

This Netflix Dataset has information about TV shows and movies available on Netflix till 2021. This dataset is collected from Flixable, which is a third-party Netflix search engine, and is available on Kaggle website for free.

```
import pandas as pd
```

```
!pip install opendatasets --upgrade --quiet
```

```
ERROR: Could not find a version that satisfies the requirement opendatasets (from versions: none)
```

```
ERROR: No matching distribution found for opendatasets
```

```
WARNING: You are using pip version 21.2.4; however, version 21.3.1 is available.
```

```
You should consider upgrading via the
```

```
'c:\users\hp\AppData\Local\Programs\Python\Python36\python.exe -m pip install --upgrade pip' command.
```

```
import opendatasets as od
```

```
datasets_url='https://www.kaggle.com/shivamb/netflix-shows'
```

```
od.download(datasets_url)
```

```
Skipping, found downloaded files in ".\netflix-shows" (use force=True to force download)
```

```
data_filename = 'netflix-shows/netflix_titles.csv'
```

```
data = pd.read_csv(data_filename)
```

```
data
```

	show_id	type	title	director	cast	country	date_added	release_year	rating	duration	
0	s1	Movie	Dick Johnson Is Dead	Kirsten Johnson	NaN	United States	September 25, 2021	2020	PG-13	90 min	Documentary
1	s2	TV Show	Blood & Water	NaN	Ama Qamata, Khosi Ngema, Gail Mabalane, Thabane...	South Africa	September 24, 2021	2021	TV-MA	2 Seasons	International TV Series

	show_id	type	title	director	cast	country	date_added	release_year	rating	duration		
	2	s3	TV Show	Ganglands	Julien Leclercq	Sami Bouajila, Tracy Gotoas, Samuel Jouy, Nabi...	NaN	September 24, 2021	2021	TV-MA	1 Season	(Inter TV Si
	3	s4	TV Show	Jailbirds New Orleans	NaN	NaN	NaN	September 24, 2021	2021	TV-MA	1 Season	Do R
	4	s5	TV Show	Kota Factory	NaN	Mayur More, Jitendra Kumar, Ranjan Raj, Alam K...	India	September 24, 2021	2021	TV-MA	2 Seasons	Inter T Rom Sho
	
8802	s8803	Movie	Zodiac	David Fincher	Mark Ruffalo, Jake Gyllenhaal, Robert Downey J...	United States	November 20, 2019	2007	R	158 min		Cul
8803	s8804	TV Show	Zombie Dumb	NaN	NaN	NaN	July 1, 2019	2018	TV-Y7	2 Seasons		Ki Sl C
8804	s8805	Movie	Zombieland	Ruben Fleischer	Jesse Eisenberg, Woody Harrelson, Emma Stone, ...	United States	November 1, 2019	2009	R	88 min		C Horro
8805	s8806	Movie	Zoom	Peter Hewitt	Tim Allen, Courteney Cox, Chevy Chase, Kate Ma...	United States	January 11, 2020	2006	PG	88 min		C Famil: C
8806	s8807	Movie	Zubaan	Mozez Singh	Vicky Kaushal, Sarah-Jane Dias, Raaghav Chanan...	India	March 2, 2019	2015	TV-14	111 min		Inter Movi &

8807 rows × 12 columns

data.head()											
	show_id	type	title	director	cast	country	date_added	release_year	rating	duration	listec

	show_id	type	title	director	cast	country	date_added	release_year	rating	duration	listec
0	s1	Movie	Dick Johnson Is Dead	Kirsten Johnson	NaN	United States	September 25, 2021	2020	PG-13	90 min	Documenta
1	s2	TV Show	Blood & Water	NaN	Ama Qamata, Khosi Ngema, Gail Mabalane, Thaban...	South Africa	September 24, 2021	2021	TV-MA	2 Seasons	Internatio TV Shows, Dramas, Myster
2	s3	TV Show	Ganglands	Julien Leclercq	Sami Bouajila, Tracy Gotoas, Samuel Jouy, Nabi...	NaN	September 24, 2021	2021	TV-MA	1 Season	Crime Sho Internatio TV Shows, A
3	s4	TV Show	Jailbirds New Orleans	NaN	NaN	NaN	September 24, 2021	2021	TV-MA	1 Season	Docuser Reality
4	s5	TV Show	Kota Factory	NaN	Mayur More, Jitendra Kumar, Ranjan Raj, Alam K...	India	September 24, 2021	2021	TV-MA	2 Seasons	Internatio TV Sho Romantic Shows, T

```
data.tail()
```

	show_id	type	title	director	cast	country	date_added	release_year	rating	duration	lis
8802	s8803	Movie	Zodiac	David Fincher	Mark Ruffalo, Jake Gyllenhaal, Robert Downey J...	United States	November 20, 2019	2007	R	158 min	Cult M Dr TI
8803	s8804	TV Show	Zombie Dumb	NaN	NaN	NaN	July 1, 2019	2018	TV-Y7	2 Seasons	Ki Kore Sho Cor
8804	s8805	Movie	Zombieland	Ruben Fleischer	Jesse Eisenberg, Woody Harrelson, Emma Stone, ...	United States	November 1, 2019	2009	R	88 min	Con I
8805	s8806	Movie	Zoom	Peter Hewitt	Tim Allen, Courteney Cox, Chevy Chase, Kate Ma...	United States	January 11, 2020	2006	PG	88 min	Chil I M Cor

	show_id	type	title	director	cast	country	date_added	release_year	rating	duration	lis
8806	s8807	Movie	Zubaan	Mozez Singh	Vicky Kaushal, Sarah-Jane Dias, Raaghav Chanan...	India	March 2, 2019	2015	TV-14	111 min	Dr Internat N M

data.shape

(8807, 12)

data.size

105684

data.columns

Index(['show_id', 'type', 'title', 'director', 'cast', 'country', 'date_added', 'release_year', 'rating', 'duration', 'listed_in', 'description'], dtype='object')

data.dtypes

show_id object
type object
title object
director object
cast object
country object
date_added object
release_year int64
rating object
duration object
listed_in object
description object
dtype: object

data.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
```

Task1. Is there any Duplicate Records in this datasets? If yes, then remove the duplicate records.

```
data.head()
```

	show_id	type	title	director	cast	country	date_added	release_year	rating	duration	listec
0	s1	Movie	Dick Johnson Is Dead	Kirsten Johnson	NaN	United States	September 25, 2021	2020	PG-13	90 min	Documenta
1	s2	TV Show	Blood & Water	NaN	Ama Qamata, Khosi Ngema, Gail Mabalane, Thaban...	South Africa	September 24, 2021	2021	TV-MA	2 Seasons	Internatio TV Shows, Dramas, Myster
2	s3	TV Show	Ganglands	Julien Leclercq	Sami Bouajila, Tracy Gotoas, Samuel Jouy, Nabi...	NaN	September 24, 2021	2021	TV-MA	1 Season	Crime Sho Internatio TV Shows, A
3	s4	TV Show	Jailbirds New Orleans	NaN	NaN	NaN	September 24, 2021	2021	TV-MA	1 Season	Docuser Reality
4	s5	TV Show	Kota Factory	NaN	Mayur More, Jitendra Kumar, Ranjan Raj, Alam K...	India	September 24, 2021	2021	TV-MA	2 Seasons	Internatio TV Sho Romantic Shows, T

```
data.shape
```

```
(8807, 12)
```

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

```
show_id  type  title  director  cast  country  date_added  release_year  rating  duration  listed_in  description
```

No Duplicate values have been found

#Task2. Is there any null value present in any column? SHow with heat-map

```
data.isnull()
```

	show_id	type	title	director	cast	country	date_added	release_year	rating	duration	listed_in	description
0	False	False	False	False	True	False	False	False	False	False	False	Fals
1	False	False	False	True	False	False	False	False	False	False	False	Fals
2	False	False	False	False	False	True	False	False	False	False	False	Fals
3	False	False	False	True	True	True	False	False	False	False	False	Fals
4	False	False	False	True	False	False	False	False	False	False	False	Fals
...
8802	False	False	False	False	False	False	False	False	False	False	False	Fals
8803	False	False	False	True	True	True	False	False	False	False	False	Fals
8804	False	False	False	False	False	False	False	False	False	False	False	Fals
8805	False	False	False	False	False	False	False	False	False	False	False	Fals
8806	False	False	False	False	False	False	False	False	False	False	False	Fals

8807 rows × 12 columns

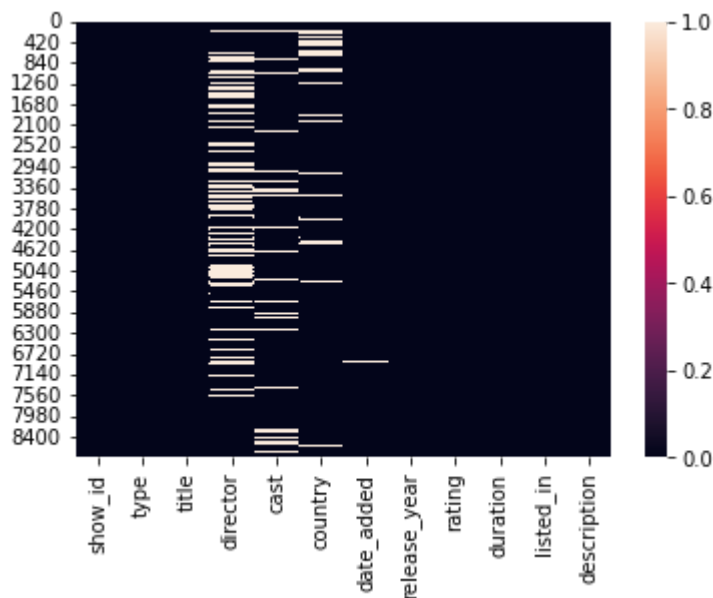
```
data.isnull().sum()
```

```
show_id      0
type         0
title        0
director    2634
cast        825
country     831
date_added   10
release_year  0
rating       4
duration     3
listed_in    0
description  0
dtype: int64
```

```
import seaborn as sns
```

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

<AxesSubplot:>



Q1. For 'Kota Factory', What is the show id and who is the director of this show?

```
data.head()
```

	show_id	type	title	director	cast	country	date_added	release_year	rating	duration	listed_in
0	s1	Movie	Dick Johnson Is Dead	Kirsten Johnson	NaN	United States	September 25, 2021	2020	PG-13	90 min	Documentary
1	s2	TV Show	Blood & Water	NaN	Ama Qamata, Khosi Ngema, Gail Mabalane, Thabani...	South Africa	September 24, 2021	2021	TV-MA	2 Seasons	International TV Shows, Dramas, Mystery
2	s3	TV Show	Ganglands	Julien Leclercq	Sami Bouajila, Tracy Gotoas, Samuel Jouy, Nabi...	NaN	September 24, 2021	2021	TV-MA	1 Season	Crime Shows, International TV Shows, Action
3	s4	TV Show	Jailbirds New Orleans	NaN	NaN	NaN	September 24, 2021	2021	TV-MA	1 Season	Docuser Reality
4	s5	TV Show	Kota Factory	NaN	Mayur More, Jitendra Kumar, Ranjan Raj, Alam K...	India	September 24, 2021	2021	TV-MA	2 Seasons	International TV Shows, Romantic Shows, TV

```
data[data['title'].isin(['Kota Factory'])]
```

	show_id	type	title	director	cast	country	date_added	release_year	rating	duration	listed_in	description
--	---------	------	-------	----------	------	---------	------------	--------------	--------	----------	-----------	-------------

show_id	type	title	director	cast	country	date_added	release_year	rating	duration	listed_in	desc	
4	s5	TV Show	Kota Factory	NaN	Mayur More, Jitendra Kumar, Ranjan Raj, Alam K...	India	September 24, 2021	2021	TV-MA	2 Seasons	International TV Shows, Romantic TV Shows, TV ...	In a co kn 1

```
data[data['title'].str.contains('Kota Factory')]
```

show_id	type	title	director	cast	country	date_added	release_year	rating	duration	listed_in	desc	
4	s5	TV Show	Kota Factory	NaN	Mayur More, Jitendra Kumar, Ranjan Raj, Alam K...	India	September 24, 2021	2021	TV-MA	2 Seasons	International TV Shows, Romantic TV Shows, TV ...	In a co kn 1

Q2. In which year highest number of TV Shows & Movies were released? Show with Bar Graph.

```
data.dtypes
```

```
show_id      object
type         object
title        object
director     object
cast         object
country      object
date_added   object
release_year  int64
rating       object
duration     object
listed_in    object
description  object
dtype: object
```

```
data['Date-N'] = pd.to_datetime(data['date_added'])
```

```
data.head()
```

show_id	type	title	director	cast	country	date_added	release_year	rating	duration	listed_in	desc
0	s1	Movie	Dick Johnson Is Dead	Kirsten Johnson	NaN	United States	September 25, 2021	2020	PG-13	90 min	Documenta

	show_id	type	title	director	cast	country	date_added	release_year	rating	duration	listed_in
1	s2	TV Show	Blood & Water	NaN	Ama Qamata, Khosi Ngema, Gail Mabalane, Thaban...	South Africa	September 24, 2021	2021	TV-MA	2 Seasons	International TV Shows, Dramas, Mystery
2	s3	TV Show	Ganglands	Julien Leclercq	Sami Bouajila, Tracy Gotoas, Samuel Jouy, Nabi...	NaN	September 24, 2021	2021	TV-MA	1 Season	Crime Shows, International TV Shows, Action
3	s4	TV Show	Jailbirds New Orleans	NaN	NaN	NaN	September 24, 2021	2021	TV-MA	1 Season	Docuseries, Reality
4	s5	TV Show	Kota Factory	NaN	Mayur More, Jitendra Kumar, Ranjan Raj, Alam K...	India	September 24, 2021	2021	TV-MA	2 Seasons	International TV Shows, Romantic Shows, TV

data.dtypes

```
show_id          object
type             object
title            object
director         object
cast             object
country          object
date_added       object
release_year     int64
rating           object
duration         object
listed_in        object
description       object
Date-N           datetime64[ns]
dtype: object
```

data['Date-N'].dt.year.value_counts()

```
2019.0    2016
2020.0    1879
2018.0    1649
2021.0    1498
2017.0    1188
2016.0     429
2015.0     82
```

```

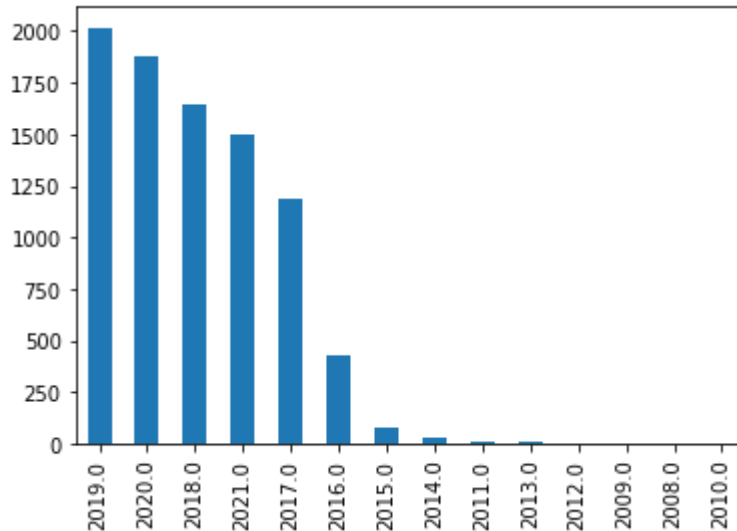
2014.0    24
2011.0    13
2013.0    11
2012.0     3
2009.0     2
2008.0     2
2010.0     1

```

Name: Date-N, dtype: int64

```
data['Date-N'].dt.year.value_counts().plot(kind='bar')
```

<AxesSubplot:>



Q4.How many Movies & TV shows are in the datasets? show them with Bar Graph

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

	show_id	type	title	director	cast	country	date_added	release_year	rating	duration	listed_i
0	s1	Movie	Dick Johnson Is Dead	Kirsten Johnson	NaN	United States	September 25, 2021	2020	PG-13	90 min	Documentarie
1	s2	TV Show	Blood & Water	NaN	Ama Qamata, Khosi Ngema, Gail Mabalane, Thaban...	South Africa	September 24, 2021	2021	TV-MA	2 Seasons	Internationa TV Shows, T Dramas, T Mysterie

```
data.groupby('type')
```

<pandas.core.groupby.generic.DataFrameGroupBy object at 0x0000021E098651D0>

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

type

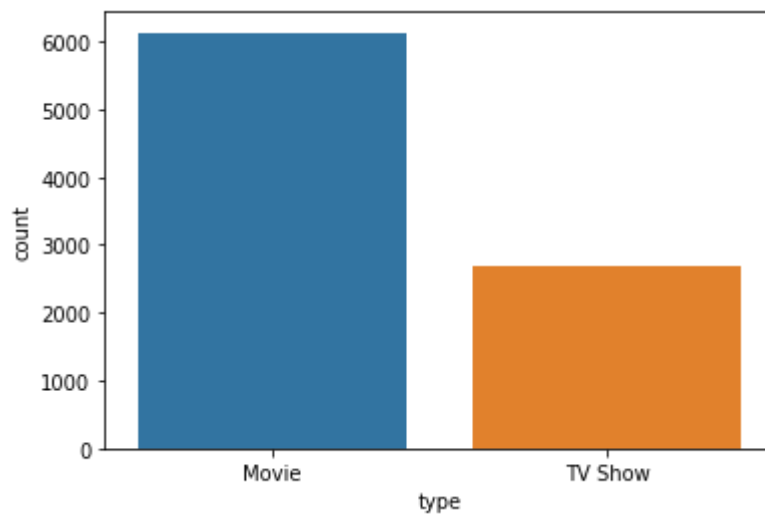
```
Movie      6131
TV Show    2676
Name: type, dtype: int64
```

```
sns.countplot(data['type'])
```

c:\users\hp\appdata\local\programs\python\python36\lib\site-packages\seaborn_decorators.py:43: FutureWarning: Pass the following variable as a keyword arg: x. From version 0.12, the only valid positional argument will be `data`, and passing other arguments without an explicit keyword will result in an error or misinterpretation.

FutureWarning

```
<AxesSubplot:xlabel='type', ylabel='count'>
```



Show all the Movies that were released in year 2000.

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

	show_id	type	title	director	cast	country	date_added	release_year	rating	duration	listed_i
0	s1	Movie	Dick Johnson Is Dead	Kirsten Johnson	NaN	United States	September 25, 2021	2020	PG-13	90 min	Documentarie
1	s2	TV Show	Blood & Water	NaN	Ama Qamata, Khosi Ngema, Gail Mablane, Thaban...	South Africa	September 24, 2021	2021	TV-MA	2 Seasons	International TV Shows, T Dramas, T Mysterie

```
data['Year'] = data['Date-N'].dt.year
```

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

	show_id	type	title	director	cast	country	date_added	release_year	rating	duration	listed_in
0	s1	Movie	Dick Johnson Is Dead	Kirsten Johnson	NaN	United States	September 25, 2021	2020	PG-13	90 min	Documentarie
1	s2	TV Show	Blood & Water	NaN	Ama Qamata, Khosi Ngema, Gail Mabalane, Thaban...	South Africa	September 24, 2021	2021	TV-MA	2 Seasons	International TV Shows, T Dramas, T Mysteries

```
data[(data['type'] == 'Movie') & (data['Year']==2000)]
```

	show_id	type	title	director	cast	country	date_added	release_year	rating	duration	listed_in	Description	Date-N
--	---------	------	-------	----------	------	---------	------------	--------------	--------	----------	-----------	-------------	--------

```
data[(data['type'] == 'Movie') & (data['Year']==2020)]
```

	show_id	type	title	director	cast	country	date_added	release_year	rating	duration	listed_in
1470	s1471	Movie	Alaska Is a Drag	Shaz Bennett	Martin L. Washington Jr., Maya Washington, Mat...	United States	December 31, 2020	2017	TV-MA	83 min	
1471	s1472	Movie	Best of Stand-Up 2020	NaN	Jerry Seinfeld, Leslie Jones, Taylor Tomlinson...	NaN	December 31, 2020	2020	TV-MA	77 min	
1472	s1473	Movie	Bobby Jasoos	Samar Shaikh	Vidya Balan, Ali Fazal, Supriya Pathak, Tanvi ...	India	December 31, 2020	2014	TV-14	116 min	Ir
1474	s1475	Movie	Tarung Sarung	Archie Hekagery	Panji Zoni, Yayan Ruhian, Maizura, Cemal Faruk...	Indonesia	December 31, 2020	2020	TV-PG	116 min	
1475	s1476	Movie	Too Handsome to Handle	Sabrina Rochelle Kalangie	Ari Irham, Nikita Willy, Calvin Jeremy, Rachel...	Indonesia	December 31, 2020	2019	TV-14	106 min	Ir
...
8742	s8743	Movie	Wild Wild West	Barry Sonnenfeld	Will Smith, Kevin Kline, Kenneth Branagh, Salm...	United States	January 1, 2020	1999	PG-13	106 min	

	show_id	type	title	director	cast	country	date_added	release_year	rating	duration	
8743	s8744	Movie	Wildlife	Paul Dano	Carey Mulligan, Ed Oxenbould, Bill Camp, Jake ...	United States	September 1, 2020	2018	PG-13	105 min	I
8745	s8746	Movie	Willy Wonka & the Chocolate Factory	Mel Stuart	Gene Wilder, Jack Albertson, Peter Ostrum, Roy...	United States, East Germany, West Germany	January 1, 2020	1971	G	100 min	
8764	s8765	Movie	Wyatt Earp	Lawrence Kasdan	Kevin Costner, Dennis Quaid, Gene Hackman, Dav...	United States	January 1, 2020	1994	PG-13	191 min	
8805	s8806	Movie	Zoom	Peter Hewitt	Tim Allen, Courteney Cox, Chevy Chase, Kate Ma...	United States	January 11, 2020	2006	PG	88 min	

1284 rows × 14 columns

Q5. Show only the Titles of all TV Shows that were release in india only.

```
data.head()
```

	show_id	type	title	director	cast	country	date_added	release_year	rating	duration	listec
0	s1	Movie	Dick Johnson Is Dead	Kirsten Johnson	NaN	United States	September 25, 2021	2020	PG-13	90 min	Documentai
1	s2	TV Show	Blood & Water	NaN	Ama Qamata, Khosi Ngema, Gail Mabalane, Thaban...	South Africa	September 24, 2021	2021	TV-MA	2 Seasons	Internatio TV Shows, Dramas, Myster
2	s3	TV Show	Ganglands	Julien Leclercq	Sami Bouajila, Tracy Gotoas, Samuel Jouy, Nabi...	NaN	September 24, 2021	2021	TV-MA	1 Season	Crime Sho Internatio TV Shows, Ai
3	s4	TV Show	Jailbirds New Orleans	NaN	NaN	NaN	September 24, 2021	2021	TV-MA	1 Season	Docuser Reality

show_id	type		title	director	cast	country	date_added	release_year	rating	duration	listec
4	s5	TV Show	Kota Factory	NaN	Mayur More, Jitendra Kumar, Ranjan Raj, Alam K...	India	September 24, 2021	2021	TV-MA	2 Seasons	Internatio TV Sho Romantic Shows, T

```
data[(data['type']== 'TV Show') & (data['country']=='India')] ['title']
```

```
4          Kota Factory
39          Chhota Bheem
50          Dharmakshetra
66          Raja Rasoi Aur Anya Kahaniyan
69          Stories by Rabindranath Tagore
...
8173          Thackeray
8235          The Calling
8321  The Golden Years with Javed Akhtar
8349          The House That Made Me
8775          Yeh Meri Family
Name: title, Length: 79, dtype: object
```

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

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

show_id	type		title	director	cast	country	date_added	release_year	rating	duration	listed_i
0	s1	Movie	Dick Johnson Is Dead	Kirsten Johnson	NaN	United States	September 25, 2021	2020	PG-13	90 min	Documentarie
1	s2	TV Show	Blood & Water	NaN	Ama Qamata, Khosi Ngema, Gail Mabalané, Thaban...	South Africa	September 24, 2021	2021	TV-MA	2 Seasons	International TV Shows, T Dramas, T Mysterie

```
data['director'].value_counts().head(10)
```

```
Rajiv Chilaka          19
Raúl Campos, Jan Suter  18
Suhas Kadav            16
Marcus Raboy           16
Jay Karas              14
Cathy Garcia-Molina    13
Youssef Chahine        12
Jay Chapman            12
```

Name: director, dtype: int64

Q7. Show all the Records, where 'Type is Movie and Listed in Comedies' or Country Is 'United kingdom'.

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

	show_id	type	title	director	cast	country	date_added	release_year	rating	duration	listed_in
0	s1	Movie	Dick Johnson Is Dead	Kirsten Johnson	NaN	United States	September 25, 2021	2020	PG-13	90 min	Documentaries
1	s2	TV Show	Blood & Water	NaN	Ama Qamata, Khosi Ngema, Gail Mablane, Thabane...	South Africa	September 24, 2021	2021	TV-MA	2 Seasons	International TV Shows, TV Dramas, TV Mysteries

```
data[(data['type']== 'Movie') & (data['listed_in']== 'Comedies')]
```

[illegible]

	show_id	type	title	director	cast	country	date_added	release_year	rating	duration
8420	s8421	Movie	The Men Who Stare at Goats	Grant Heslov	George Clooney, Ewan McGregor, Jeff Bridges, K...	United States, United Kingdom	June 4, 2019	2009	R	94 min
8433	s8434	Movie	The Naked Gun 2 1/2: The Smell of Fear	David Zucker	Leslie Nielsen, Priscilla Presley, George Kenn...	NaN	January 1, 2020	1991	PG-13	85 min
8536	s8537	Movie	The Trip to Spain	Michael Winterbottom	Steve Coogan, Rob Brydon, Marta Barrio, Claire...	United Kingdom	December 12, 2017	2016	TV-MA	108 min
8608	s8609	Movie	Total Frat Movie	Warren P. Sonoda	Justin Deeley, Alex House, Steven Yaffee, Rebe...	United States	December 19, 2016	2016	NR	94 min
8730	s8731	Movie	Where's the Money	Scott Ziebielski	Andrew Bachelor, Kat Graham, Mike Epps, Terry ...	United States	January 22, 2018	2017	R	86 min

110 rows × 14 columns

```
data[(data['type'] == 'Movie') & (data['listed_in'] == 'Comedies') | (data['country'] == 'U
```

	show_id	type	title	director	cast	country	date_added	release_year	rating	duration
27	s28	Movie	Grown Ups	Dennis Dugan	Adam Sandler, Kevin James, Chris Rock, David S...	United States	September 20, 2021	2010	PG-13	103 min
152	s153	Movie	Janoskians: Untold and Untrue	Brett Weiner	Jai Brooks, Luke Brooks, James Yammouni, Danie...	United States	September 1, 2021	2016	TV-MA	88 min
182	s183	Movie	Welcome Home Roscoe Jenkins	Malcolm D. Lee	Martin Lawrence, James Earl Jones, Joy Bryant,...	United States	September 1, 2021	2008	PG-13	114 min
342	s343	Movie	Major Payne	Nick Castle	Damon Wayans, Karyn Parsons, William Hickey, M...	United States	August 1, 2021	1995	PG-13	97 min

	show_id	type	title	director	cast	country	date_added	release_year	rating	duration
348	s349	Movie	Poms	Zara Hayes	Diane Keaton, Jacki Weaver, Pam Grier, Rhea Pe...	United Kingdom, United States	August 1, 2021	2019	PG-13	91 min
...
8420	s8421	Movie	The Men Who Stare at Goats	Grant Heslov	George Clooney, Ewan McGregor, Jeff Bridges, K...	United States, United Kingdom	June 4, 2019	2009	R	94 min
8433	s8434	Movie	The Naked Gun 2 1/2: The Smell of Fear	David Zucker	Leslie Nielsen, Priscilla Presley, George Kenn...	NaN	January 1, 2020	1991	PG-13	85 min
8536	s8537	Movie	The Trip to Spain	Michael Winterbottom	Steve Coogan, Rob Brydon, Marta Barrio, Claire...	United Kingdom	December 12, 2017	2016	TV-MA	108 min
8608	s8609	Movie	Total Frat Movie	Warren P. Sonoda	Justin Deeley, Alex House, Steven Yaffee, Rebe...	United States	December 19, 2016	2016	NR	94 min
8730	s8731	Movie	Where's the Money	Scott Zabielski	Andrew Bachelor, Kat Graham, Mike Epps, Terry ...	United States	January 22, 2018	2017	R	86 min

110 rows × 14 columns

Q8. In how many movies/shows, Tom Cruise was cast?

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

	show_id	type	title	director	cast	country	date_added	release_year	rating	duration	listed_i
0	s1	Movie	Dick Johnson Is Dead	Kirsten Johnson	NaN	United States	September 25, 2021	2020	PG-13	90 min	Documentarie
1	s2	TV Show	Blood & Water	NaN	Ama Qamata, Khosi Ngema, Gail Mabalane, Thaban...	South Africa	September 24, 2021	2021	TV-MA	2 Seasons	International TV Shows, T' Dramas, T' Mysterie

```
data[data['cast'] == 'Tom Cruise']
```

show_id	type	title	director	cast	country	date_added	release_year	rating	duration	listed_in	description	Date-N
---------	------	-------	----------	------	---------	------------	--------------	--------	----------	-----------	-------------	--------

```
data[data['cast'].str.contains('Tom Cruise')]
```

ValueError Traceback (most recent call last)

<ipython-input-85-8b73098fb4c1> in <module>

----> 1 data[data['cast'].str.contains('Tom Cruise')]

c:\users\hp\appdata\local\programs\python\python36\lib\site-packages\pandas\core\frame.py in __getitem__(self, key)

2894

2895 # Do we have a (boolean) 1d indexer?

-> 2896 if com.is_bool_indexer(key):

2897 return self._getitem_bool_array(key)

2898

c:\users\hp\appdata\local\programs\python\python36\lib\site-packages\pandas\core\common.py in is_bool_indexer(key)

132 na_msg = "Cannot mask with non-boolean array containing NA / NaN values"

133 if isna(key).any():

--> 134 raise ValueError(na_msg)

135 return False

136 return True

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

```
data_new = data.dropna()
```

```
data_new.head(2)
```

	show_id	type	title	director	cast	country	date_added	release_year	rating	duration	listed_in
7	s8	Movie	Sankofa	Haile Gerima	Kofi Ghanaba, Oyafunmike Ogunlano, Alexandra D...	United States, Ghana, Burkina Faso, United Kin...	September 24, 2021	1993	TV-MA	125 min	Dran Independ Mov Internatic Mo
8	s9	TV Show	The Great British Baking Show	Andy Devonshire	Mel Giedroyc, Sue Perkins, Mary Berry, Paul Ho...	United Kingdom	September 24, 2021	2021	TV-14	9 Seasons	British Shc Reality

```
data_new[data_new['cast'].str.contains('Tom Cruise')]
```

	show_id	type	title	director	cast	country	date_added	release_year	rating	duration	listed
341	s342	Movie	Magnolia	Paul Thomas Anderson	John C. Reilly, Philip Baker Hall, Tom Cruise,...	United States	August 1, 2021	1999	R	189 min	Dram Independ Mov
1254	s1255	Movie	Rain Man	Barry Levinson	Dustin Hoffman, Tom Cruise, Valeria Golino, Ge...	United States	March 1, 2021	1988	R	134 min	Clas Movi Dram

Q9. What are the different Ratings defined by Netflix?

```
data.head()
```

	show_id	type	title	director	cast	country	date_added	release_year	rating	duration	listec
0	s1	Movie	Dick Johnson Is Dead	Kirsten Johnson	NaN	United States	September 25, 2021	2020	PG-13	90 min	Documenta
1	s2	TV Show	Blood & Water	NaN	Ama Qamata, Khosi Ngema, Gail Mabalane, Thaban...	South Africa	September 24, 2021	2021	TV-MA	2 Seasons	Internatio TV Shows, Dramas, Myster
2	s3	TV Show	Ganglands	Julien Leclercq	Sami Bouajila, Tracy Gotoas, Samuel Jouy, Nabi...	NaN	September 24, 2021	2021	TV-MA	1 Season	Crime Sho Internatio TV Shows, A
3	s4	TV Show	Jailbirds New Orleans	NaN	NaN	NaN	September 24, 2021	2021	TV-MA	1 Season	Docuser Reality
4	s5	TV Show	Kota Factory	NaN	Mayur More, Jitendra Kumar, Ranjan Raj, Alam K...	India	September 24, 2021	2021	TV-MA	2 Seasons	Internatio TV Sho Romantic Shows, T

```
data['rating'].nunique()
```

```
data['rating'].unique()
```

```
array(['PG-13', 'TV-MA', 'PG', 'TV-14', 'TV-PG', 'TV-Y', 'TV-Y7', 'R',  
      'TV-G', 'G', 'NC-17', '74 min', '84 min', '66 min', 'NR', nan,  
      'TV-Y7-FV', 'UR'], dtype=object)
```

Q9.1. How many Movies got the 'TV-14' rating in Canada?

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

	show_id	type	title	director	cast	country	date_added	release_year	rating	duration	listed_i
0	s1	Movie	Dick Johnson Is Dead	Kirsten Johnson	NaN	United States	September 25, 2021	2020	PG-13	90 min	Documentarie
1	s2	TV Show	Blood & Water	NaN	Ama Qamata, Khosi Ngema, Gail Mabalane, Thaban...	South Africa	September 24, 2021	2021	TV-MA	2 Seasons	International TV Shows, T Dramas, T Mysteries

```
data[(data['type']=='Movie') & (data['rating'] == 'TV-14')]
```

	show_id	type	title	director	cast	country	date_added	release_year	rating	duration	
18	s19	Movie	Intrusion	Adam Salky	Freida Pinto, Logan Marshall-Green, Robert Joh...	NaN	September 22, 2021	2021	TV-14	94 min	
24	s25	Movie	Jeans	S. Shankar	Prashanth, Aishwarya Rai Bachchan, Sri Lakshmi...	India	September 21, 2021	1998	TV-14	166 min	Cc Inter R
30	s31	Movie	Ankahi Kahaniya	Ashwiny Iyer Tiwari, Abhishek Chaubey, Saket C...	Abhishek Banerjee, Rinku Rajguru, Delzad Hiwal...	NaN	September 17, 2021	2021	TV-14	111 min	Inde Inter
51	s52	Movie	InuYasha the Movie 2: The Castle Beyond the Lo...	Toshiya Shinohara	Kappei Yamaguchi, Satsuki Yukino, Mieko Harada...	Japan	September 15, 2021	2002	TV-14	99 min	Ac F Inti
52	s53	Movie	InuYasha the Movie 3: Swords of an Honorable R...	Toshiya Shinohara	Kappei Yamaguchi, Satsuki Yukino, Koji Tsujita...	Japan	September 15, 2021	2003	TV-14	99 min	Ac F Inti

	show_id	type	title	director	cast	country	date_added	release_year	rating	duration	
	
8772	s8773	Movie	Yamla Pagla Deewana 2	Sangeeth Sivan	Dharmendra, Sunny Deol, Bobby Deol, Neha Sharm...	India	May 1, 2017	2013	TV-14	147 min	Ac Ct Inter
8774	s8775	Movie	يوم الدين	Abu Bakr Shawky	Rady Gamal, Ahmed Abdelhafiz, Shahira Fahmy, S...	Egypt, Austria, United States	October 22, 2019	2018	TV-14	97 min	Inde Inter
8794	s8795	Movie	اشتباك	Mohamed Diab	Nelly Karim, Hany Adel, Tarek Abdel Aziz, Ahme...	Egypt, France	October 11, 2018	2016	TV-14	98 min	Inde Inter
8799	s8800	Movie	Zenda	Avadhoot Gupte	Santosh Juvekar, Siddharth Chandekar, Sachit P...	India	February 15, 2018	2009	TV-14	120 min	Inter
8806	s8807	Movie	Zubaan	Mozez Singh	Vicky Kaushal, Sarah-Jane Dias, Raaghav Chanan...	India	March 2, 2019	2015	TV-14	111 min	Inter I

1427 rows x 14 columns

```
data[(data['type']=='Movie') & (data['rating'] == 'TV-14')].shape
```

(1427, 14)

```
data[(data['type']=='Movie') & (data['rating'] == 'TV-14') & (data['country']=='Canada')]
```

	show_id	type	title	director	cast	country	date_added	release_year	rating	duration	
157	s158	Movie	Level 16	Danishka Esterhazy	Katie Douglas, Celina Martin, Peter Outerbridg...	Canada	September 1, 2021	2018	TV-14	102 mi	
1279	s1280	Movie	Made You Look: A True Story About Fake Art	Barry Avrich	NaN	Canada	February 23, 2021	2020	TV-14	90 mi	
2769	s2770	Movie	There's Something in the Water	Ellen Page, Ian Daniel	Ellen Page	Canada	March 27, 2020	2019	TV-14	72 mi	
3424	s3425	Movie	Martin Matte: La vie, la mort...eh la la..!	Jean-François Blais	Martin Matte	Canada	October 14, 2019	2019	TV-14	62 mi	

	show_id	type	title	director	cast	country	date_added	release_year	rating	duration
5972	s5973	Movie	#cats_the_mewvie	Michael Margolis	NaN	Canada	February 5, 2020	2020	TV-14	90 min
5973	s5974	Movie	#Roxy	Michael Kennedy	Jake Short, Sarah Fisher, Booboo Stewart, Dann...	Canada	April 10, 2019	2018	TV-14	105 min
6192	s6193	Movie	At First Light	Jason Stone	Stefanie Scott, Theodore Pellerin, Percy Hynes...	Canada	December 27, 2018	2018	TV-14	91 min
6537	s6538	Movie	Counterfeiting in Suburbia	Jason Bourque	Sarah Butler, Larissa Albuquerque, Kayla Walla...	Canada	July 1, 2018	2018	TV-14	88 min
7334	s7335	Movie	Long Time Running	Jennifer Baichwal, Nicholas de Pencier	Gord Downie, Paul Langlois, Gord Sinclair, Rob...	Canada	November 12, 2017	2017	TV-14	96 min
7916	s7917	Movie	Sadie's Last Days on Earth	Michael Seater	Morgan Taylor Campbell, Clark Backo, Ricardo H...	Canada	August 22, 2017	2016	TV-14	94 min
7936	s7937	Movie	Sardaar ji	Rohit Jugraj	Diljit Dosanjh, Neeru Bajwa, Mandy Takhar, Jas...	Canada	December 1, 2017	2015	TV-14	140 min
8178	s8179	Movie	The Accountant of Auschwitz	Matthew Shoychet	NaN	Canada	July 1, 2019	2018	TV-14	78 min
8566	s8567	Movie	The Wrong Babysitter	George Mendeluk	Daphne Zuniga, Seann Gallagher, Lisa Marie Car...	Canada	June 18, 2019	2017	TV-14	89 min

```
data[(data['type']=='Movie') & (data['rating'] == 'TV-14') &(data['country']=='Canada')]
```

```
(13, 14)
```

Q.9.2. How many Tv shows got rating 'R' after year 2018?

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

	show_id	type	title	director	cast	country	date_added	release_year	rating	duration	listed_in
0	s1	Movie	Dick Johnson Is Dead	Kirsten Johnson	NaN	United States	September 25, 2021	2020	PG-13	90 min	Documentaries
1	s2	TV Show	Blood & Water	NaN	Ama Qamata, Khosi Ngema, Gail Mabalane, Thabane...	South Africa	September 24, 2021	2021	TV-MA	2 Seasons	International TV Shows, TV Dramas, TV Mysteries

```
data[(data['type']=='TV Show') & (data['rating']=='R') & (data['Year'] > 2018)]
```

	show_id	type	title	director	cast	country	date_added	release_year	rating	duration	listed_in
3893	s3894	TV Show	The Hateful Eight: Extended Version	Quentin Tarantino	Samuel L. Jackson, Kurt Russell, Jennifer Jason...	NaN	April 25, 2019	2015	R	1 Season	TV Shows

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

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

	show_id	type	title	director	cast	country	date_added	release_year	rating	duration	listed_in
0	s1	Movie	Dick Johnson Is Dead	Kirsten Johnson	NaN	United States	September 25, 2021	2020	PG-13	90 min	Documentaries
1	s2	TV Show	Blood & Water	NaN	Ama Qamata, Khosi Ngema, Gail Mabalane, Thabane...	South Africa	September 24, 2021	2021	TV-MA	2 Seasons	International TV Shows, TV Dramas, TV Mysteries

```
data.duration.unique()
```

```
array(['90 min', '2 Seasons', '1 Season', '91 min', '125 min',
       '9 Seasons', '104 min', '127 min', '4 Seasons', '67 min', '94 min',
       '5 Seasons', '161 min', '61 min', '166 min', '147 min', '103 min',
       '97 min', '106 min', '111 min', '3 Seasons', '110 min', '105 min',
       '96 min', '124 min', '116 min', '98 min', '23 min', '115 min',
       '122 min', '99 min', '88 min', '100 min', '6 Seasons', '102 min',
       '93 min', '95 min', '85 min', '83 min', '113 min', '13 min',
       '182 min', '48 min', '145 min', '87 min', '92 min', '80 min',
```

```
'117 min', '128 min', '119 min', '143 min', '114 min', '118 min',
'108 min', '63 min', '121 min', '142 min', '154 min', '120 min',
'82 min', '109 min', '101 min', '86 min', '229 min', '76 min',
'89 min', '156 min', '112 min', '107 min', '129 min', '135 min',
'136 min', '165 min', '150 min', '133 min', '70 min', '84 min',
'140 min', '78 min', '7 Seasons', '64 min', '59 min', '139 min',
'69 min', '148 min', '189 min', '141 min', '130 min', '138 min',
'81 min', '132 min', '10 Seasons', '123 min', '65 min', '68 min',
'66 min', '62 min', '74 min', '131 min', '39 min', '46 min',
'38 min', '8 Seasons', '17 Seasons', '126 min', '155 min',
'159 min', '137 min', '12 min', '273 min', '36 min', '34 min',
'77 min', '60 min', '49 min', '58 min', '72 min', '204 min',
'212 min', '25 min', '73 min', '29 min', '47 min', '32 min',
'35 min', '71 min', '149 min', '33 min', '15 min', '54 min',
'224 min', '162 min', '37 min', '75 min', '79 min', '55 min',
'158 min', '164 min', '173 min', '181 min', '185 min', '21 min',
'24 min', '51 min', '151 min', '42 min', '22 min', '134 min',
'177 min', '13 Seasons', '52 min', '14 min', '53 min', '8 min',
'57 min', '28 min', '50 min', '9 min', '26 min', '45 min',
'171 min', '27 min', '44 min', '146 min', '20 min', '157 min',
'17 min', '203 min', '41 min', '30 min', '194 min', '15 Seasons',
'233 min', '237 min', '230 min', '195 min', '253 min', '152 min',
'190 min', '160 min', '208 min', '180 min', '144 min', '5 min',
'174 min', '170 min', '192 min', '209 min', '187 min', '172 min',
'16 min', '186 min', '11 min', '193 min', '176 min', '56 min',
'169 min', '40 min', '10 min', '3 min', '168 min', '312 min',
'153 min', '214 min', '31 min', '163 min', '19 min', '12 Seasons',
nan, '179 min', '11 Seasons', '43 min', '200 min', '196 min',
'167 min', '178 min', '228 min', '18 min', '205 min', '201 min',
'191 min'], dtype=object)
```

```
data.duration.dtypes
```

```
dtype('O')
```

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

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

	show_id	type	title	director	cast	country	date_added	release_year	rating	duration	listed_i
0	s1	Movie	Dick Johnson Is Dead	Kirsten Johnson	NaN	United States	September 25, 2021	2020	PG-13	90 min	Documentarie

show_id	type	title	director	cast	country	date_added	release_year	rating	duration	listed_i	
1	s2	TV Show	Blood & Water	NaN	Ama Qamata, Khosi Ngema, Gail Mabalane, Thaban...	South Africa	September 24, 2021	2021	TV-MA	2 Seasons	International TV Shows, TV Dramas, TV Mysteries

data['Minutes'].dropna()

0 90
1 2
2 1
3 1
4 2
...
8802 158
8803 2
8804 88
8805 88
8806 111

Name: Minutes, Length: 8804, dtype: object

data['Minutes'].isnull().sum()

3

data.dropna()

show_id	type	title	director	cast	country	date_added	release_year	rating	duration	
7	s8	Movie	Sankofa	Haile Gerima	Kofi Ghanaba, Oyafunmike Ogunlano, Alexandra D...	United States, Ghana, Burkina Faso, United Kin...	September 24, 2021	1993	TV-MA	125 min
8	s9	TV Show	The Great British Baking Show	Andy Devonshire	Mel Giedroyc, Sue Perkins, Mary Berry, Paul Ho...	United Kingdom	September 24, 2021	2021	TV-14	9 Seasons
9	s10	Movie	The Starling	Theodore Melfi	Melissa McCarthy, Chris O'Dowd, Kevin Kline, T...	United States	September 24, 2021	2021	PG-13	104 min
12	s13	Movie	Je Suis Karl	Christian Schwochow	Luna Wedler, Jannis Niewöhner, Milan Peschel, ...	Germany, Czech Republic	September 23, 2021	2021	TV-MA	127 min

	show_id	type		title	director	cast	country	date_added	release_year	rating	duration	
	24	s25	Movie	Jeans	S. Shankar	Prashanth, Aishwarya Rai Bachchan, Sri Lakshmi...	India	September 21, 2021	1998	TV-14	166 min	I
	
	8801	s8802	Movie	Zinzana	Majid Al Ansari	Ali Suliman, Saleh Bakri, Yasa, Ali Al-Jabri, ...	United Arab Emirates, Jordan	March 9, 2016	2015	TV-MA	96 min	I
	8802	s8803	Movie	Zodiac	David Fincher	Mark Ruffalo, Jake Gyllenhaal, Robert Downey J...	United States	November 20, 2019	2007	R	158 min	
	8804	s8805	Movie	Zombieland	Ruben Fleischer	Jesse Eisenberg, Woody Harrelson, Emma Stone, ...	United States	November 1, 2019	2009	R	88 min	
	8805	s8806	Movie	Zoom	Peter Hewitt	Tim Allen, Courteney Cox, Chevy Chase, Kate Ma...	United States	January 11, 2020	2006	PG	88 min	
	8806	s8807	Movie	Zubaan	Mozez Singh	Vicky Kaushal, Sarah-Jane Dias, Raaghav Chanan...	India	March 2, 2019	2015	TV-14	111 min	I

5332 rows × 16 columns

data.dtypes

```
data = data.dropna(how='any',axis=0)
```

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

'99'

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

'1'

Q.11 Which individual country has the Highest No.of TV shows

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

	show_id	type		title	director	cast	country	date_added	release_year	rating	duration	listed
7	s8	Movie		Sankofa	Haile Gerima	Kofi Ghanaba, Oyafunmike Ogunlano, Alexandra D...	United States, Ghana, Burkina Faso, United Kin...	September 24, 2021	1993	TV-MA	125 min	Dran Independ Mov Internatic Mo
8	s9	TV Show		The Great British Baking Show	Andy Devonshire	Mel Giedroyc, Sue Perkins, Mary Berry, Paul Ho...	United Kingdom	September 24, 2021	2021	TV-14	9 Seasons	British Shc Reality

```
data_tvshows = data[data['type'] == 'TV Show']
```

```
data_tvshows.head(2)
```

	show_id	type		title	director	cast	country	date_added	release_year	rating	duration	listed
8	s9	TV Show		The Great British Baking Show	Andy Devonshire	Mel Giedroyc, Sue Perkins, Mary Berry, Paul Ho...	United Kingdom	September 24, 2021	2021	TV-14	9 Seasons	British Shov Reality
198	s199	TV Show		King of Boys: The Return of the King	Kemi Adetiba	Sola Sobowale, Toni Tones, Richard Mofe-Damijo...	Nigeria	August 27, 2021	2021	TV-MA	1 Season	Crime Shov Internation TV Shov TV Dram

```
data_tvshows.country.value_counts()
```

```
United States      27
United Kingdom     19
South Korea        10
Japan              10
Taiwan             7
India              7
Spain              7
Thailand           5
France             5
Turkey            5
Nigeria           4
Brazil             4
Canada            3
Italy             2
United States, Canada 2
China             2
Denmark           2
```

Russia	1
Italy, United States	1
Philippines	1
United States, Israel, Italy, South Africa	1
Taiwan, Malaysia	1
Colombia, Mexico, United States	1
United Kingdom, Ireland, United States	1
Poland	1
France, South Korea, Japan, United States	1
Italy, Canada, France	1
United Kingdom, United States, Spain, Germany, Greece, Canada	1
Pakistan	1
South Korea, United States	1
Colombia	1
Belgium	1
United States, Ireland	1
Australia	1
Canada, United Kingdom, United States	1
United Kingdom, Germany, United States, France	1
Mexico	1
Saudi Arabia	1
Philippines, Singapore, Indonesia	1
Argentina	1
India, United States	1
Mexico, Spain	1
Mexico, United States	1

Name: country, dtype: int64

```
data_tvshows.country.value_counts().head(1)
```

United States 27
Name: country, dtype: int64

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

```
data.head()
```

	show_id	type		title	director	cast	country	date_added	release_year	rating	duration	lis
7	s8	Movie		Sankofa	Haile Gerima	Kofi Ghanaba, Oyafunmike Ogunlano, Alexandra D...	United States, Ghana, Burkina Faso, United Kin...	September 24, 2021	1993	TV-MA	125 min	Dr Indepe N Interna N
8	s9	TV Show		The Great British Baking Show	Andy Devonshire	Mel Giedroyc, Sue Perkins, Mary Berry, Paul Ho...	United Kingdom	September 24, 2021	2021	TV-14	9 Seasons	Briti S Real

	show_id		type	title	director	cast	country	date_added	release_year	rating	duration	lis
9	s10	Movie	The Starling	Theodore Melfi	Melissa McCarthy, Chris O'Dowd, Kevin Kline, T...	United States	September 24, 2021	2021	PG-13	104 min	Com	Dr
12	s13	Movie	Je Suis Karl	Christian Schwochow	Luna Wedler, Jannis Niewöhner, Milan Peschel, ...	Germany, Czech Republic	September 23, 2021	2021	TV-MA	127 min	Dr	Internat
24	s25	Movie	Jeans	S. Shankar	Prashanth, Aishwarya Rai Bachchan, Sri Lakshmi...	India	September 21, 2021	1998	TV-14	166 min	Com	Internat

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

	show_id		type	title	director	cast	country	date_added	release_year	rating	duration	
5957	s5958	Movie	To and From New York	Sorin Dan Mihalcescu	Barbara King, Shaana Diya, John Krisiukenas, Y...	United States	January 1, 2008	2006	TV-MA	81 min		
5956	s5957	Movie	Just Another Love Story	Ole Bornedal	Anders W. Berthelsen, Rebecka Hemse, Nikolaj L...	Denmark	May 5, 2009	2007	TV-MA	104 min		
5955	s5956	Movie	Splatter	Joe Dante	Corey Feldman, Tony Todd, Tara Leigh, Erin Way...	United States	November 18, 2009	2009	TV-MA	29 min		f
7370	s7371	Movie	Mad Ron's Prevues from Hell	Jim Monaco	Nick Pawlow, Jordy Schell, Jay Kushwara, Micha...	United States	November 1, 2010	1987	NR	84 min		f
5945	s5946	Movie	In Defense of a Married Man	Joel Oliansky	Judith Light, Michael Ontkian, Jerry Orbach, P...	United States	October 1, 2011	1990	TV-14	94 min		
...	
1020	s1021	Movie	Madness in the Desert	Satyajit Bhatkal	Aamir Khan, Ashutosh Gowariker	India	April 17, 2021	2004	TV-14	141 min		De

	show_id	type	title	director	cast	country	date_added	release_year	rating	duration	
1019	s1020	Movie	Lagaan	Ashutosh Gowariker	Aamir Khan, Gracy Singh, Rachel Shelley, Paul ...	India, United Kingdom	April 17, 2021	2001	PG	224 min	↑
1018	s1019	Movie	Jaane Tu... Ya Jaane Na	Abbas Tyrewala	Imran Khan, Genelia D'Souza, Manjari Fadnis, A...	India	April 17, 2021	2008	TV-14	147 min	↑
1030	s1031	Movie	Four Sisters Before the Wedding	Mae Czarina Cruz	Alexa Ilacad, Charlie Dizon, Gillian Vicencio,...	Philippines	April 16, 2021	2020	TV-MA	116 min	Fi
7	s8	Movie	Sankofa	Haile Gerima	Kofi Ghanaba, Oyafunmike Ogunlano, Alexandra D...	United States, Ghana, Burkina Faso, United Kin...	September 24, 2021	1993	TV-MA	125 min	

5332 rows × 16 columns

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

	show_id	type	title	director	cast	country	date_added	release_year	rating	duration	
7	s8	Movie	Sankofa	Haile Gerima	Kofi Ghanaba, Oyafunmike Ogunlano, Alexandra D...	United States, Ghana, Burkina Faso, United Kin...	September 24, 2021	1993	TV-MA	125 min	Inc Int
1101	s1102	Movie	Escape from Planet Earth	Cal Brunker	Rob Corddry, Brendan Fraser, Sarah Jessica Par...	United States, Canada	April 3, 2021	2013	PG	89 min	↓ S
1085	s1086	Movie	Night in Paradise	Park Hoon-jung	Um Tae-goo, Jeon Yeo-been, Cha Seoung-won, Lee...	South Korea	April 9, 2021	2021	TV-MA	132 min	Int
1086	s1087	Movie	Ojukokoro: Greed	Dare Olaitan	Seun Ajayi, Zainab Balogun, Sammie Eddie, Lind...	Nigeria	April 9, 2021	2016	TV-MA	108 min	Int

	show_id	type	title	director	cast	country	date_added	release_year	rating	duration	
1087	s1088	Movie	Roohi	Hardik Mehta	Rajkummar Rao, Varun Sharma, Janhvi Kapoor, Ma...	India	April 9, 2021	2021	TV-14	133 min	Int
...	
5943	s5944	Movie	Adam: His Song Continues	Robert Markowitz	Daniel J. Travanti, JoBeth Williams, Richard M...	United States	October 1, 2011	1986	TV-MA	96 min	
7370	s7371	Movie	Mad Ron's Prevues from Hell	Jim Monaco	Nick Pawlow, Jordu Schell, Jay Kushwara, Micha...	United States	November 1, 2010	1987	NR	84 min	Ct
5955	s5956	Movie	Splatter	Joe Dante	Corey Feldman, Tony Todd, Tara Leigh, Erin Way...	United States	November 18, 2009	2009	TV-MA	29 min	
5956	s5957	Movie	Just Another Love Story	Ole Bornedal	Anders W. Berthelsen, Rebecka Hemse, Nikolaj L...	Denmark	May 5, 2009	2007	TV-MA	104 min	Int
5957	s5958	Movie	To and From New York	Sorin Dan Mihalcescu	Barbara King, Shaana Diya, John Kriisiukenas, Y...	United States	January 1, 2008	2006	TV-MA	81 min	Inc

5332 rows × 16 columns

```
data.sort_values(by = 'Year', ascending = False).head(10)
```

	show_id	type	title	director	cast	country	date_added	release_year	rating	duration	
7	s8	Movie	Sankofa	Haile Gerima	Kofi Ghanaba, Oyafunmike Ogunlano, Alexandra D...	United States, Ghana, Burkina Faso, United Kin...	September 24, 2021	1993	TV-MA	125 min	I II
1101	s1102	Movie	Escape from Planet Earth	Cal Brunker	Rob Corddry, Brendan Fraser, Sarah Jessica Par...	United States, Canada	April 3, 2021	2013	PG	89 min	

	show_id	type	title	director	cast	country	date_added	release_year	rating	duration	li
1085	s1086	Movie	Night in Paradise	Park Hoon-jung	Um Tae-goo, Jeon Yeo-been, Cha Seoung-won, Lee...	South Korea	April 9, 2021	2021	TV-MA	132 min	li
1086	s1087	Movie	Ojukokoro: Greed	Dare Olaitan	Seun Ajayi, Zainab Balogun, Sammie Eddie, Lind...	Nigeria	April 9, 2021	2016	TV-MA	108 min	li
1087	s1088	Movie	Roohi	Hardik Mehta	Rajkummar Rao, Varun Sharma, Janhvi Kapoor, Ma...	India	April 9, 2021	2021	TV-14	133 min	li
1088	s1089	Movie	Thunder Force	Ben Falcone	Melissa McCarthy, Octavia Spencer, Jason Batem...	United States	April 9, 2021	2021	PG-13	107 min	
1089	s1090	Movie	Two Distant Strangers	Travon Free, Martin Desmond Roe	Joey Bada\$\$, Andrew Howard, Zaria	United States	April 9, 2021	2021	TV-MA	32 min	
1090	s1091	Movie	Story of Kale: When Someone's in Love	Angga Dwimas Sasongko	Ardhito Pramono, Aurélie Moeremans, Arya Salok...	Indonesia	April 8, 2021	2020	TV-PG	78 min	li
1098	s1099	Movie	Mandela	Madonne Ashwin	Yogi Babu, Sheela Rajkumar, Sangili Murugan, G...	India	April 5, 2021	2021	TV-14	140 min	li
1099	s1100	Movie	The Fisherman's Diary	Enah Johnscott	Kang Quintus, Faith Fidel, Casson Chinepoh, Ra...	Cameroon	April 4, 2021	2020	TV-MA	143 min	li

Q.13. Find all the instance where: Type is 'Movies' And Listed in 'Dramas' or Type is 'TV Shows ' And Listed in 'Kids TV'

```
data[(data['type']== 'Movie')& (data['listed_in']=='Dramas')]
```

	show_id	type	title	director	cast	country	date_added	release_year	rating	duration	li
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	show_id	type	title	director	cast	country	date_added	release_year	rating	duration	li
129	s130	Movie	An Unfinished Life	Lasse Hallström	Robert Redford, Jennifer Lopez, Morgan Freeman...	Germany, United States	September 1, 2021	2005	PG-13	108 min	[
142	s143	Movie	Freedom Writers	Richard LaGravenese	Hilary Swank, Patrick Dempsey, Scott Glenn, Im...	Germany, United States	September 1, 2021	2007	PG-13	124 min	[
162	s163	Movie	Marshall	Reginald Hudlin	Chadwick Boseman, Josh Gad, Kate Hudson, Sterl...	United States, China, Hong Kong	September 1, 2021	2017	PG-13	118 min	[
329	s330	Movie	Catch Me If You Can	Steven Spielberg	Leonardo DiCaprio, Tom Hanks, Christopher Walk...	United States, Canada	August 1, 2021	2002	PG-13	142 min	[
343	s344	Movie	My Girl	Howard Zieff	Dan Aykroyd, Jamie Lee Curtis, Macaulay Culkin...	United States	August 1, 2021	1991	PG-13	102 min	[
...	
8674	s8675	Movie	Viceroy's House	Gurinder Chadha	Hugh Bonneville, Gillian Anderson, Manish Daya...	United Kingdom, India, Sweden	December 12, 2017	2017	NR	106 min	[
8675	s8676	Movie	Victor	Brandon Dickerson	Patrick Davis, Lisa Vidal, Josh Pence, José Zú...	United States	July 24, 2017	2015	PG-13	110 min	[
8685	s8686	Movie	VS.	Ed Lilly	Connor Swindells, Fola Evans-Akingbola, Nichol...	United Kingdom	June 19, 2019	2018	TV-MA	99 min	[
8691	s8692	Movie	Wakefield	Robin Swicord	Bryan Cranston, Jennifer Garner, Jason O'Mara,...	United States	March 2, 2019	2016	R	109 min	[
8696	s8697	Movie	War Horse	Steven Spielberg	Emily Watson, David Thewlis, Peter Mullan, Nie...	United States, India	May 6, 2019	2011	PG-13	147 min	[

133 rows × 16 columns

```
data[(data['type']== 'TV Show')& (data['listed_in']=="Kids' TV")]
```

	show_id	type	title	director	cast	country	date_added	release_year	rating	duration	listed
1463	s1464	TV Show	The Cat in the Hat Knows a Lot About That!	Tony Collingwood	Martin Short, Alexa Torrington, Jacob Ewaniuk,...	Canada, United Kingdom, United States	January 1, 2021	2014	TV-Y	1 Season	Kids'
2307	s2308	TV Show	Abby Hatcher	Kyran Kelly	Macy Drouin, Wyatt White, Paul Sun-Hyung Lee, ...	United States, Canada	July 1, 2020	2019	TV-Y	1 Season	Kids'
5428	s5429	TV Show	World of Winx	Iginio Straffi	Haven Paschall, Alysha Deslorieux, Jessica Paq...	Italy, United States	June 16, 2017	2017	TV-Y7	2 Seasons	Kids'
7288	s7289	TV Show	Lego Friends: Girls on a Mission	Andrew Tan, Stephen Murray	Jasmine St. Clair, Allegra Clark, Rosamund Mar...	Denmark	February 1, 2019	2018	TV-Y	1 Season	Kids'

```
data[(data['type']== 'Movie')& (data['listed_in']=='Dramas') | (data['type']== 'TV Show
```

	show_id	type	title	director	cast	country	date_added	release_year	rating	duration	li
129	s130	Movie	An Unfinished Life	Lasse Hallström	Robert Redford, Jennifer Lopez, Morgan Freeman...	Germany, United States	September 1, 2021	2005	PG-13	108 min	[
142	s143	Movie	Freedom Writers	Richard LaGravenese	Hilary Swank, Patrick Dempsey, Scott Glenn, Im...	Germany, United States	September 1, 2021	2007	PG-13	124 min	[
162	s163	Movie	Marshall	Reginald Hudlin	Chadwick Boseman, Josh Gad, Kate Hudson, Sterl...	United States, China, Hong Kong	September 1, 2021	2017	PG-13	118 min	[
329	s330	Movie	Catch Me If You Can	Steven Spielberg	Leonardo DiCaprio, Tom Hanks, Christopher Walk...	United States, Canada	August 1, 2021	2002	PG-13	142 min	[

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343	s344	Movie	My Girl	Howard Zieff	Dan Aykroyd, Jamie Lee Curtis, Macaulay Culkin...	United States	August 1, 2021	1991	PG-13	102 min	[
...
8674	s8675	Movie	Viceroy's House	Gurinder Chadha	Hugh Bonneville, Gillian Anderson, Manish Daya...	United Kingdom, India, Sweden	December 12, 2017	2017	NR	106 min	[
8675	s8676	Movie	Victor	Brandon Dickerson	Patrick Davis, Lisa Vidal, Josh Pence, José Zú...	United States	July 24, 2017	2015	PG-13	110 min	[
8685	s8686	Movie	VS.	Ed Lilly	Connor Swindells, Fola Evans-Akingbola, Nichol...	United Kingdom	June 19, 2019	2018	TV-MA	99 min	[
8691	s8692	Movie	Wakefield	Robin Swicord	Bryan Cranston, Jennifer Garner, Jason O'Mara,...	United States	March 2, 2019	2016	R	109 min	[
8696	s8697	Movie	War Horse	Steven Spielberg	Emily Watson, David Thewlis, Peter Mullan, Nie...	United States, India	May 6, 2019	2011	PG-13	147 min	[

137 rows × 16 columns

```
import jovian
```

```
jovian.commit()
```