Anupam Kher
44961	After receiving an anonymous tip about a bomb,...	Anupam Kher
47815	When pretty new neighbor Seema falls for their...	Anupam Kher
51126	Love blooms when kind-hearted Avinash takes in...	Anupam Kher
51292	A millionaire opens the door to comic complica...	Anupam Kher
52503	To avoid alimony payments, an aspiring actor s...	Anupam Kher
52758	Separated at birth, a pair of identical twins ...	Anupam Kher
53060	A prison guard goes undercover as a dancer to ...	Anupam Kher
53074	A cranky control freak must rely on his comica...	Anupam Kher
53516	A young university student's world is shaken a...	Anupam Kher
54440	Two young brothers encounter a singing bird wh...	Anupam Kher
59857	A loving, concerned American grandson travels ...	Anupam Kher
59989	After his family's donkey is confiscated by a ...	Anupam Kher
62696	Three sexually frustrated men in their 60s hav...	Anupam Kher
64642	The lives of a middle-aged soap opera addict, ...	Anupam Kher
64685	Up to his old tricks, con man Dharam poses as ...	Anupam Kher

```
[64]: x=pd.DataFrame(df_cast.groupby('cast_y')['title'].count())
```

```
[65]: x.reset_index(inplace=True)
x
```

```
[65]:
```

	cast_y	title
0	Jr.	2
1	"Riley" Lakdhar Dridi	1
2	'Najite Dede	2
3	2 Chainz	1
4	2Mex	1
...
36435	Şevket Çoruh	1
36436	Şinasi Yurtsever	3
36437	Şükran Ovalı	1
36438	Şükrü Özyıldız	2
36439	Şopé Dirisù	1

[36440 rows x 2 columns]

```
[66]: x[x['cast_y']=='Anupam Kher']
```

```
[66]:
```

	cast_y	title
2833	Anupam Kher	43


```
[67]: df_cast[df_cast['cast_y']=='Anupam Kher']
```

```
[67]:
```

	index	show_id	type	title \
1606	192	s193	Movie	C Kkompany
1704	202	s203	Movie	Kyaa Kool Hai Hum
1718	204	s205	Movie	Kyaa Super Kool Hain Hum
1728	205	s206	Movie	Kyo Kii... Main Jhuth Nahin Bolta
5985	702	s703	Movie	Silver Linings Playbook
15063	1861	s1862	Movie	Dil
18151	2270	s2271	Movie	Chashme Baddoor
18315	2289	s2290	Movie	Special 26
18650	2339	s2340	Movie	Prem Ratan Dhan Payo
18662	2340	s2341	Movie	Vivah
20434	2564	s2565	Movie	One Day: Justice Delivered
21603	2724	s2725	Movie	Gori Tere Pyaar Mein
21610	2725	s2726	Movie	Gumrah
21685	2734	s2735	Movie	Kuch Kuch Hota Hai
23391	2957	s2958	Movie	Hum Aapke Hain Koun
24818	3136	s3137	Movie	Game
34309	4466	s4467	Movie	Zokkomon
35340	4612	s4613	Movie	Wake Up Sid
35876	4679	s4680	Movie	Naam Shabana
35967	4694	s4695	Movie	Toilet: Ek Prem Katha
36257	4732	s4733	Movie	Rang De Basanti
37011	4860	s4861	Movie	Aiyaary
37592	4955	s4956	Movie	Paheli
38002	5009	s5010	Movie	Judwaa 2
38673	5118	s5119	TV Show	The Indian Detective
41062	5460	s5461	Movie	Oh Darling Yeh Hai India
41297	5499	s5500	Movie	Chaahat
44745	6034	s6035	Movie	A Family Man
44961	6063	s6064	Movie	A Wednesday
47815	6449	s6450	Movie	Chashme Buddoor
51126	6912	s6913	Movie	Hamara Dil Aapke Paas Hai
51292	6936	s6937	Movie	Haseena Maan Jaayegi
52503	7109	s7110	Movie	Jaan-E-Mann: Let's Fall in Love... Again
52758	7144	s7145	Movie	Judwaa
53060	7183	s7184	Movie	Khalnayak
53074	7186	s7187	Movie	Khosla Ka Ghosla
53516	7247	s7248	Movie	Kya Kehna
54440	7380	s7381	Movie	Mahabharat
59857	8124	s8125	Movie	Super Nani
59989	8145	s8146	Movie	Tahaan
62696	8504	s8505	Movie	The Shaukeens
64642	8769	s8770	Movie	Y.M.I.: Yeh Mera India
64685	8772	s8773	Movie	Yamla Pagla Deewana 2

	director \
1606	Sachin Yardi
1704	Sangeeth Sivan
1718	Sachin Yardi
1728	David Dhawan
5985	David O. Russell
15063	Indra Kumar
18151	David Dhawan
18315	Neeraj Pandey
18650	Sooraj R. Barjatya
18662	Sooraj R. Barjatya
20434	Ashok Nanda
21603	Punit Malhotra
21610	Mahesh Bhatt
21685	Karan Johar
23391	Sooraj R. Barjatya
24818	Abhinay Deo
34309	Satyajit Bhatkal
35340	Ayaan Mukherji
35876	Shivam Nair
35967	Shree Narayan Singh
36257	Rakeysh Omprakash Mehra
37011	Neeraj Pandey
37592	Amol Palekar
38002	David Dhawan
38673	NaN
41062	Ketan Mehta
41297	Mahesh Bhatt
44745	Mark Williams
44961	Neeraj Pandey
47815	David Dhawan
51126	Satish Kaushik
51292	David Dhawan
52503	Shirish Kunder
52758	David Dhawan
53060	Subhash Ghai
53074	Dibakar Banerjee
53516	Kundan Shah
54440	Amaan Khan
59857	Indra Kumar
59989	Santosh Sivan
62696	Abhishek Sharma
64642	N. Chandra
64685	Sangeeth Sivan

	cast_x \
1606	Mithun Chakraborty, Tusshar Kapoor, Anupam Khe...

1704 Tusshar Kapoor, Riteish Deshmukh, Isha Koppika...
 1718 Tusshar Kapoor, Riteish Deshmukh, Anupam Kher,...
 1728 Govinda, Sushmita Sen, Rambha, Anupam Kher, Sa...
 5985 Bradley Cooper, Jennifer Lawrence, Robert De N...
 15063 Aamir Khan, Madhuri Dixit, Saeed Jaffrey, Deve...
 18151 Rishi Kapoor, Ali Zafar, Taapsee Pannu, Siddha...
 18315 Akshay Kumar, Manoj Bajpayee, Anupam Kher, Jim...
 18650 Salman Khan, Sonam Kapoor, Anupam Kher, Neil N...
 18662 Shahid Kapoor, Amrita Rao, Anupam Kher, Alok N...
 20434 Anupam Kher, Esha Gupta, Kumud Mishra, Kashyap...
 21603 Imran Khan, Kareena Kapoor, Nizhalgal Ravi, An...
 21610 Sanjay Dutt, Sridevi, Anupam Kher, Rahul Roy, ...
 21685 Shah Rukh Khan, Kajol, Rani Mukerji, Farida Ja...
 23391 Madhuri Dixit, Salman Khan, Mohnish Bahl, Renu...
 24818 Abhishek Bachchan, Kangana Ranaut, Anupam Kher...
 34309 Darsheel Safary, Anupam Kher, Manjari Fadnis, ...
 35340 Ranbir Kapoor, Konkona Sen Sharma, Shruti Bapn...
 35876 Tapsee Pannu, Akshay Kumar, Manoj Bajpayee, Pr...
 35967 Akshay Kumar, Bhumi Pednekar, Divyendu Sharma,...
 36257 Aamir Khan, Siddharth, Atul Kulkarni, Sharman ...
 37011 Sidharth Malhotra, Manoj Bajpayee, Rakul Preet...
 37592 Shah Rukh Khan, Rani Mukerji, Anupam Kher, Dil...
 38002 Varun Dhawan, Jacqueline Fernandez, Tapsee Pan...
 38673 Russell Peters, Anupam Kher, Christina Cole, M...
 41062 Shah Rukh Khan, Deepa Sahi, Javed Jaffrey, Anu...
 41297 Naseeruddin Shah, Shah Rukh Khan, Pooja Bhatt,...
 44745 Gerard Butler, Gretchen Mol, Alison Brie, Will...
 44961 Anupam Kher, Naseeruddin Shah, Jimmy Shergill,...
 47815 Ali Zafar, Siddharth, Divyendu Sharma, Tapsee ...
 51126 Anil Kapoor, Aishwarya Rai Bachchan, Sonali Be...
 51292 Sanjay Dutt, Govinda, Karisma Kapoor, Pooja Ba...
 52503 Salman Khan, Akshay Kumar, Preity Zinta, Anupa...
 52758 Salman Khan, Karisma Kapoor, Rambha, Kader Kha...
 53060 Sanjay Dutt, Madhuri Dixit, Jackie Shroff, Anu...
 53074 Anupam Kher, Boman Irani, Parvin Dabas, Tara S...
 53516 Preity Zinta, Saif Ali Khan, Anupam Kher, Fari...
 54440 Amitabh Bachchan, Ajay Devgn, Vidya Balan, Sha...
 59857 Rekha, Randhir Kapoor, Sharman Joshi, Anupam K...
 59989 Purav Bhandare, Anupam Kher, Rahul Bose, Victo...
 62696 Akshay Kumar, Annu Kapoor, Piyush Mishra, Lisa...
 64642 Anupam Kher, Atul Kulkarni, Aakash Pandey, Mil...
 64685 Dharmendra, Sunny Deol, Bobby Deol, Neha Sharm...

	country	date_added	release_year	rating	\
1606	India	August 27, 2021	2008	TV-14	
1704	India	August 27, 2021	2005	TV-MA	
1718	India	August 27, 2021	2012	TV-MA	

1728	India	August 27, 2021	2001	TV-14
5985	United States	June 17, 2021	2012	R
15063	India	October 12, 2020	1990	TV-14
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38673	Canada, Germany, South Africa	December 19, 2017	2017	TV-14
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1606	127 min	Action & Adventure, Comedies, International Mo...
1704	165 min	Comedies, International Movies, Music & Musicals
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64642	137 min	Dramas, Independent Movies, International Movies
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1606	Three broke friends pose as an underworld gang...	Anupam Kher	
1704	Longtime friends Rahul and Karan head to Mumba...	Anupam Kher	
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5985	A man with bipolar disorder moves home with hi...	Anupam Kher	
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18151	When pretty new neighbor Seema falls for their...	Anupam Kher	

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18650	While recovering from an assassination attempt...	Anupam Kher
18662	Set up for an arranged marriage, a young coupl...	Anupam Kher
20434	A former judge in retirement finds and punishe...	Anupam Kher
21603	Sriram is concerned only with spending money, ...	Anupam Kher
21610	Jailed for drug trafficking while searching fo...	Anupam Kher
21685	Per her mother's last wish, a girl sets out to...	Anupam Kher
23391	Although Nisha falls for Prem, she agrees to m...	Anupam Kher
24818	A tycoon accuses three strangers of killing hi...	Anupam Kher
34309	When his cruel uncle abandons him, a young orp...	Anupam Kher
35340	A spoiled trust fund brat finds himself stuck ...	Anupam Kher
35876	A fiery young woman accepts help from a spy ag...	Anupam Kher
35967	On her first day of marriage, a woman leaves h...	Anupam Kher
36257	An idealistic English filmmaker casts a group ...	Anupam Kher
37011	When his protégé goes rogue and poses a grave ...	Anupam Kher
37592	Traditional Indian folklore comes alive in thi...	Anupam Kher
38002	Separated at birth, twins Raja and Prem couldn...	Anupam Kher
38673	In this crime dramedy, a suspended Canadian co...	Anupam Kher
41062	A penniless actor new to Mumbai and a beautifu...	Anupam Kher
41297	A vulnerable singer is forced to choose betwee...	Anupam Kher
44745	A ruthless corporate headhunter battles his ri...	Anupam Kher
44961	After receiving an anonymous tip about a bomb,...	Anupam Kher
47815	When pretty new neighbor Seema falls for their...	Anupam Kher
51126	Love blooms when kind-hearted Avinash takes in...	Anupam Kher
51292	A millionaire opens the door to comic complica...	Anupam Kher
52503	To avoid alimony payments, an aspiring actor s...	Anupam Kher
52758	Separated at birth, a pair of identical twins ...	Anupam Kher
53060	A prison guard goes undercover as a dancer to ...	Anupam Kher
53074	A cranky control freak must rely on his comica...	Anupam Kher
53516	A young university student's world is shaken a...	Anupam Kher
54440	Two young brothers encounter a singing bird wh...	Anupam Kher
59857	A loving, concerned American grandson travels ...	Anupam Kher
59989	After his family's donkey is confiscated by a ...	Anupam Kher
62696	Three sexually frustrated men in their 60s hav...	Anupam Kher
64642	The lives of a middle-aged soap opera addict, ...	Anupam Kher
64685	Up to his old tricks, con man Dharam poses as ...	Anupam Kher

```
[68]: df_cast[df_cast['title']=='A Wednesday']
```

```
[68]:
```

	index	show_id	type	title	director \
44961	6063	s6064	Movie	A Wednesday	Neeraj Pandey
44962	6063	s6064	Movie	A Wednesday	Neeraj Pandey
44963	6063	s6064	Movie	A Wednesday	Neeraj Pandey
44964	6063	s6064	Movie	A Wednesday	Neeraj Pandey
44965	6063	s6064	Movie	A Wednesday	Neeraj Pandey
44966	6063	s6064	Movie	A Wednesday	Neeraj Pandey
44967	6063	s6064	Movie	A Wednesday	Neeraj Pandey

44968 6063 s6064 Movie A Wednesday Neeraj Pandey

		cast_x	country	\
44961	Anupam Kher, Naseeruddin Shah, Jimmy Shergill,...		India	
44962	Anupam Kher, Naseeruddin Shah, Jimmy Shergill,...		India	
44963	Anupam Kher, Naseeruddin Shah, Jimmy Shergill,...		India	
44964	Anupam Kher, Naseeruddin Shah, Jimmy Shergill,...		India	
44965	Anupam Kher, Naseeruddin Shah, Jimmy Shergill,...		India	
44966	Anupam Kher, Naseeruddin Shah, Jimmy Shergill,...		India	
44967	Anupam Kher, Naseeruddin Shah, Jimmy Shergill,...		India	
44968	Anupam Kher, Naseeruddin Shah, Jimmy Shergill,...		India	

	date_added	release_year	rating	duration	\
44961	November 1, 2018	2008	TV-MA	103 min	
44962	November 1, 2018	2008	TV-MA	103 min	
44963	November 1, 2018	2008	TV-MA	103 min	
44964	November 1, 2018	2008	TV-MA	103 min	
44965	November 1, 2018	2008	TV-MA	103 min	
44966	November 1, 2018	2008	TV-MA	103 min	
44967	November 1, 2018	2008	TV-MA	103 min	
44968	November 1, 2018	2008	TV-MA	103 min	

	listed_in	\
44961	Action & Adventure, Dramas, International Movies	
44962	Action & Adventure, Dramas, International Movies	
44963	Action & Adventure, Dramas, International Movies	
44964	Action & Adventure, Dramas, International Movies	
44965	Action & Adventure, Dramas, International Movies	
44966	Action & Adventure, Dramas, International Movies	
44967	Action & Adventure, Dramas, International Movies	
44968	Action & Adventure, Dramas, International Movies	

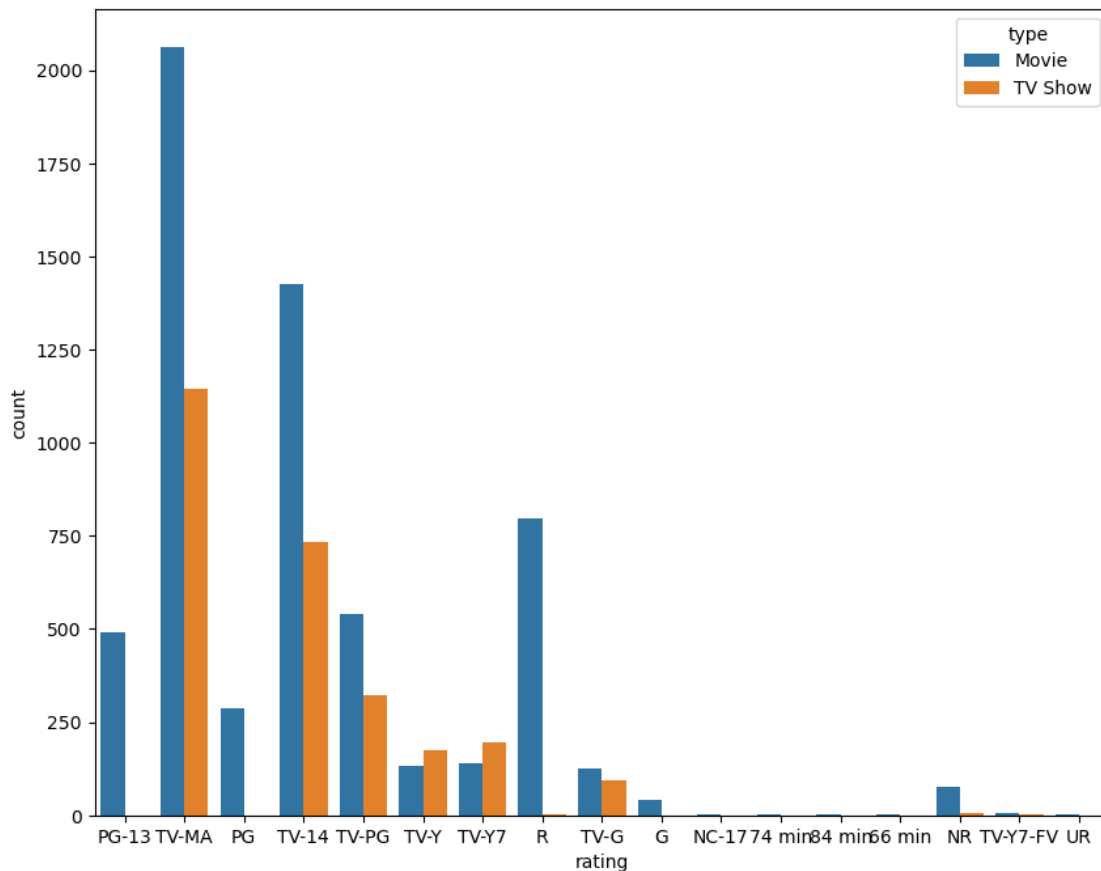
	description	\
44961	After receiving an anonymous tip about a bomb,...	
44962	After receiving an anonymous tip about a bomb,...	
44963	After receiving an anonymous tip about a bomb,...	
44964	After receiving an anonymous tip about a bomb,...	
44965	After receiving an anonymous tip about a bomb,...	
44966	After receiving an anonymous tip about a bomb,...	
44967	After receiving an anonymous tip about a bomb,...	
44968	After receiving an anonymous tip about a bomb,...	

	cast_y
44961	Anupam Kher
44962	Naseeruddin Shah
44963	Jimmy Shergill
44964	Deepal Shaw

```
44965         Aamir Bashir
44966 Kali Prasad Mukherjee
44967         Vijay Bhatia
44968         Chetan Pandit
```

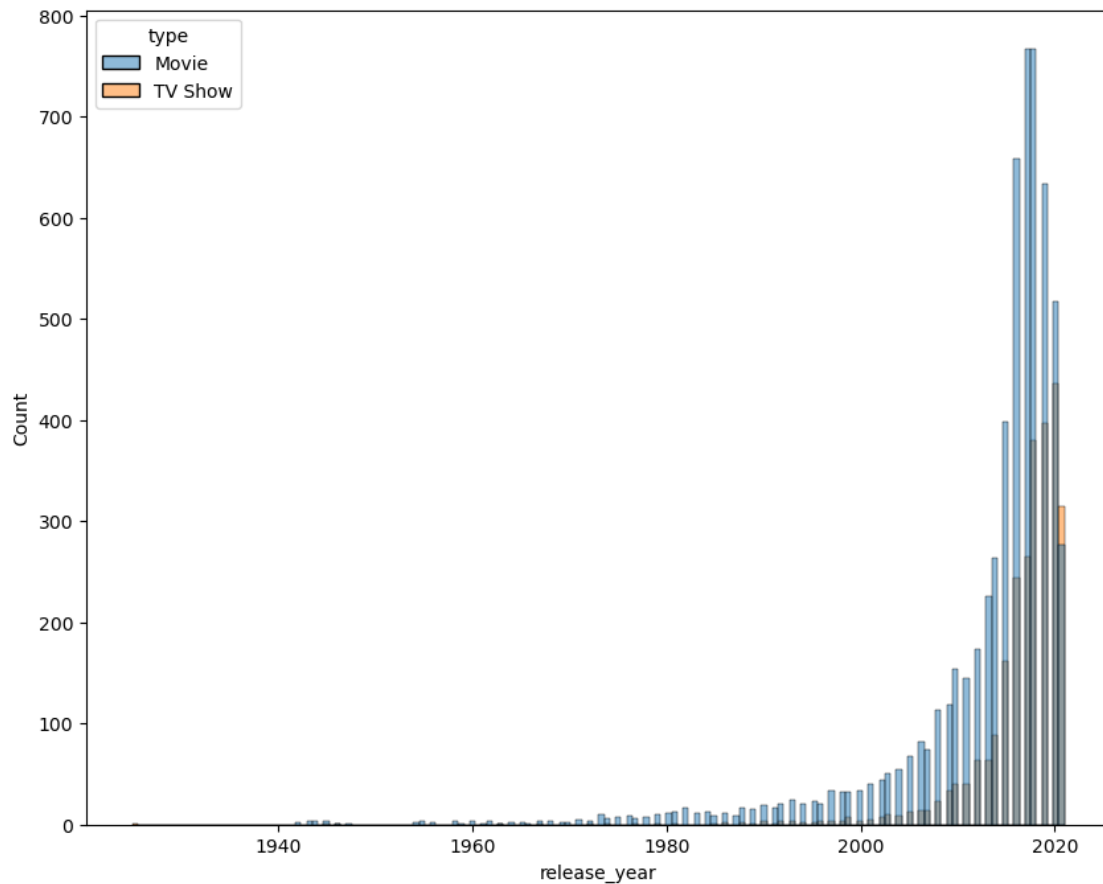
```
[69]: import seaborn as sns
import matplotlib.pyplot as plt
plt.figure(figsize=(10,8))
sns.countplot(x='rating', hue='type', data=df)
```

```
[69]: <AxesSubplot:xlabel='rating', ylabel='count'>
```



```
[70]: plt.figure(figsize=(10,8))
sns.histplot(x='release_year', hue='type', data=df)
```

```
[70]: <AxesSubplot:xlabel='release_year', ylabel='Count'>
```

```
[71]: df['date_add']=pd.to_datetime(df['date_added'], errors='coerce')
```

```
[72]: df.info()
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 8807 entries, 0 to 8806
Data columns (total 13 columns):
#   Column          Non-Null Count  Dtype
---  -
0   show_id         8807 non-null   object
1   type            8807 non-null   object
2   title           8807 non-null   object
3   director        6173 non-null   object
4   cast            7982 non-null   object
5   country         7976 non-null   object
6   date_added      8797 non-null   object
7   release_year    8807 non-null   int64
8   rating          8803 non-null   object
9   duration        8804 non-null   object
10  listed_in       8807 non-null   object
```

```

11 description    8807 non-null    object
12 date_add       8797 non-null    datetime64[ns]
dtypes: datetime64[ns](1), int64(1), object(11)
memory usage: 894.6+ KB

```

```
[73]: df.head()
```

```

[73]:  show_id    type          title    director \
0      s1    Movie  Dick Johnson Is Dead  Kirsten Johnson
1      s2  TV Show      Blood & Water          NaN
2      s3  TV Show      Ganglands  Julien Leclercq
3      s4  TV Show  Jailbirds New Orleans          NaN
4      s5  TV Show      Kota Factory          NaN

                                cast    country \
0                                NaN  United States
1  Ama Qamata, Khosi Ngema, Gail Mabalane, Thaban...  South Africa
2  Sami Bouajila, Tracy Gotoas, Samuel Jouy, Nabi...    NaN
3                                NaN    NaN
4  Mayur More, Jitendra Kumar, Ranjan Raj, Alam K...    India

    date_added  release_year  rating  duration \
0  September 25, 2021      2020  PG-13    90 min
1  September 24, 2021      2021  TV-MA  2 Seasons
2  September 24, 2021      2021  TV-MA    1 Season
3  September 24, 2021      2021  TV-MA    1 Season
4  September 24, 2021      2021  TV-MA  2 Seasons

                                listed_in \
0                                Documentaries
1  International TV Shows, TV Dramas, TV Mysteries
2  Crime TV Shows, International TV Shows, TV Act...
3                                Docuseries, Reality TV
4  International TV Shows, Romantic TV Shows, TV ...

                                description  date_add
0  As her father nears the end of his life, filmm... 2021-09-25
1  After crossing paths at a party, a Cape Town t... 2021-09-24
2  To protect his family from a powerful drug lor... 2021-09-24
3  Feuds, flirtations and toilet talk go down amo... 2021-09-24
4  In a city of coaching centers known to train I... 2021-09-24

```

```
[74]: df['month']=df['date_add'].dt.month.fillna(-1)
```

```
[75]: df['month']=df['month'].astype('int64')
```

```
[76]: df.head()
```

```
[76]: show_id      type      title      director \
0      s1      Movie      Dick Johnson Is Dead      Kirsten Johnson
1      s2      TV Show      Blood & Water      NaN
2      s3      TV Show      Ganglands      Julien Leclercq
3      s4      TV Show      Jailbirds New Orleans      NaN
4      s5      TV Show      Kota Factory      NaN

                                cast      country \
0                                NaN      United States
1      Ama Qamata, Khosi Ngema, Gail Mabalane, Thaban...      South Africa
2      Sami Bouajila, Tracy Gotoas, Samuel Jouy, Nabi...      NaN
3                                NaN      NaN
4      Mayur More, Jitendra Kumar, Ranjan Raj, Alam K...      India

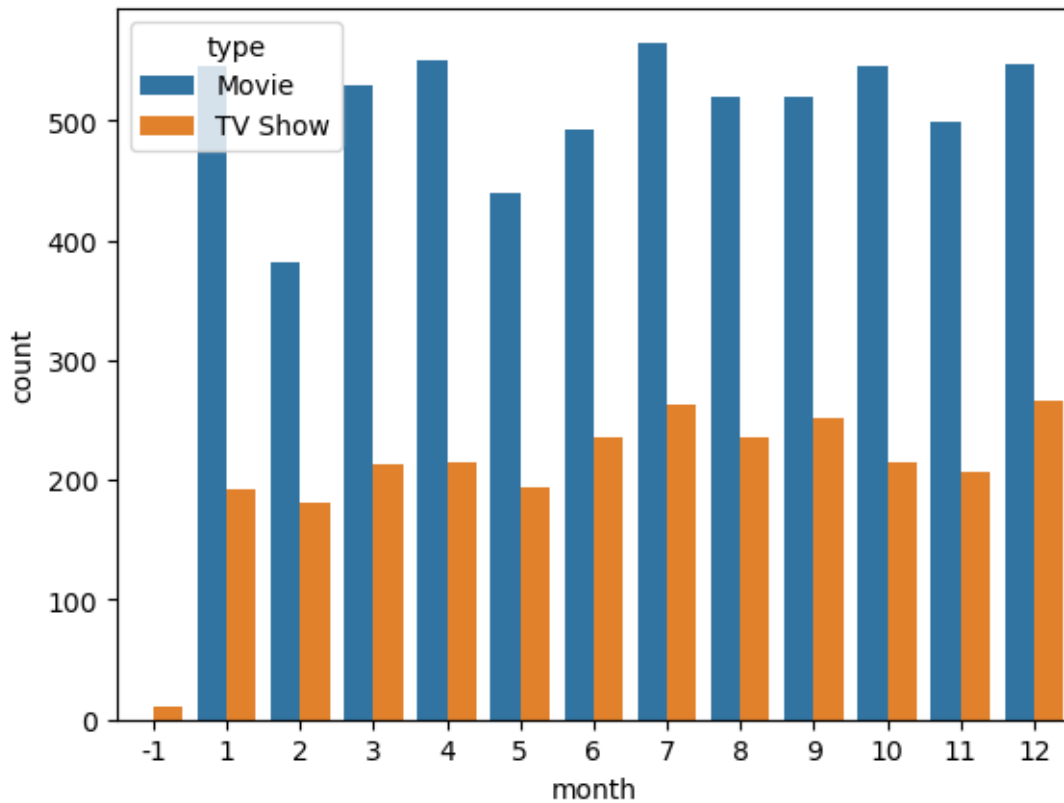
      date_added      release_year      rating      duration \
0      September 25, 2021      2020      PG-13      90 min
1      September 24, 2021      2021      TV-MA      2 Seasons
2      September 24, 2021      2021      TV-MA      1 Season
3      September 24, 2021      2021      TV-MA      1 Season
4      September 24, 2021      2021      TV-MA      2 Seasons

                                listed_in \
0                                Documentaries
1      International TV Shows, TV Dramas, TV Mysteries
2      Crime TV Shows, International TV Shows, TV Act...
3                                Docuseries, Reality TV
4      International TV Shows, Romantic TV Shows, TV ...

                                description      date_add      month
0      As her father nears the end of his life, filmm... 2021-09-25      9
1      After crossing paths at a party, a Cape Town t... 2021-09-24      9
2      To protect his family from a powerful drug lor... 2021-09-24      9
3      Feuds, flirtations and toilet talk go down amo... 2021-09-24      9
4      In a city of coaching centers known to train I... 2021-09-24      9
```

```
[77]: sns.countplot(x='month',hue='type', data=df)
```

```
[77]: <AxesSubplot:xlabel='month', ylabel='count'>
```



```
[78]: #issue with ratings
```

```
[79]: df.rating.value_counts()
```

```
[79]: TV-MA      3207
      TV-14     2160
      TV-PG     863
      R         799
      PG-13     490
      TV-Y7     334
      TV-Y      307
      PG        287
      TV-G      220
      NR         80
      G          41
      TV-Y7-FV    6
      NC-17       3
      UR          3
      74 min       1
      84 min       1
      66 min       1
```

```
Name: rating, dtype: int64
```

```
[ ]:
```

```
[ ]:
```