

NETFLIX DATASET CASE STUDY

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1. Objective of the study

The main Objective of the case study is to suggest types of shows to produce to grow business for Netflix. For Jupyter Notebook, please use link [DS Project](#).

2. Data Preprocessing

2.1.Understanding the dataset.

After importing the Netflix dataset and doing preliminary study, following observation was made on number of columns in the dataset, their data types and missing values. Refer line 4 in the Jupyter Notebook for python code.

```
<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
```

1: List of Columns in Netflix dataset

The total no. of Null values in the dataset in individual columns is shown in the image below. Refer line 5 in the Jupyter Notebook for python code.

```
data.isna().sum(axis = 0)
```

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	

2: Total Null Values in different columns

2.2.Filling all missing values in columns with appropriate values

After analysing the data for missing values, all the missing values for different columns were replaced with value "Unknown". Refer line 6 in the Jupyter Notebook for python code.

2.3. Manipulating columns in the dataset

The datatype of column "date_added" is converted to datetime.

Duration column is modified to contain only the duration (numeric) part of the data.

Observation: As seen, for TV shows the duration is given in Seasons and for movies, it is given in minutes.

Age group column is created based on the rating of the content from the table below:

Age Group	TV Rating applicable
0-6	TV-Y, TV-G, G
7-13	TV-Y7, TV-Y7-FV, TV-G, TV-PG, G
14-17	TV-14, PG-13, PG, G, TV-G
Child>17	TV-MA, PG, R, G, TV-G
Adult	TV-MA, PG, R, NC-17, UR, NR, G

Refer line 9 in the Jupyter Notebook for the code.

2.4. Un-nesting the dataset (Cast, Country, Actor, Listed_in).

Data in the columns Cast, Country, Actor, Listed_in are nested.

For example: if a content is shown in different countries, there is only one record in the table and contains all the countries in which it is available in the country column against the show id.

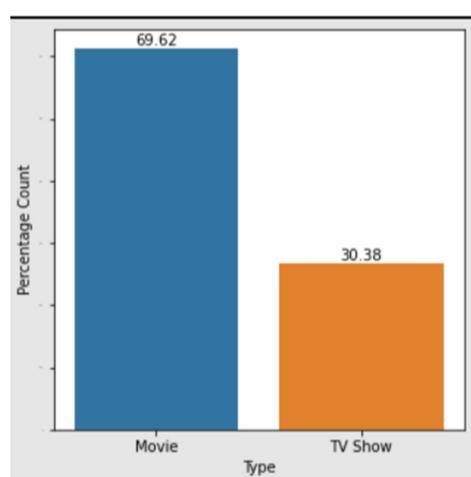
Refer line 12, 13 and 14 in the Jupyter Notebook for the code.

New column Netflix_age is created as the difference of date when the first content was released in a country and the last date when any content was released on the platform. Refer line 16 in the Jupyter Notebook for the code.

3. Understanding the different types of contents produced by NETFLIX.

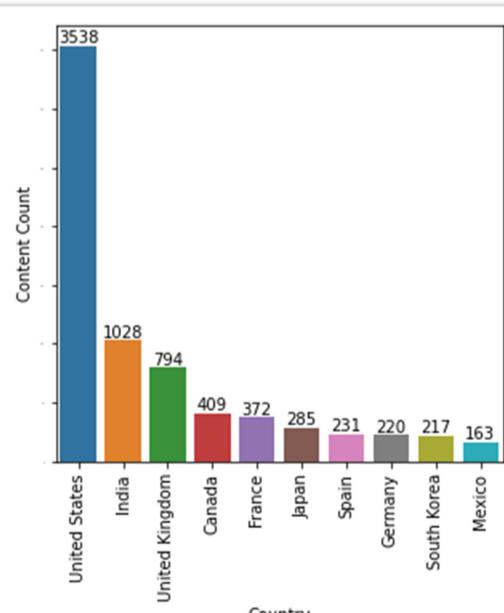
For understanding the type of contents available on Netflix, original dataset is used and not the un-nested dataset as the un-nested dataset will give unrealistic result due uneven expansion of dataset during un-nesting of dataset. Refer line 17 in the Jupyter Notebook for the code.

In the given dataset, 69.92% of the total contents are Movie and 30.38% of the total content are TV Show. Refer figure 3.

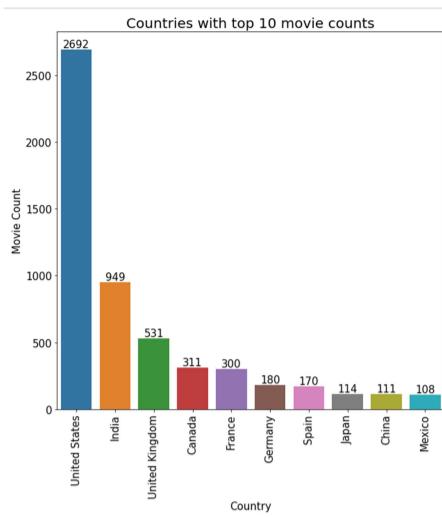


3: Content type distribution on Netflix

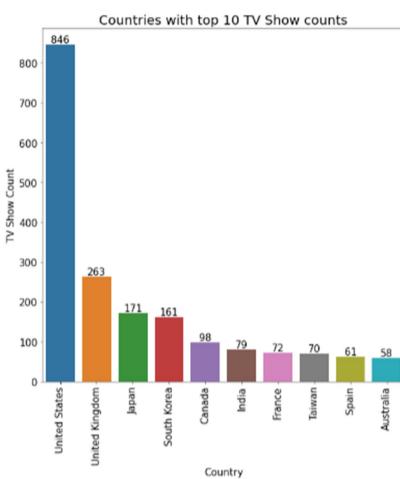
The top 10 countries where most no. of contents ("Movies and TV Shows combined) are available are. Refer codeline 18 in the Jupyter Notebook.:



4: Top 10 countries with most available content on Netflix



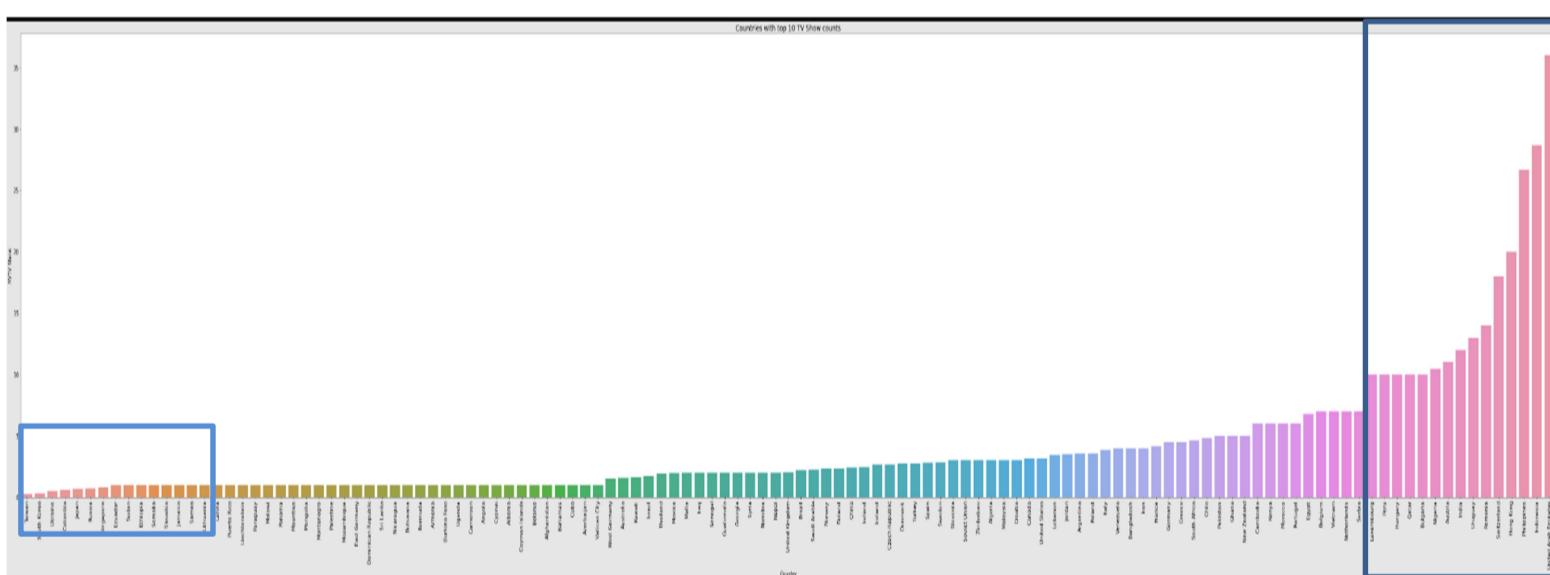
5: Countries with top 10 movie counts



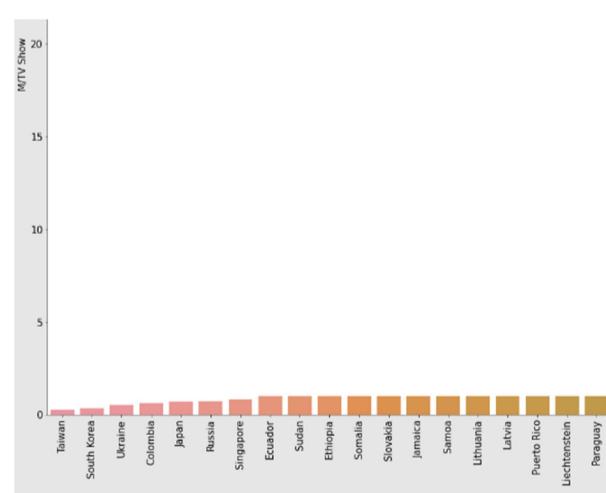
6: Countries with top 10 TV Show Counts

Observation: While USA, UK, India, Canada, France, Spain and Japan appear in top 10 countries for both content types, Germany, China and Mexico appears in the top 10 in Movie segment. South Korea, Taiwan and Australia appear in the top 10 in TV Show content. Refer codeline 20 and 21 in the Jupyter Notebook.

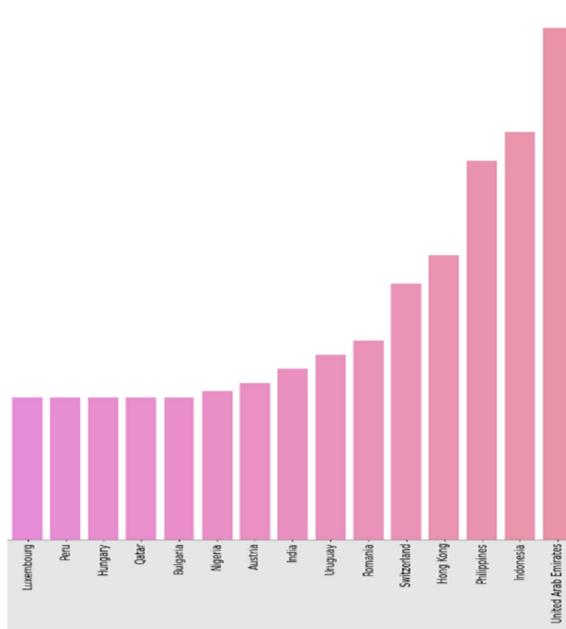
For understanding the preference type of audience in each country, ratio of Movie count to TV Show count can be analysed to understand if people in a particular country hav more inclination for a particular type of content. Refer line 22 for code in the Jupyter Notebook.



7: Movie/TV Show ratio for different countries.



8: Countries with low M/TV Show



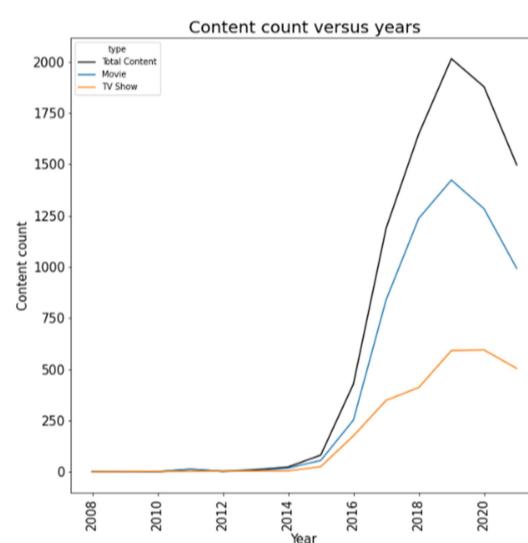
9: Countries with high M/TV Show

Observation: While Taiwan, South Korea, Ukraine, Columbia, Japan, Singapore, Ecuador, Sudan, Ethopia and Somalia have low M/TV Show, Further analysis is needed to see if audience in these countries are more inclined towards TV Shows.

Similarly UAE, Indonesia, Philippines, Hong Kong, Switzerland, Romania, Uruguay and India have high M/TV Show. Further analysis is needed to see if audience in these countries are more inclined towards Movies.

4. Understanding the trend for different content types over the past years.

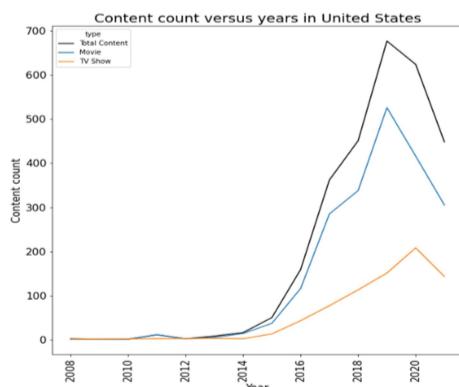
For this analysis, year is extracted from the date added column and the visualizations are made to understand how the count of contents (both, movie and TV Show) have changed over the years. Refer codeline 23 in the Jupyter Notebook.



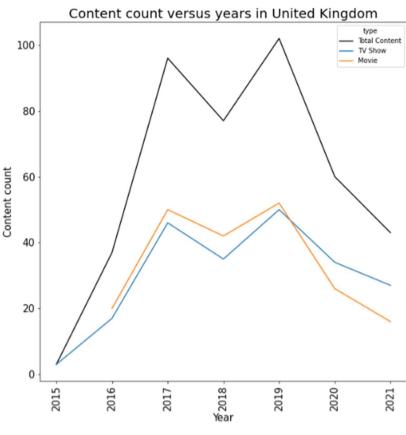
10: Content count over years

Observation: The dataset contains movies that were launched between 2008 and 2021.

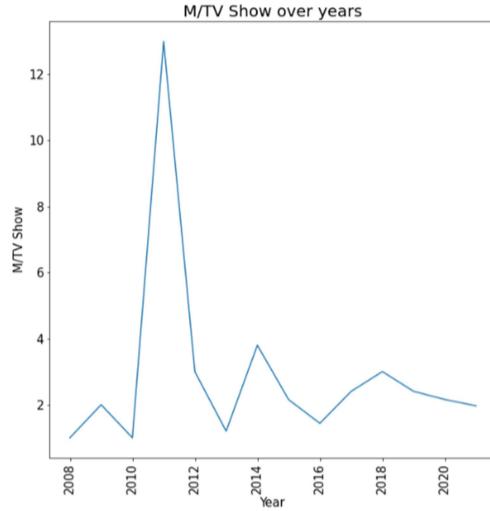
The total content available on Netflix increased over the years from 2008 to 2019, but decreased during the years 2020 and 2021. Both the movie and TV Show contents released on Netflix had decreased count in the two years. This can be explained by the global COVID pandemic due to which less contents might have been available during 2020 and 2021. Refer codeline 24 in the Jupyter Notebook.



11: Content count released in different years in United States



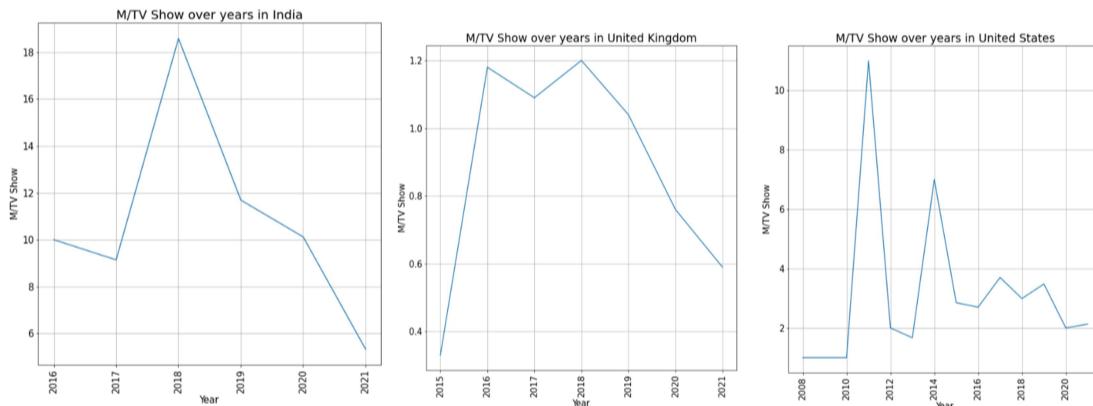
12: Content count released in different years in United Kingdom



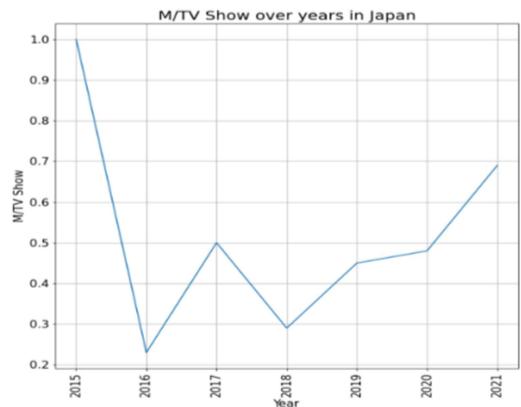
13: Ratio of Movie count to TV Show Count over years.

Observation: The ratio of Movie count to the TV Show count has decreased from the year 2018 and onwards. It might be an indication that Netflix has more inclination towards TV Shows in the past years. But further detailed analysis is needed to conclude this as there was global pandemic from 2020 which might have resulted in less movies contents being created. Refer code line 25 in the Jupyter Notebook.

5. Understanding the trend for different content types over the past years in different countries.

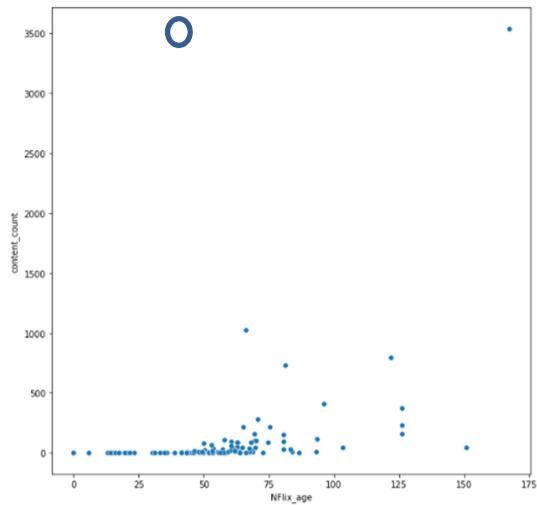


Observation: The ratio of M/TV Show has been consistently decreasing in India and UK since 2018. In USA on an average, the ratio has gone down with fluctuations about mean. Similar plots can be generated by Inputting the name of the countries. Refer code line 25 of the jupyter Notebook attached.



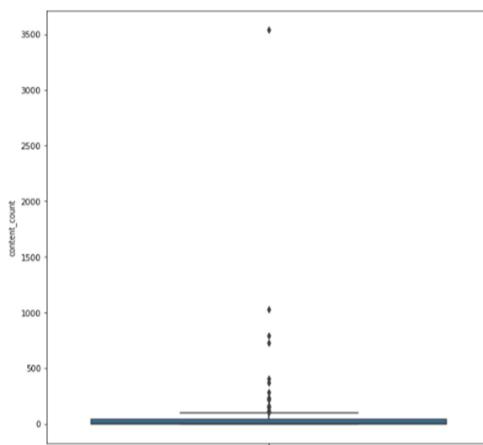
In Japan, the M/TV Show ratio has been increasing since 2018.

6. Understanding if the content released in a country is proportional to the age of Netflix in a country.



14: Age of Netflix in a country versus Content count

Observation: As seen from the above graph, the Netflix was first launched in a country around 170 months before. This country is United States. Clearly the content count in United States is way higher than content count in any other country. The same can be visualized using Box plot as well to detect the outlier in content count. Refer to the lines 27 for code in Jupyter Notebook.



15: Box plot for total content released in different countries

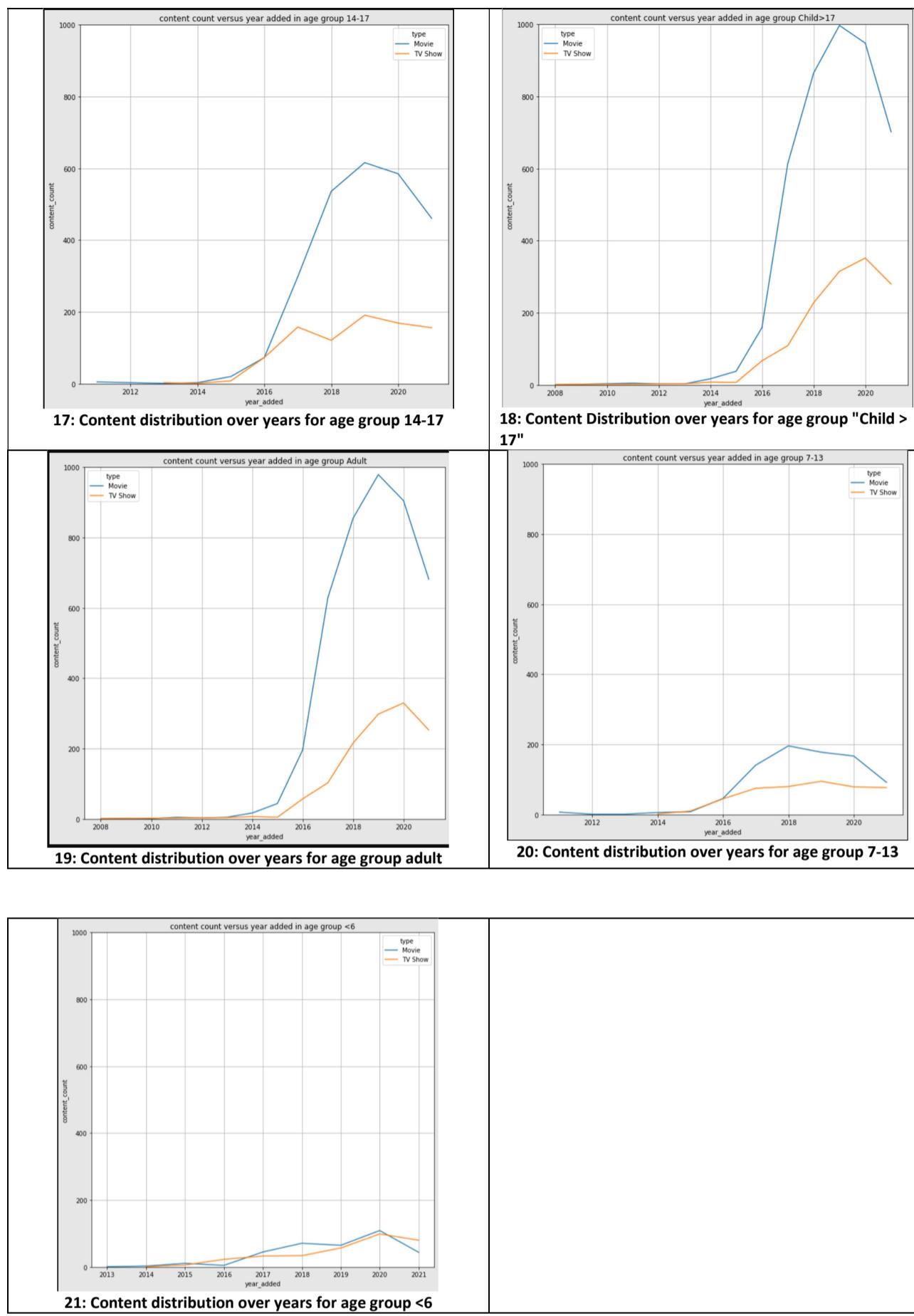
As can be seen from the above image, the median of total content released in different countries is very low and is equal to 6. This means in 50 percent of the countries, the total content count is 6 or less. The (25,75) percentile is (1,14). This implies interquartile range is 13. Thus any country where total content count is greater than 14 is an outlier as per boxplot. Thus as per data, there are 15 outliers in the dataset. These can be regarded as the countries where Netflix is performing very well. Also, this implies there is huge scope of growth for Netflix in other countries.



16: Countries where NetFlix is doing very well

7. Understanding the trend in contents over the past years for different age group.

The age groups were created from the TV ratings of TV Shows and Movie as per table in section 2.3.



Observation: The contents on NetFlix are directed for different age groups as follows:

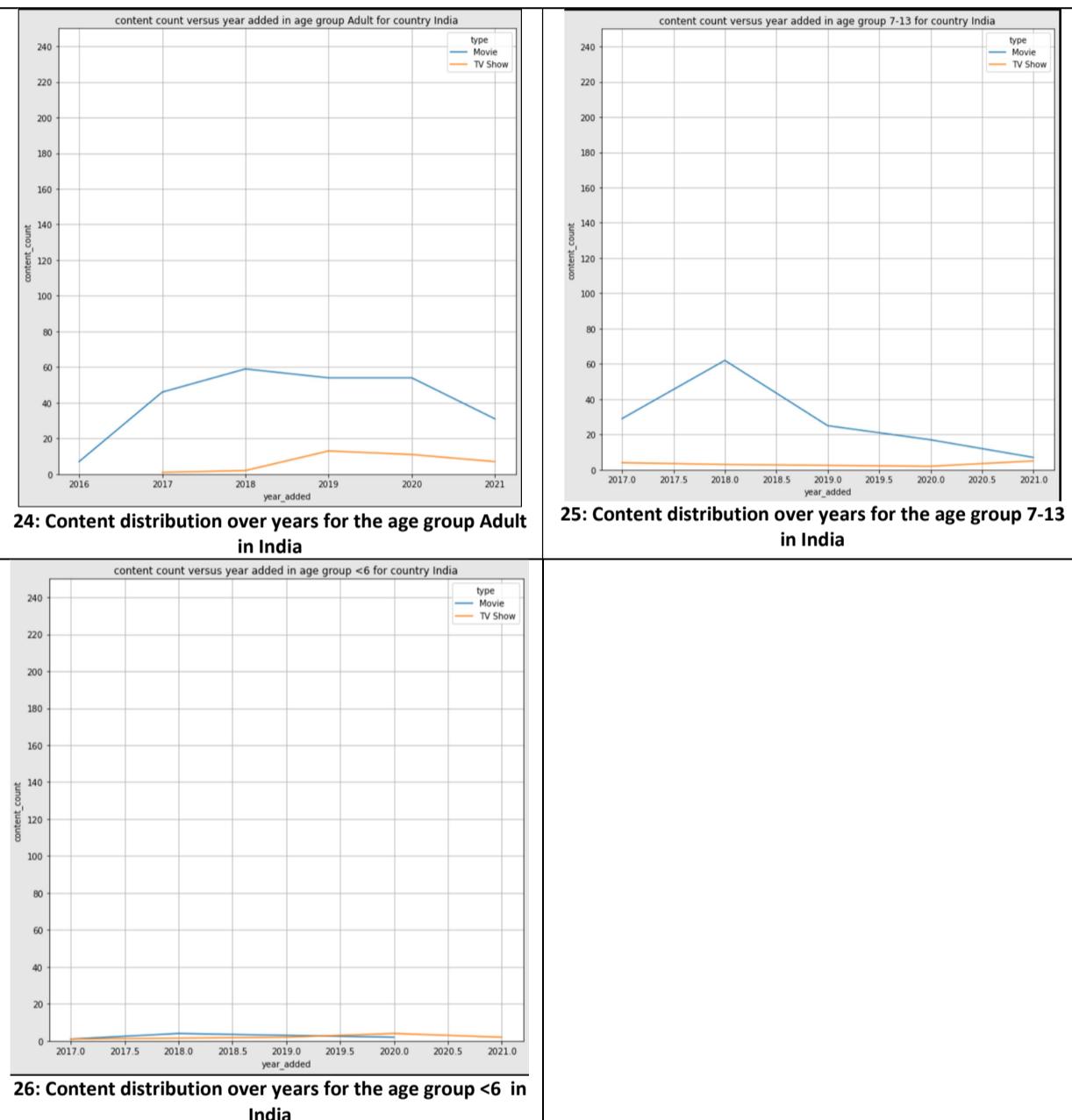
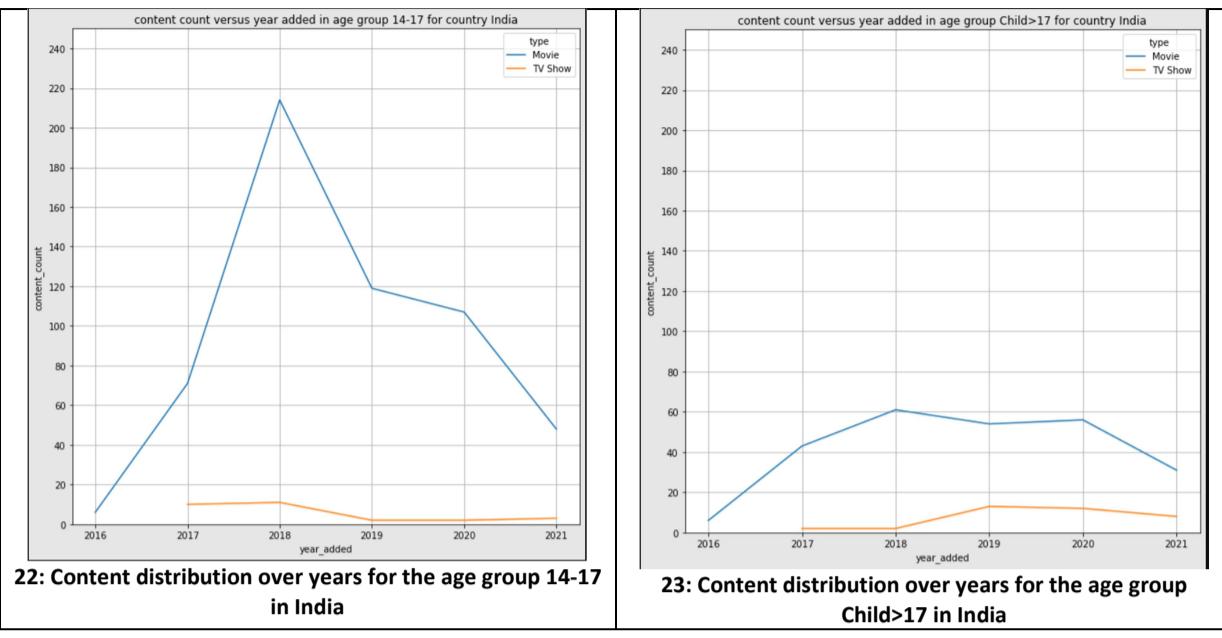
Child>17, Adult, 14-17, 7-13 and <6. This implies majority of the contents on NetFlix target age group of Child>17 and Adult.

The drop in movie content is more as compared to TV Show content over 2018-2021 for all age groups.

For age groups <6 and 7-13, NetFlix is more inclined towards TV Shows as compared to Movies. This is indicated by nearly constant TV Show curve and a drop in the Movie curve for the two age groups.

For code refer to the line 32 in the Jupyter Notebook attached.

Similar profiling can be done countrywise as well. Profiling has been done for India and USA to understand the age groups that are targeted by NetFlix. For code refer to the line 33 in the Jupyter Notebook attached.



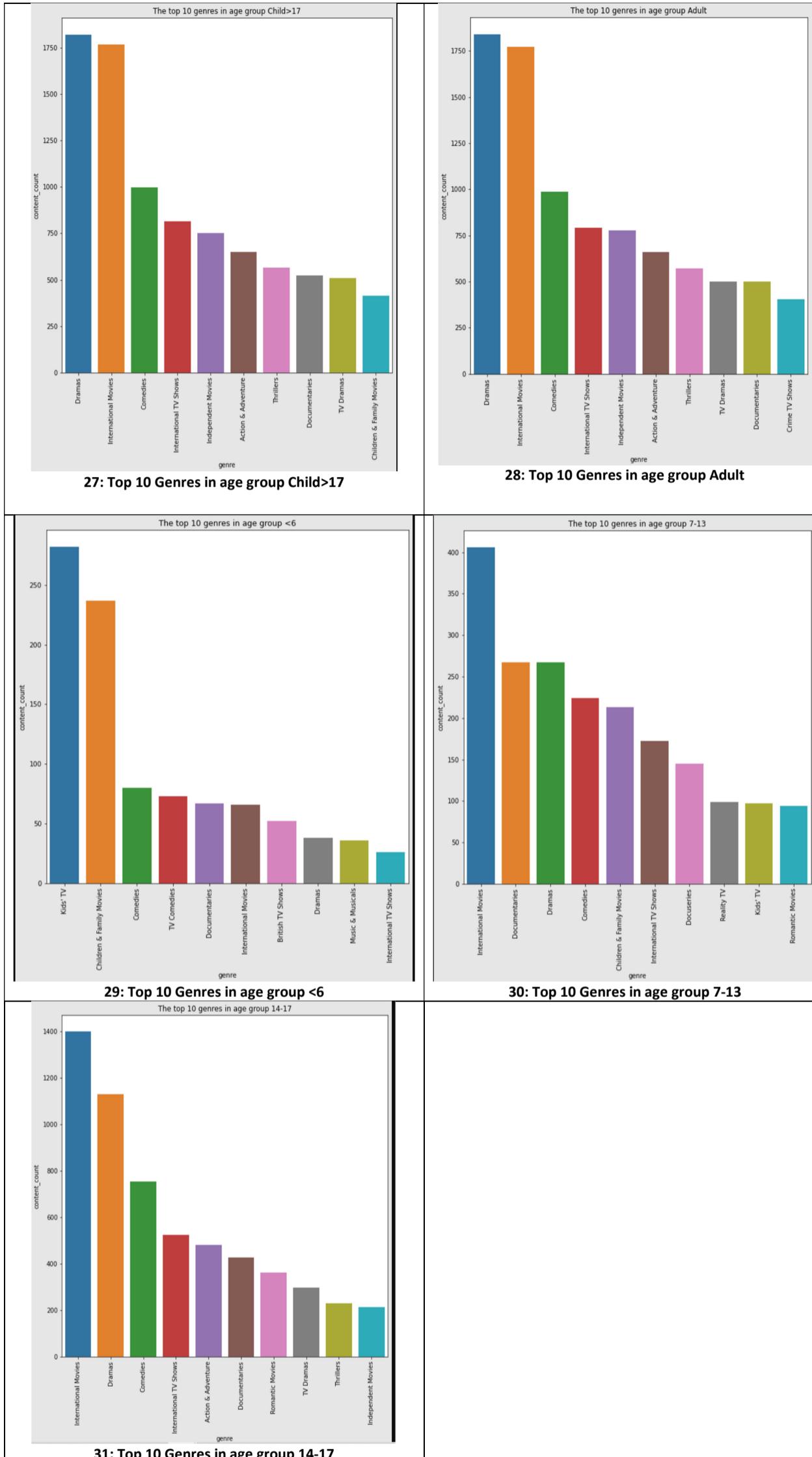
Observation: In India, the major audience of NetFlix is in the age groups as follows:

14-17, Child>17, Adult, 7-13, <6.

In age group category <6, there is no movie released in 2020.

Most of TV Show contents are directed Child>17 and adult group in the last 2 years.

8. Understanding the top 5 Genres age-group wise



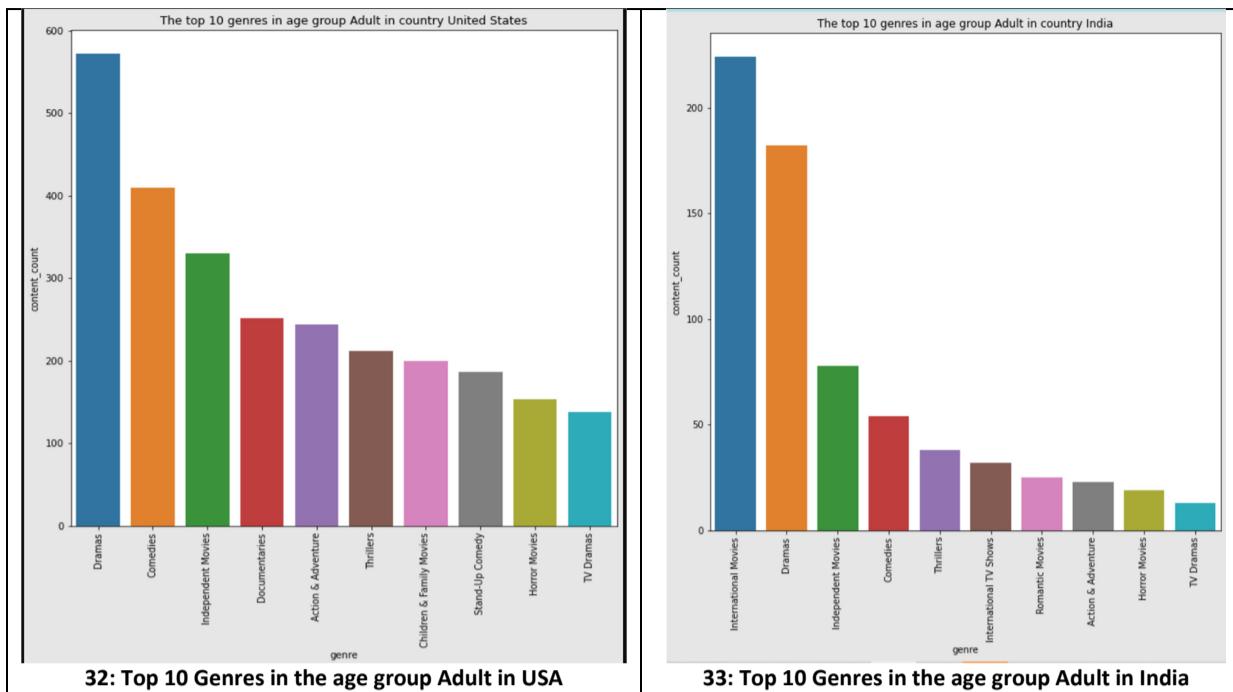
As can be seen from the graphs above, Dramas and International movies are among top 3 genres for all age groups except <6 age group.

For age groups Child>17 and Adult, the top 5 Genres are common and are Dramas, Comedies, International Movies, International Shows and Independent movies. These are followed by action and adventure, Thrillers, TV Dramas and Documentaries. The notable difference is Crime TV Shows in Adult age group.

For age group 14-17, the genres are more or less same, the notable difference is the count of Romantic Movies and Documentaries in these age group.

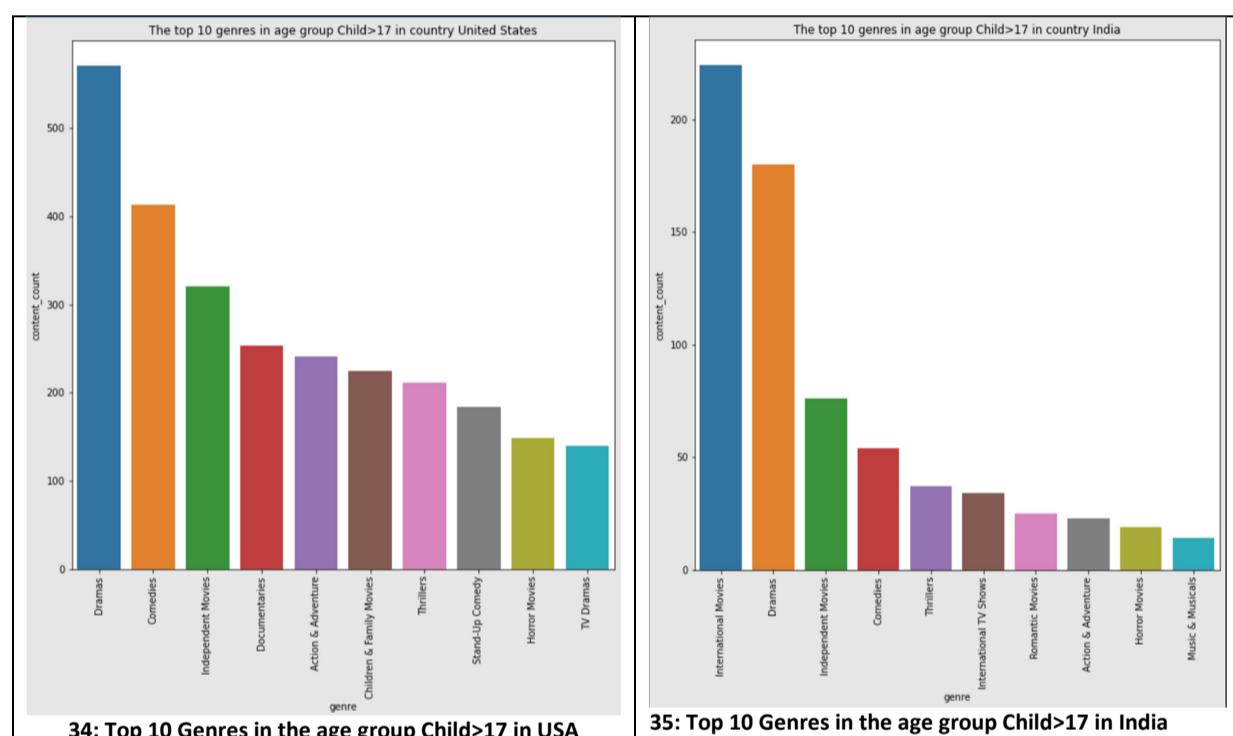
For age group < 6, Kids' TV, Children and Family movies are most available genres on Netflix. Another notable genre in top 10 is "Music and Musicals" for this age group.

Similar analysis can be done countrywise as well for different age groups Refer line 34 and 35 in the Jupyter Notebook attached:

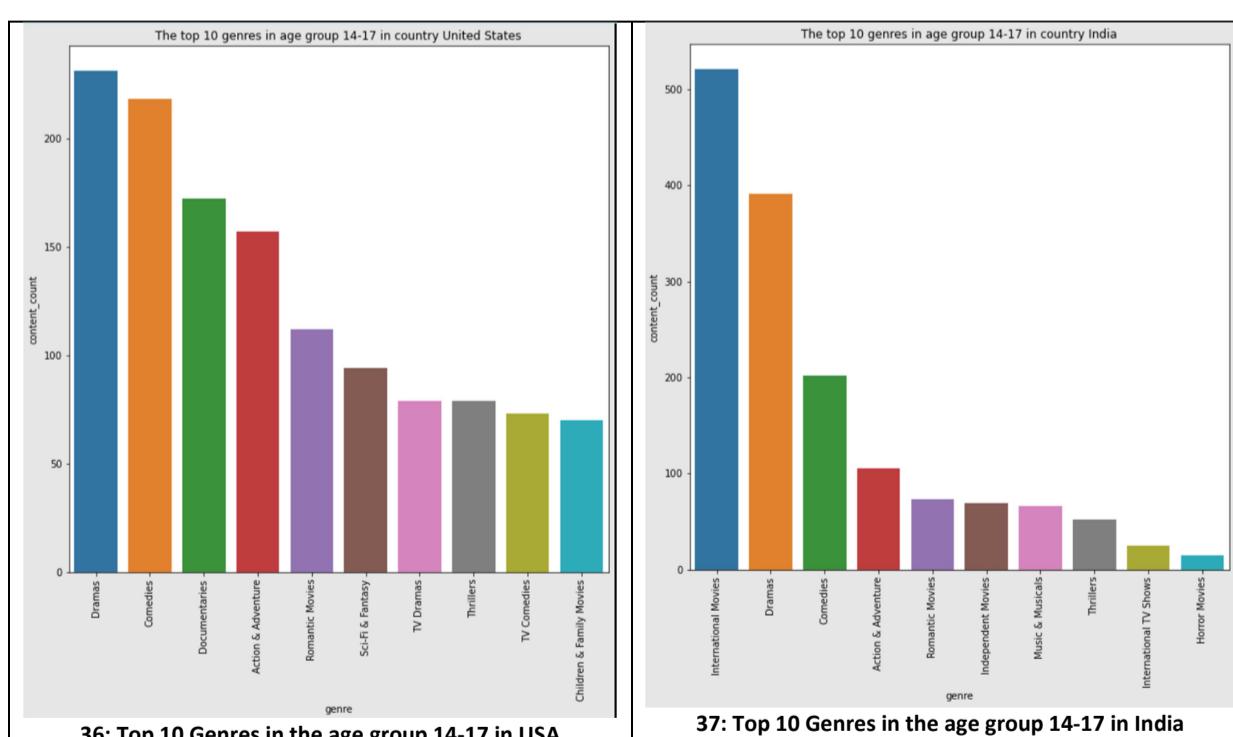


Observation: For age group Adult in US and India, common genres for contents available are Dramas, Comedy, Independent Movies, Comedies, Thrillers, Horror Movies and TV Dramas.

Documentaries, Stand up comedy, Children and Family Movies are also the genres for which contents are available on NetFlix for Adult age group in USA. For adult age group, International TV Shows, International Movies and Romantic movies are available on NetFlix and among the top 10 Genres.



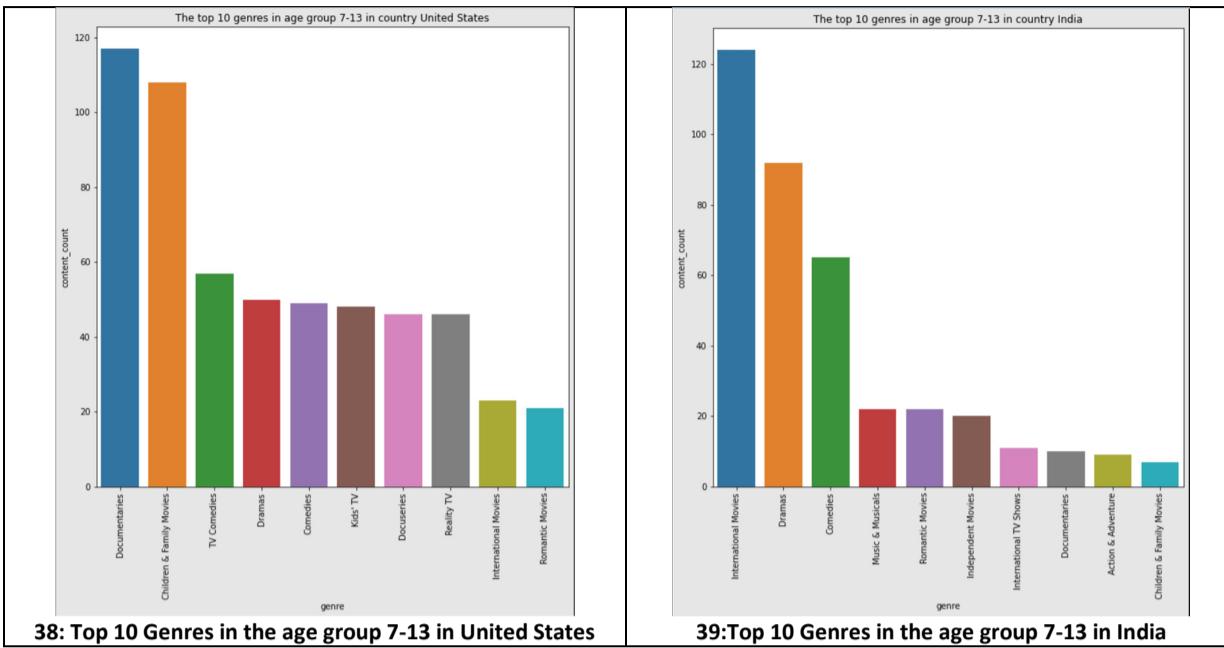
For age group Child>17, the observations are similar to that for age group Adult in both the countries.



Observation: For age group 14-17 in US and India, common genres for contents available are Dramas, Comedy, Action & Adventure, Romantic Movies and Thrillers.

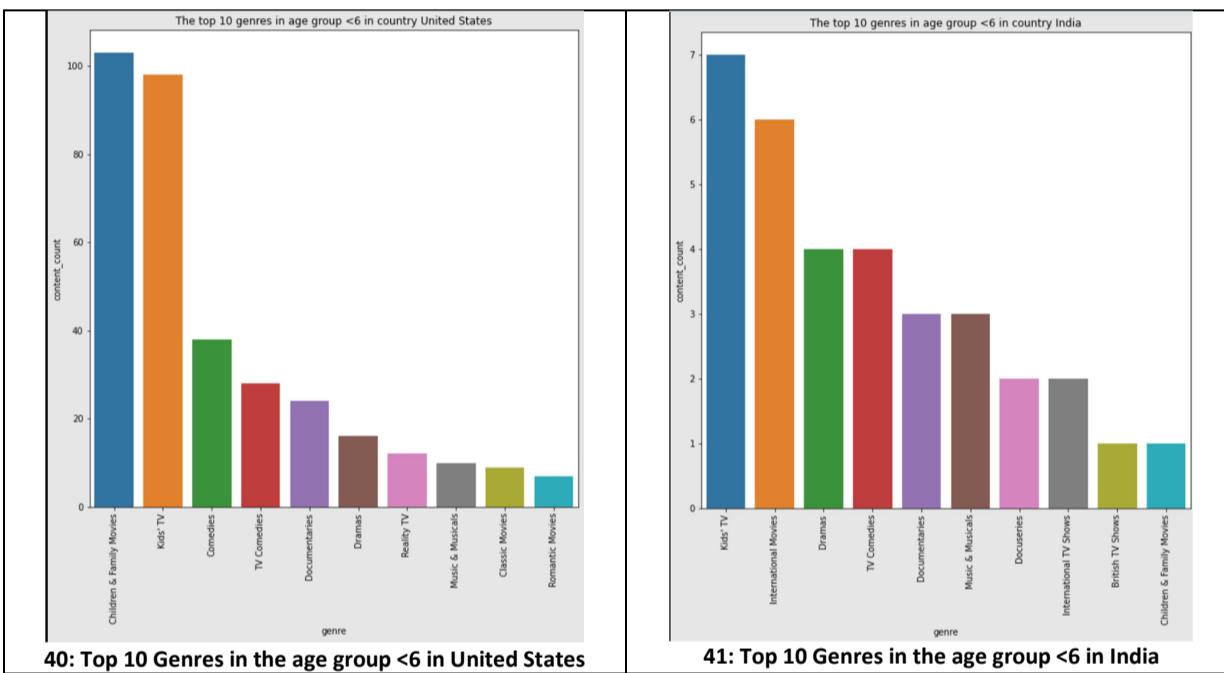
Documentaries, Scify & Fantasy, TV Dramas, TV Comedies and Children & Family movies are also the genres for which contents are available on NetFlix for 14-17 age group in USA.

For adult age group, International Movies, International TV Shows, Independent Movies, Music & Musicals and Horror Movies are available on NetFlix and among the top 10 Genres.



In age group 7-13 in USA, Documentaries, Children movies and TV Comedies are top 3 genres whereas in India, International Movies, Drama and Comedies are top 3 genres. There are romantic movie contents in both India and USA.

In age group 7-13 in USA, Docuseries, Kids TV and Reality TV's are also among the top 10 genres where as in India for same age group, Music and Musicals, Action and Adventures and International TV Shows contents are available for the same age group.



In age group <6 in Kids TV, Dramas, TV Comedies, Documentaries, Music and Musicals are common genres in top 10 for both India and USA.

In age group <6 in USA, Reality TV's and Docuseries are also among the top 10 genres where as in India for same age group, International TV Shows and British TV Show contents are available for the same age group.

In the table below is given the top 10 genres for all age groups in different years. (Refer code line 36 and 37 for codes and Barplots of the same.

age group	year	genres
14-17	2021	['Dramas' 'International Movies' 'Comedies' 'Action & Adventure' 'International TV Shows' 'Romantic Movies' 'Thrillers' 'Documentaries' 'TV Dramas' 'TV Comedies']
14-17	2020	['International Movies' 'Dramas' 'Comedies' 'Romantic Movies' 'Action & Adventure' 'International TV Shows' 'Documentaries' 'Thrillers' 'TV Dramas' 'Children & Family Movies']
14-17	2019	['International Movies' 'Dramas' 'Comedies' 'International TV Shows' 'Action & Adventure' 'Romantic Movies' 'Documentaries' 'Independent Movies' 'Thrillers' 'Romantic TV Shows']
14-17	2018	['International Movies' 'Dramas' 'Comedies' 'Action & Adventure' 'Documentaries' 'International TV Shows' 'Romantic Movies' 'TV Dramas' 'Music & Musicals' 'Independent Movies']
14-17	2017	['International Movies' 'International TV Shows' 'Dramas' 'Documentaries' 'TV Dramas' 'Comedies' 'Action & Adventure' 'Romantic TV Shows' 'Music & Musicals' 'Crime TV Shows']
14-17	2016	['Documentaries' 'International Movies' 'International TV Shows' 'TV Comedies' 'Romantic TV Shows' 'TV Dramas' 'Dramas' 'Crimes TV Shows' 'Docuseries' 'Independent Movies']

14-17	2015	['Children & Family Movies' 'Documentaries' 'International Movies' 'Dramas' 'Music & Musicals' 'TV Dramas' 'Comedies' 'Classic & Cult TV' 'TV Mysteries' 'Docuseries']
14-17	2014	['Documentaries' 'Children & Family Movies' "Kids' TV" 'TV Thrillers']
14-17	2013	['TV Dramas' 'TV Mysteries' 'TV Sci-Fi & Fantasy' 'Children & Family Movies' 'Comedies' 'Music & Musicals' 'Teen TV Shows']
14-17	2011	['Dramas' 'Thrillers']

Observation: The top 5 genres for the age group 14-17 from past 5 years are International Movies, Drama, Comedy, Action and Adventure.

Over the past 5 years, documentaries content has gone relatively down whereas Romantic Movies and Romantic TV Shows content have gone relatively upwards. This might indicate a shift in Liking for this age group audience.

The Thrillers content have increased on Netflix platform over the past 3 years. This is indicated by relative position of Thrillers in the genres list over the years.

Child>17	2021	['Dramas' 'International Movies' 'Comedies' 'International TV Shows' 'Action & Adventure' 'Thrillers' 'Independent Movies' 'TV Dramas' 'Children & Family Movies' 'Crime TV Shows']
Child>17	2020	['Dramas' 'International Movies' 'Comedies' 'International TV Shows' 'Independent Movies' 'Action & Adventure' 'Children & Family Movies' 'TV Dramas' 'Thrillers' 'Crime TV Shows']
Child>17	2019	['Dramas' 'International Movies' 'Comedies' 'International TV Shows' 'Independent Movies' 'Action & Adventure' 'Thrillers' 'Documentaries' 'TV Dramas' 'Horror Movies']
Child>17	2018	['International Movies' 'Dramas' 'Independent Movies' 'Comedies' 'International TV Shows' 'Action & Adventure' 'Thrillers' 'Documentaries' 'Stand-Up Comedy' 'Crime TV Shows']
Child>17	2017	['International Movies' 'Dramas' 'Documentaries' 'Independent Movies' 'Comedies' 'Thrillers' 'Action & Adventure' 'International TV Shows' 'Stand-Up Comedy' 'TV Dramas']
Child>17	2016	['International Movies' 'Dramas' 'International TV Shows' 'Comedies' 'Stand-Up Comedy' 'TV Dramas' 'Independent Movies' 'Documentaries' 'TV Comedies' 'Crime TV Shows']
Child>17	2015	['Stand-Up Comedy' 'Children & Family Movies' 'Dramas' 'Comedies' 'Independent Movies' 'International Movies' 'Documentaries' 'TV Comedies' 'British TV Shows' 'Docuseries']
Child>17	2014	['Documentaries' 'TV Dramas' 'International Movies' 'Children & Family Movies' 'Stand-Up Comedy' 'TV Comedies' 'Comedies' 'Crime TV Shows' 'Sci-Fi & Fantasy' 'Action & Adventure']
Child>17	2013	['Crime TV Shows' 'TV Dramas' 'Children & Family Movies' 'International TV Shows' 'Comedies' 'Documentaries' 'Music & Musicals' 'Sports Movies' 'Stand-Up Comedy' 'TV Thrillers']
Child>17	2012	['Comedies' 'Documentaries']
Child>17	2011	['Dramas' 'International Movies']
Child>17	2009	['Dramas' 'Horror Movies' 'International Movies']
Child>17	2008	['Dramas' 'Independent Movies' 'Stand-Up Comedy & Talk Shows' 'Thrillers']

Observation: In the age group Child>17, there has been relative decrease in the Documentary content on Netflix. There has been relative increase in Thrillers and Action & Adventures Genre contents on Netflix over the past 5 years. 'Dramas' 'International Movies' 'Comedies' 'International TV Shows' are the top 4 Genres in the past 4 years for the age group Child>17.

In the past 2 years, there have been contents on "Children & Family Movies" and "Crime TV Shows".

There has been relative decrease in "Standard Comedy" contents over the past 5 years.

Adult	2021	['Dramas' 'International Movies' 'Comedies' 'Action & Adventure' 'International TV Shows' 'Thrillers' 'Independent Movies' 'TV Dramas' 'Crime TV Shows' 'Children & Family Movies']
Adult	2020	['Dramas' 'International Movies' 'Comedies' 'International TV Shows' 'Independent Movies' 'Action & Adventure' 'TV Dramas' 'Thrillers' 'Children & Family Movies' 'Crime TV Shows']
Adult	2019	['Dramas' 'International Movies' 'Comedies' 'International TV Shows' 'Independent Movies' 'Action & Adventure' 'Thrillers' 'TV Dramas' 'Documentaries' 'Horror Movies']
Adult	2018	['International Movies' 'Dramas' 'Independent Movies' 'Comedies' 'International TV Shows' 'Action & Adventure' 'Thrillers' 'Documentaries' 'Stand-Up Comedy' 'Crime TV Shows']
Adult	2017	['International Movies' 'Dramas' 'Documentaries' 'Independent Movies' 'Comedies' 'Thrillers' 'Action & Adventure' 'International TV Shows' 'Stand-Up Comedy' 'TV Dramas']

Adult	2016	['International Movies' 'Dramas' 'Comedies' 'International TV Shows' 'Documentaries' 'Stand-Up Comedy' 'Independent Movies' 'TV Dramas' 'Crime TV Shows' 'Action & Adventure']
Adult	2015	['International Movies' 'Documentaries' 'Dramas' 'Stand-Up Comedy' 'Comedies' 'Independent Movies' 'Sports Movies' 'Children & Family Movies' 'Thrillers' 'TV Comedies']
Adult	2014	['Documentaries' 'TV Dramas' 'International Movies' 'Children & Family Movies' 'Stand-Up Comedy' 'TV Comedies' 'Comedies' 'Crime TV Shows' 'Sci-Fi & Fantasy' 'Action & Adventure']
Adult	2013	['Stand-Up Comedy' 'Crime TV Shows' 'TV Dramas' 'International TV Shows' 'Children & Family Movies' 'Documentaries' 'Docuseries' 'Sports Movies' 'Stand-Up Comedy & Talk Shows' 'TV Thrillers']
Adult	2012	['Comedies' 'Documentaries']
Adult	2011	['Dramas' 'International Movies']
Adult	2009	['Dramas' 'Horror Movies' 'International Movies']
Adult	2008	['Dramas' 'Independent Movies' 'Stand-Up Comedy & Talk Shows' 'Thrillers']
Adult	2010	['Cult Movies' 'Horror Movies']

Observation: In the Adult age group, 'Dramas' 'International Movies' 'Comedies' 'International TV Shows' are among top 5 Genres in the last 3 years. Over the past 5 years, the "Independent movies" content can also be seen among the top 10 Genres.

Over the past years, there has been relative decrease in the 'Documentaries' and "Stand up Comedy" content for the adult age group.

Over the past 5 years, there has been relative increase in "Action & Adventures", "Thrillers" & "Crime TV Shows" content on NetFlix.

7-13	2021	['International Movies' 'Dramas' 'International TV Shows' 'Docuseries' 'Kids' TV' 'Documentaries' 'Reality TV' 'Children & Family Movies' 'Comedies' 'TV Comedies']
7-13	2020	['International Movies' 'Comedies' 'Children & Family Movies' 'Dramas' 'Documentaries' 'Reality TV' 'Kids' TV' 'Romantic Movies' 'TV Comedies' 'International TV Shows']
7-13	2019	['International Movies' 'Comedies' 'Documentaries' 'Children & Family Movies' 'Dramas' 'International TV Shows' 'Docuseries' 'Romantic Movies' 'Kids' TV' 'Reality TV']
7-13	2018	['International Movies' 'Dramas' 'Documentaries' 'Children & Family Movies' 'Comedies' 'International TV Shows' 'Music & Musicals' 'Romantic Movies' 'Reality TV' 'Docuseries']
7-13	2017	['International Movies' 'Documentaries' 'International TV Shows' 'Docuseries' 'Comedies' 'Dramas' 'Children & Family Movies' 'Science & Nature TV' 'British TV Shows' 'Romantic Movies']
7-13	2016	['International TV Shows' 'Docuseries' 'Documentaries' 'British TV Shows' 'TV Comedies' 'Movies' 'Romantic TV Shows' 'Science & Nature TV' 'International Movies' 'Children & Family Movies']
7-13	2015	['British TV Shows' 'Docuseries' 'Children & Family Movies' 'Science & Nature TV' 'International TV Shows' 'Documentaries' 'TV Dramas' 'Kids' TV' 'Sports Movies' 'TV Comedies']
7-13	2014	['Documentaries' 'Kids' TV' 'Children & Family Movies' 'Classic & Cult TV' 'Movies' 'TV Comedies' 'TV Thrillers']
7-13	2013	['Children & Family Movies' 'Comedies' 'Music & Musicals']
7-13	2012	['Children & Family Movies' 'Comedies']
7-13	2011	['Dramas' 'Children & Family Movies' 'Faith & Spirituality' 'Sports Movies']

Observation: 'International Movies', "Documentaries", "Reality TV", Kids' TV', 'Children & Family movies' are the genres which have constantly occurred in the age group 7-13 content in the past 5 years.

<6	2021	["Kids' TV" 'Children & Family Movies' 'International Movies' 'TV Comedies' 'Dramas' 'International TV Shows' 'British TV Shows' 'Comedies' 'Music & Musicals' 'Docuseries']
<6	2020	["Kids' TV" 'Children & Family Movies' 'Comedies' 'TV Comedies' 'International Movies' 'British TV Shows' 'Dramas' 'Romantic Movies' 'Music & Musicals' 'Reality TV']
<6	2019	["Kids' TV" 'Children & Family Movies' 'Documentaries' 'Comedies' 'International Movies' 'British TV Shows' 'TV Comedies' 'Docuseries' 'International TV Shows' 'Sports Movies']
<6	2018	['Children & Family Movies' 'Kids' TV' 'Documentaries' 'International Movies' 'Movies' 'Dramas' 'Comedies' 'Music & Musicals' 'Docuseries' 'Sports Movies']
<6	2017	['Children & Family Movies' 'Kids' TV' 'Documentaries' 'Comedies' 'International Movies' 'Music & Musicals' 'Docuseries' 'British TV Shows' 'Science & Nature TV']

<6	2016	["Kids' TV" 'TV Comedies' 'Children & Family Movies' 'Comedies' 'Music & Musicals' 'TV Shows' 'British TV Shows' 'Documentaries' 'Docuseries' 'Faith & Spirituality']
<6	2015	['Children & Family Movies' "Kids' TV" 'British TV Shows' 'Comedies' 'Docuseries' 'TV Comedies' 'International TV Shows' 'Science & Nature TV']
<6	2014	['Children & Family Movies' 'Comedies' "Kids' TV" 'TV Thrillers']
<6	2013	['Children & Family Movies' 'Comedies' 'Music & Musicals']

Observation: "Kids' TV" 'Children & Family Movies' 'International Movies' 'TV Comedies' 'Dramas' 'International TV Shows' 'British TV Shows' 'Music & Musicals' are the genres that occur in the top 10 for age group <6 over the past 5 years.

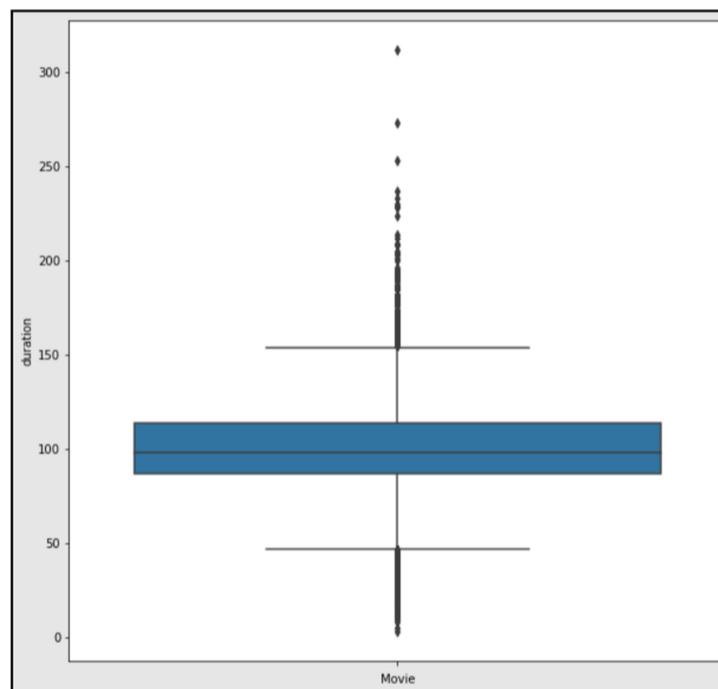
Similar profiling can be done based on individual country. Refer Lines ABC in the Jupyter Notebook. Similar profiling has been done for Japan. It can be done for other countries by entering in the country name while running the line ABC in the Jupyter Notebook.

age group	year	genres
14-17	2021	['International TV Shows' 'Anime Series' 'Action & Adventure' 'International Movies' 'Anime Features' 'Dramas' 'Romantic TV Shows' 'TV Comedies' 'Reality TV' 'Romantic Movies']
14-17	2020	['Anime Series' 'International TV Shows' 'Romantic TV Shows' 'Action & Adventure' 'Anime Features' 'International Movies' 'Crime TV Shows' 'TV Thrillers' 'Children & Family Movies' 'Comedies']
14-17	2019	['Anime Series' 'International TV Shows' 'Teen TV Shows' 'Anime Features' 'International Movies' 'Crime TV Shows' 'Romantic TV Shows' 'TV Dramas' 'Action & Adventure' 'Reality TV']
14-17	2018	['International TV Shows' 'Anime Series' 'Action & Adventure' 'Anime Features' 'International Movies' 'Children & Family Movies' 'Comedies' 'Classic Movies' 'Cult Movies' 'Dramas']
14-17	2017	['International Movies' 'International TV Shows' 'Anime Features' 'Action & Adventure' 'Anime Series' 'Documentaries' 'Crime TV Shows' 'Music & Musicals' 'Reality TV' 'Romantic TV Shows']
14-17	2016	['International TV Shows' 'Anime Series' 'Romantic TV Shows' 'Action & Adventure' 'Anime Features' 'Crime TV Shows' "Kids' TV" 'Reality TV' 'Sci-Fi & Fantasy' 'TV Comedies']
Child>17	2021	['International TV Shows' 'Anime Series' 'Action & Adventure' 'International Movies' 'TV Dramas' 'Crime TV Shows' 'Dramas' 'Horror Movies' 'TV Thrillers' 'Teen TV Shows']
Child>17	2020	['International TV Shows' 'Anime Series' 'International Movies' 'Action & Adventure' 'Children & Family Movies' 'Anime Features' 'TV Dramas' 'Dramas' 'Crime TV Shows' 'Independent Movies']
Child>17	2019	['International TV Shows' 'International Movies' 'Anime Series' 'Dramas' 'Action & Adventure' 'Anime Features' 'Comedies' 'Independent Movies' 'Children & Family Movies' 'Romantic TV Shows']
Child>17	2018	['International TV Shows' 'Anime Series' 'TV Dramas' 'TV Action & Adventure' 'Children & Family Movies' 'TV Mysteries' 'Anime Features' 'TV Comedies' 'Action & Adventure' 'TV Thrillers']
Child>17	2017	['International TV Shows' 'International Movies' 'Action & Adventure' 'Anime Features' 'Anime Series' 'Independent Movies' 'Classic Movies' 'Crime TV Shows' 'Documentaries' 'Dramas']
Child>17	2016	['Anime Series' 'International TV Shows' 'Crime TV Shows' 'TV Dramas' 'Action & Adventure' 'Anime Features' 'International Movies' "Kids' TV" 'TV Comedies']
Adult	2021	['International TV Shows' 'Anime Series' 'Action & Adventure' 'International Movies' 'TV Dramas' 'Crime TV Shows' 'Dramas' 'Horror Movies' 'TV Thrillers' 'Teen TV Shows']
Adult	2020	['International TV Shows' 'Anime Series' 'International Movies' 'Action & Adventure' 'Children & Family Movies' 'Anime Features' 'TV Dramas' 'Dramas' 'Crime TV Shows' 'Independent Movies']
Adult	2019	['International TV Shows' 'International Movies' 'Anime Series' 'Dramas' 'Action & Adventure' 'Anime Features' 'Comedies' 'Independent Movies' 'Children & Family Movies' 'Romantic TV Shows']
Adult	2018	['International TV Shows' 'Anime Series' 'TV Dramas' 'TV Action & Adventure' 'Children & Family Movies' 'TV Mysteries' 'Anime Features' 'TV Comedies' 'Action & Adventure' 'TV Thrillers']
Adult	2017	['International TV Shows' 'International Movies' 'Action & Adventure' 'Anime Features' 'Anime Series' 'Independent Movies' 'Classic Movies' 'Crime TV Shows' 'Documentaries' 'Dramas']
Adult	2016	['Anime Series' 'International TV Shows' 'Crime TV Shows' 'TV Dramas' 'Action & Adventure' 'Anime Features' 'International Movies']
7-13	2021	['Action & Adventure' 'Anime Features' 'International Movies' 'Anime Series' 'Children & Family Movies' 'Docuseries' 'Romantic TV Shows' 'Teen TV Shows']

7-13	2020	['International Movies' 'Anime Features' 'Anime Series' 'Children & Family Movies' 'Dramas' 'Action & Adventure' "Kids' TV" 'Romantic TV Shows' 'Sci-Fi & Fantasy' 'Teen TV Shows']
7-13	2019	['Anime Series' 'International TV Shows' 'International Movies' 'Anime Features' 'Teen TV Shows' 'Dramas' 'Music & Musicals' 'Romantic TV Shows' 'Action & Adventure' 'Children & Family Movies']
7-13	2018	['International Movies' 'International TV Shows' 'Action & Adventure' 'Anime Features' 'Anime Series' 'Children & Family Movies' 'Comedies' 'Dramas' 'Movies' 'Music & Musicals']
7-13	2017	['International TV Shows' 'TV Dramas' 'Action & Adventure' 'Anime Features' 'Anime Series' 'Documentaries' 'International Movies' 'Sports Movies' 'Stand-Up Comedy & Talk Shows' 'TV Comedies']
7-13	2016	['Action & Adventure' 'Anime Features' "Kids' TV" 'Sci-Fi & Fantasy' 'TV Comedies']
7-13	2015	['International TV Shows' 'TV Dramas']
<6	2020	["Kids' TV" 'Anime Series' 'British TV Shows' 'TV Comedies']
<6	2018	['Children & Family Movies' 'Comedies' 'Music & Musicals']
<6	2017	['International Movies' 'International TV Shows' 'Sci-Fi & Fantasy' 'Stand-Up Comedy & Talk Shows']
<6	2016	["Kids' TV" 'TV Comedies']

Data can be interpreted for the different age groups accordingly.

9. Visualizing the distribution of Movie contents duration available on NetFlix using Boxplots.



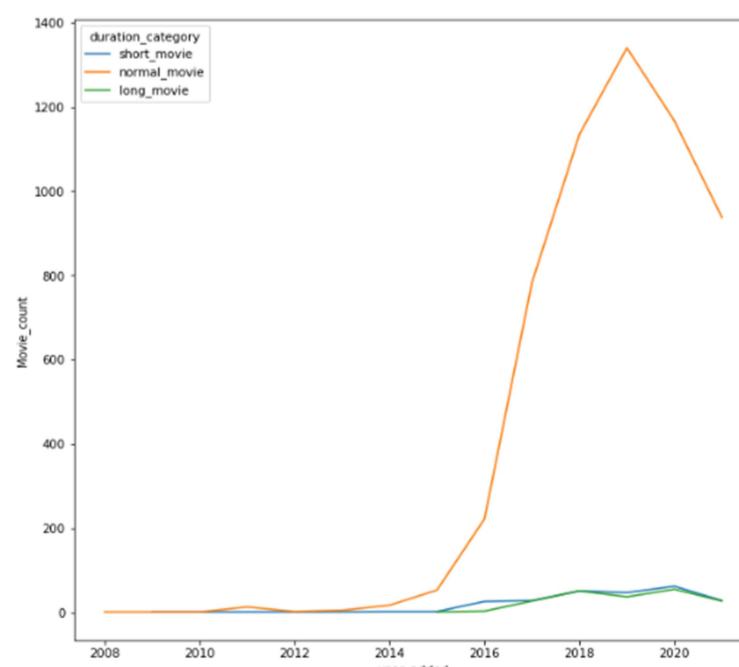
42: Box plot for Movie Duration

Observation: 25 percentile, 50 percentile and 75 percentile of the movie distribution are of 87, 98 and 114 minutes respectively.

Movies which are above 154.5 minutes are outliers and may be called Long Movies.

Movies which are below 46.5 minutes are also outliers and may be considered short movies.

The movies can be classified into "Short Movies", "Normal Movies" and "Long Movies" based on this and trend can be analyzed regarding the short_movies, Normal_movies and Long_movies over the years. Refer to the lines 41-43 in the Jupyter Notebook for code.



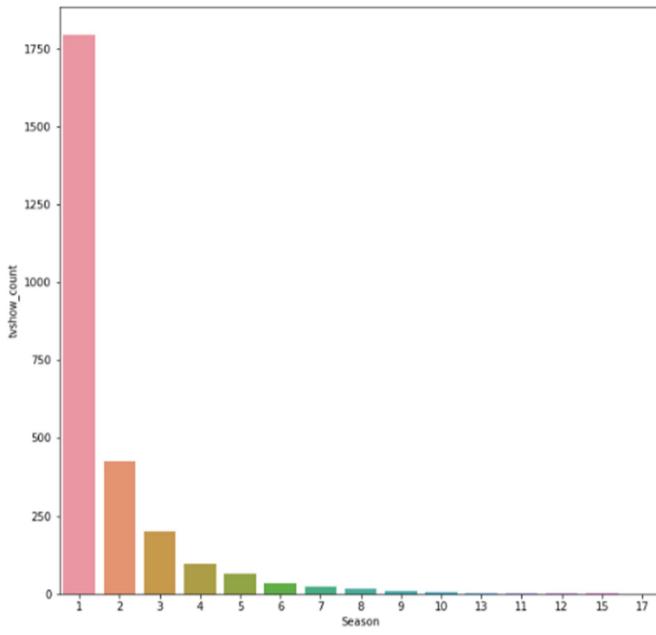
43: Trend of Movies in different duration countries over years

Observation: As can be seen from the image above, the short duration and long duration movie are very few in number as compared to Normal Duration movie.

The trend for both short duration and long duration movie content count increased till the year 2020 but declined sharply in 2021.

The Normal movie content has also decreased since the year 2019.

10. Visualizing the duration of Seasons for TV Show content.

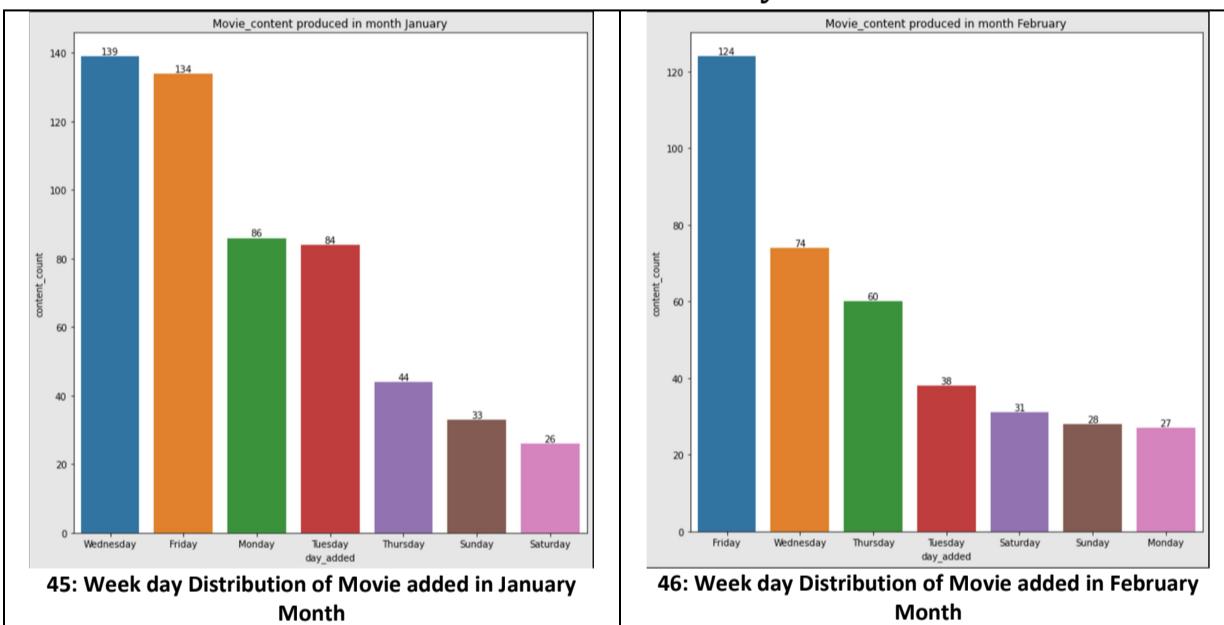


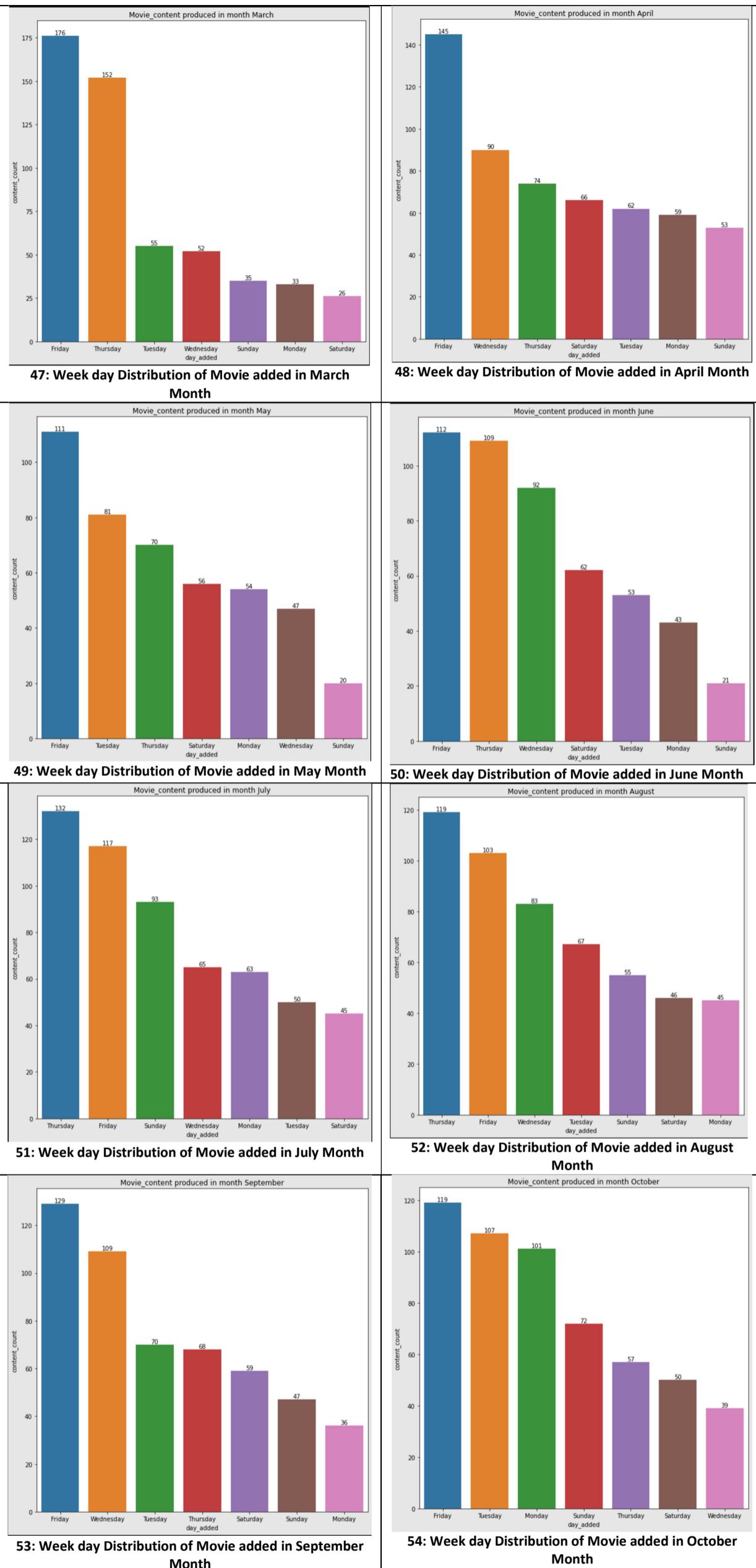
44: TV Show count Versus Season

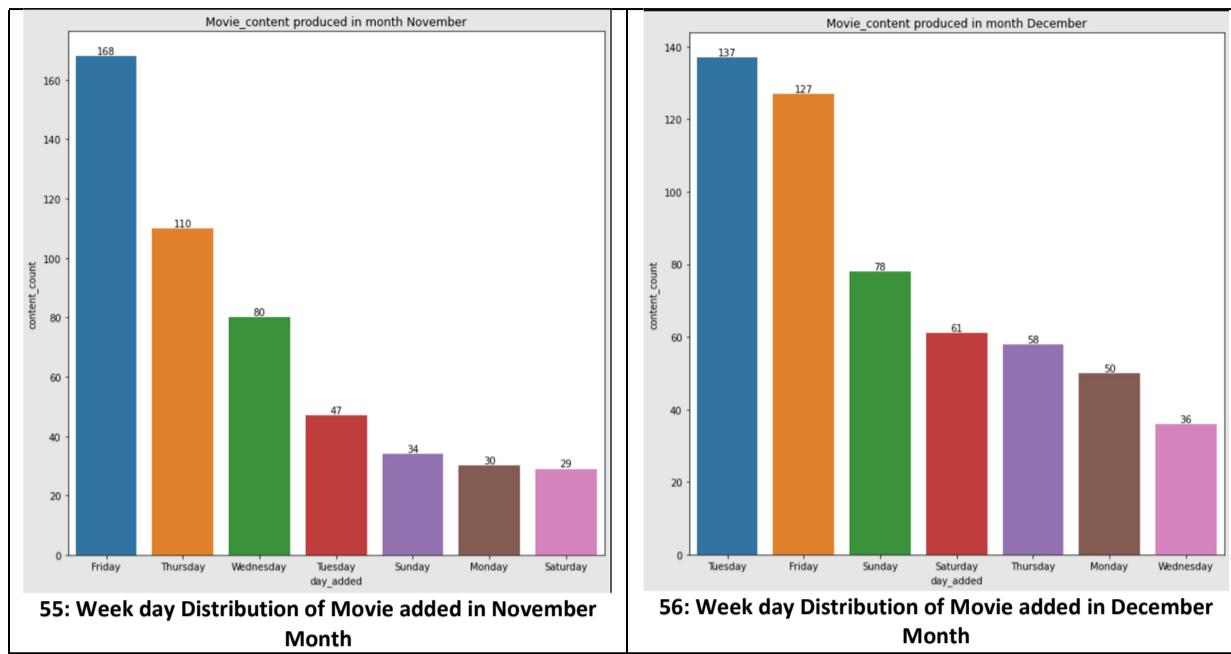
Observation: Majority of TV Shows have one or two season

The maximum no. of seasons for a TV Show is 17. Refer codeline 46 in the Jupyter Notebook.

11. Identifying the best time to release a movie or a TV Show in a year.

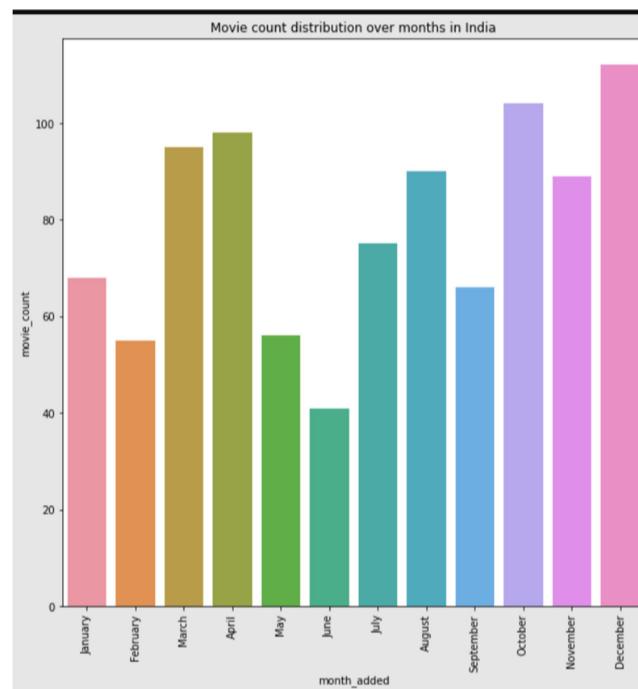






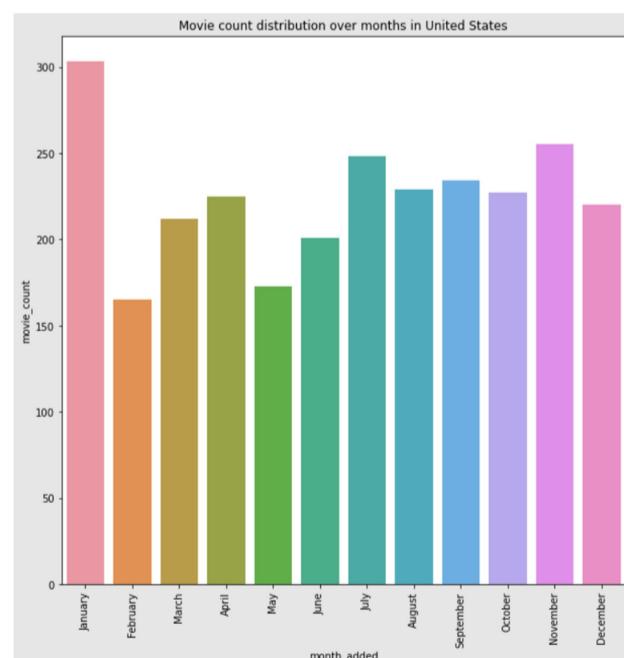
Observation: Friday is the best day to release a movie as it appears in the top 2 in all the Months followed by Thursday and Wednesday on which maximum contents were release in at 5, 4 months respectively. Refer line 47-49 in the Jupyter Notebook for the code.

Further drill down can be on basis of Country to observe the trend across the months and weekdays of the month for release of a movie content. Refer line 50 in the Jupyter Notebook for the code.



57: Movie content added during different Months in India

Observation: In India. Movies contents are added more in months October – December, March, April and July. These are festive seasons in India.



58: Movie content added during different Months in United States

Observation: In United States, more movie contents are added in the month of January.

In most of the months, Friday occurs in the top 2 days where maximum movie content was released. Also, in majority of the months, more movie contents were released on weekends (Thursday to Sunday). Please run line 50 in the code for the bar graphs.

12. Identifying the top 5 actors for different countries for TV Show contents and Movie type contents.

The list of top 5 actor Countrywise and for both TV Show and Movie content type are given in the table below. For code, refer line 51-52 in the Jupyter Notebook.

Country	TV Show top 5 actor	Movie top 5 actor
United States	['Mike Colter', 'David Attenborough', 'Breanna Yde', 'Allison Munn', 'Eric Lange']	['Samuel L. Jackson', 'James Franco', 'Molly Shannon', 'Nicolas Cage', 'Seth Rogen']
South Africa	['Cindy Mahlangu', 'Thabang Molaba', 'Abdul Khoza', 'Alfred Enoch', 'Otto Nobela']	['Deon Lotz', 'Kagiso Lediga', 'Tumi Morake', 'Mikael Persbrandt', 'Ramsey Nouah']
Unknown	['Frederick Lee', 'Pemey Peramin Thabkaew', 'Aenie Wong', 'Tay Ping Hui', 'Ak Akarat']	['Nassar', 'Shaffy Bello', 'Alexx Ekubo', 'Prabhas', 'Sathyaraj']
India	['Gagan Arora', 'Delnaaz Irani', 'Jitendra Joshi', 'Shreya Mehta', 'Kiku Sharda']	['Anupam Kher', 'Naseeruddin Shah', 'Shah Rukh Khan', 'Om Puri', 'Paresh Rawal']
Ghana	[]	['Adjetey Anang', 'Chris Attoh', 'Joselyn Dumas', 'Alexandra Duah', 'Afemo Omilami']
Burkina Faso	[]	['Afemo Omilami', 'Alexandra Duah', 'Kofi Ghanaba', 'Mutabaruka', 'Mzuri']
United Kingdom	['David Attenborough', 'Nadiya Hussain', 'Monty Don', 'Harriet Walter', 'John Cleese']	['John Cleese', 'Michael Palin', 'Helena Bonham Carter', 'Ben Whishaw', 'James Cosmo']
Germany	['Jamie Carter', 'Robert Finster', 'Christopher Sommers', 'Sylvester Groth', 'Julian Cullen']	['Daniel Brühl', 'David Schäffer', 'Lisa Hagmeister', 'Stellan Skarsgård', 'Sebastian Koch']
Ethiopia	[]	['Afemo Omilami', 'Alexandra Duah', 'Kofi Ghanaba', 'Mutabaruka', 'Mzuri']
Czech Republic	['Brigitte Hobmeier', 'Klaus Steinbacher', 'Markus Krojer', 'Martin Feifel', 'Martina Gedeck']	['Anna Fialová', 'Mackenzie Crook', 'Adnan Haskovic', 'Nora von Waldstätten', 'Ed Harris']
Mexico	['Damián Alcázar', 'Erik Hayser', 'Fátima Molina', 'Alejandro Speitzer', 'Luis Rábago']	['Cassandra Ciangherotti', 'Fernando Becerril', 'Andrés Almeida', 'Humberto Busto', 'Gael García Bernal']
Turkey	['Hazal Türesan', 'Alican Yıldızesoy', 'Ayşen Eren', 'Melis Birkan', 'Berkan Åžal']	['Demet Akbaş', 'Cezmi Baskın', 'Cem Yılmaz', 'Salih Kalyon', 'Yılmaz Erdoğan']
Australia	['Danielle Cormack', 'Alex Dimitriades', 'Miah Madden', 'Mia Milnes', 'Mercy Cornwall']	['Emily Morris', 'Ryan Corr', 'Elysia Markou', 'Sam Neill', 'Guy Pearce']
France	['Liliane Rovère', 'Guillaume Gouix', 'Tiphaine Daviot', 'Julia Piaton', 'Marc Ruchmann']	['Benoît Magimel', 'Wille Lindberg', 'Matt Annetts', 'Kristin Scott Thomas', 'Blanche Gardin']
China	['Wang Runze', 'Zhao Jinmai', 'Wang Bowen', 'Lai Kuan-lin', 'Chai Wei']	['Donnie Yen', 'Xing Yu', 'Simon Yam', 'Jackie Chan', 'Kent Cheng']
Canada	['Jordan Clark', 'Brittany Raymond', 'Victoria Baldesarra', 'Trevor Tordjman', 'Shamier Anderson']	['Diedrich Bader', 'David DeLuise', 'John Dunsworth', 'John Paul Tremblay', 'Robb Wells']
Japan	['Takahiro Sakurai', 'Yuki Kaji', 'Daisuke Ono', 'Jun Fukuyama', 'Junichi Suwabe']	['Yuki Kaji', 'Minako Kotobuki', 'Takahiro Sakurai', 'Chie Nakamura', 'Junko Takeuchi']
Nigeria	['Jude Chukwuka', 'Bimbo Manuel', 'Richard Mofe-Damijo', 'Anee Icha', '"Najite Dede"]	['Ramsey Nouah', 'Blossom Chukwujekwu', 'Tina Mba', 'Ayo Makun', 'Richard Mofe-Damijo']
Spain	['Carlos Cuevas', 'María Pedraza', 'Pedro Casablanc', 'Ernesto Alterio', 'José Sacristán']	['Mario Casas', 'Carmen Machi', 'Luis Tosar', 'Leonardo Sbaraglia', 'Karra Elejalde']
Belgium	['Laurent Capelluto', 'Tom Audenaert', 'Jeroen Perceval', 'Kris Cuppens', 'Lynn Van Royen']	['Matthias Schoenaerts', 'Fred Armisen', 'Charlotte Gainsbourg', 'Charlotte Le Bon', 'Benoît Magimel']
South Korea	['Sung Dong-il', 'Lee Seung-gi', 'Kim Won-hae', 'Cho Seong-ha', 'Lee Il-hwa']	['Kyeong-yeong Lee', 'Song Kang-ho', 'Eui-sung Kim', 'Park Hae-joon', 'Dal-su Oh']
Singapore	['Zhang Zhenhuan', 'Tay Ping Hui', 'Rui En', 'Rebecca Lim', 'Paige Chua']	['Tio Pakusadewo', 'Kit Chan', 'Mark Lee', 'Huang Lu', 'Hugo Weaving']
Italy	['Abigail Cowen', 'Federico Tocci', 'Lucrezia Guidone', 'Luca Lionello', 'Lorenzo Zurzolo']	['Riccardo Scamarcio', 'Jasmine Trinca', 'Valentina Cervi', 'Ludovica Martino', 'Antonio Zavatteri']
Romania	[]	['Vlad Logigan', 'Olimpia Melinte', 'Flavia Hojda', 'Sali Levent', 'Crina Semciuc']
Argentina	['Chino Darín', 'Victoria Almeida', 'Gustavo Garzón', 'Osmar Nuñez', 'Santiago Korovsky']	['Andrea Frigerio', 'Joaquín Furriel', 'Leonardo Sbaraglia', 'Mirella Pascual', 'Luis Brandoni']
Venezuela	[]	['Andrea Garrote', 'Germán de Silva', 'Guillermo Pfening', 'Joaquín Furriel', 'Luis Ziembrowski']
Hong Kong	['Justin Cheung', 'Louis Cheung', 'Kaki Sham', 'Kim Hee-won', 'Kim Ji-young']	['Donnie Yen', 'Shawn Yue', 'Lam Suet', 'Louis Koo', 'Miriam Chin Wah Yeung']
Russia	['Paulina Andreeva', 'Alexander Petrov', 'Eldar Kalimulin', 'Dmitry Shevchenko', 'Kirill Káro']	['Danila Kozlovsky', 'Karl Davies', 'Michael Smiley', 'Jude Law', 'Jodie Whittaker']
	['Jung Hae-in', 'Kim Sung-kyun', 'Koo Kyohwan', 'Son Suk-ku']	['Eestmäe Äänd', 'Stanisław Celiński', 'Roman Wilhelmi', 'Roman Skamene', 'Michał Pawlicki']
Ireland	['Rory Kinnear', 'Adam Rothenberg', 'Matthew Macfadyen', 'MyAnna Buring', 'David Dawson']	['Moe Dunford', 'Colin Farrell', 'Barry Keoghan', 'Fionn O'Shea', 'Michael McElhatton']
Nepal	[]	['Aarif Rahman', 'Amyra Dastur', 'Anmol Limbu', 'Banita Lagun', 'Binod Pradhan']
New Zealand	['Aaron Jakubenko', 'Ivana Baquero', 'Tasma Walton', 'Stef Dawson', 'Ryan Corr']	['James Rolleston', 'Cohen Holloway', 'Sam Neill', 'Rima Te Wiata', 'Nathalie Boltt']
Brazil	['Wallie Ruy', 'Jonathan Haagensen', 'Adriano Garib', 'Lee Taylor', 'Julia Ianina']	['Luccas Neto', 'Jessica Diehl', 'Vivian Duarte', 'Giovanna Alparone', 'Eduardo Galvão']
Greece	['David Attenborough']	['Olivia Colman', 'Lætitia Seydoux', 'John C. Reilly', 'Ariane Labed', 'Ashley Jensen']
Jordan	['Aysha Shahaltough', 'Ban Halaweh', 'Hamzeh Okab', 'Salma Malhas', 'Sultan Alkhail']	['Ahd', 'Ali Suliman', 'Abdullah Al Gohani', 'Saleh Bakri', 'Leem Lubany']
Colombia	['Fabián Ríos', 'Carmen Villalobos']	['Ricardo Quevedo', 'Iván Marín', 'Liss Pereira', 'Nelson Polanco', 'Rocío Tavera']

	'Catherine Siachoque', 'Juan Pablo Urrego', 'Carolina Gaitán']	
Switzerland	['Alexandra Vandernoot', 'Baptiste Gillièron', 'Bernard Yerlès', 'Gaspard Boesch', 'Lavinia Longhi']	['Rie Miyazawa', 'Pierce Brosnan', 'Lancelot Perrin', 'Jacques Perrin', 'Kristen Stewart']
Israel	['Shai Avivi', 'Lior Raz', 'Tomer Kapon', 'Michael Aloni', 'Nir Hasdai']	['Rotem Keinan', 'Igal Naor', 'Itzik Cohen', 'Lenny Ravitz', 'Harvey Keitel']
Taiwan	['Amanda Chou', 'James Wen', 'Joe Chen', 'Chris Wang', 'Janel Tsai']	['Chen Yi-wen', 'Jack Kao', 'Jason Wang', 'Liu Kuan-ting', 'Lotus Wang']
Bulgaria	[]	['Antonio Banderas', 'Robert Forster', 'Atanas Srebrev', 'Lillian Blankenship', 'Dylan McDermott']
Algeria	[]	['Abdalla Mahmoud', 'Gerry Sundquist', 'Yehia Chahine', 'Naglaa Fathi', 'Mohsen Mohiedine']
Poland	['Zofia Wicha', 'Michalina Olszańska', 'Paulina Gałecka', 'Paulina Chapko', 'Nela Kaczmarek']	['Jan Nowicki', 'Władysław Kowalski', 'Michał Bajor', 'Grażyna Szapońska', 'Piotr Cywus']
Saudi Arabia	['Moayed Althagafi', 'Abdulaziz Alshehri', 'Khairiah Abulaban', 'Sayed Rajab', 'Reem Alhabib']	['Ahmad', 'Khaled Abol Naga', 'Rafa Al Sanea', 'Fatima Al-Banawi', 'Hisham Fageeh']
Thailand	['Chutavuth Pattarakampol', 'Oabnithi Wiwattanawarang', 'Naruporn Kamol Chaisang', 'Jidapa Siribunchawan', 'Sutatta Udomsilp']	['Sahajak Boonthanakit', 'Kohtee Arambay', 'Wiradit Srimalai', 'Chutimon Chuengcharoensukying', 'Note Chern-Yim']
Indonesia	['Jon Jon Briones', 'Steve Blum', 'Shay Mitchell', 'Nicole Scherzinger', 'Dante Basco']	['Maudy Koesnaedi', 'Adipati Dolken', 'Reza Rahadian', 'Rio Dewanto', 'Alex Abbad']
Egypt	['Hesham Selim', 'Ahmed Dawood', 'Mohamed Mamdouh', 'Sawsan Badr', 'Dina El-Sherbiny']	['Ahmed Helmy', 'Hassan Hosny', 'Ezzat Abou Aouf', 'Lotfy Labib', 'Mohammed Tharwat']
Denmark	['Ellen Hillingsøe', 'Alexandre Willaume', 'Danica Curcic', 'Lise Bastrup', 'Mille Dinesen']	['Stellan Skarsgård', 'Stellan Skarsgård', 'Sophie Kennedy Clark', 'Jakob Oftebro', 'Peter Sverre Hagen']
Kuwait	['Abdullah Al-Turkumani', 'Fatma Al Tabbakh', 'Nour Al Ghadour', 'Nasser Kermani', 'Muhanad Al-Hamdi']	['Jassim Al Nabhan', 'Souad al-Husseini', 'Mohamed El Hemaly', 'Ibrahim Al-Sheikhly', 'Heba El Dorry']
Netherlands	['Steef de Bot', 'Alexander Brouwer', 'Rifka Lodeizen', 'Karina Smulders', 'Kevin Janssens']	['Jolijn Henneman', 'Fenna Ramos', 'Dafne Holwijn', 'Donny Roelvink', 'Niek Roozen']
Malaysia	['Yoon Du-jun', 'Hwang Seog-jeong', 'Lee Ju-seung', 'Kwon Yul', 'Kim Ji-young']	['Amerul Affendi', 'Nam Ron', 'Remy Ishak', 'Henley Hii', 'Hairul Azreen']
Vietnam	[]	['Son Tung M-TP', 'Mai Cat Vi', 'Pham Anh Khoa', 'Thanh Hoa', 'Phuong Mai']
Hungary	['Colm Feore', 'David Oakes', 'François Arnaud', 'Holliday Grainger', 'Jeremy Irons']	['Adám Fekete', 'Gáza Morcsányi', 'Kate Beckinsale', 'Kevin Greivoix', 'Lidia Danis']
Sweden	['Björn Kjellman', 'David Dencik', 'Magnus Krepper', 'Gizem Erdogan', 'Adam Godley']	['Stellan Skarsgård', 'Stellan Skarsgård', 'Claes Malmberg', 'Peter Sverre Hagen', 'Anders Baasmo Christiansen']
Lebanon	['Daniella Rahme', 'Bassel Khayyat', 'Nada Abou Farhat', 'Adel Karam', 'Amel Bouchoucha']	['Liliane Nemri', 'Joseph Bou Nassar', 'Rodrigue Sleiman', 'Georges Khabbaz', 'Badih Abou Chakra']
Finland	['Anu Sinisalo', 'Ilkka Villi', 'Tommi Korpela', 'Riku Nieminen', 'Raimo Grönberg']	['Ximena Guzmán', 'Luis Gerardo Méndez', 'Laura Birn', 'Miriam Balderas', 'Joonas Saartamo']
Syria	['Aseel Omran', 'Ayman Mabrouk', 'Azeez Khayoun', 'Dima Al Jundi', 'Dina Talaat']	['Abdel Nasser Maraqqi', 'Amal Assaf', 'Hanane Hajj Ali', 'Madonna Adib', 'Marwa Almassri']
Philippines	['Huybs Azarcon', 'Gardo Versoza', 'Nicole Scherzinger', 'Manny Jacinto', 'Lou Diamond Phillips']	['Joross Gamboa', 'Bea Alonzo', 'Kathryn Bernardo', 'Al Tantay', 'John Lloyd Cruz']
Iceland	['Ársteinn Bachmann', 'Björn Thors', 'Nánna Þórgígg Filippusdóttir', 'Halldóra Geirharðsdóttir', 'Ásgríð Tanja Flygenring']	['Anders Danielsen Lie', 'Jaden Smith', 'Thorbjörn Harr', 'Ola G. Furuset', 'Maria Bock']
United Arab Emirates	['Abdulmohsen Alnemr', 'Ahmad Aljasmii', 'Dean Cain', 'Khaled Alkeesh', 'Khaled El Sayed']	['Ali Suliman', 'Ahmed', 'Mansour Al Felei', 'Alhamadi Hamad', 'Abdullah Bin Heider']
Norway	['Benjamin Helstad', 'Bjørn Skagestad', 'Mads Sjögård Pettersen', 'Dennis Storhaug', 'Marian Saastad Ottesen']	['Jon Åsgård', 'Thorbjørn Harr', 'Stellan Skarsgård', 'Thomas Gullestad', 'Anders Baasmo Christiansen']
Qatar	[]	['Abdel Nasser Maraqqi', 'Noor Maghout', 'John Arcilla', 'Ku Aquino', 'Karine Mischel']
Austria	['Anja Kling', 'Brigitte Kren', 'Christoph Krutzler', 'Ella Rumpf', 'Georg Friedrich']	['Turlough Convery', 'Lars Bitterlich', 'León Orlandianyi', 'Luca Streussnig', 'Julia Koschitz']
Cameroon	[]	['Casson Chinopoh', 'Daphne Nije', 'Faith Fidel', 'Kang Quintus', 'Ndamo Damaris']
Palestine	[]	[]
Uruguay	[]	['Mirella Pascual', 'Christian Morales', 'José Pedro Bujaruz', 'Juan Calot', 'Gonzalo Delgado']
Kenya	[]	['Pierra Makana', 'Mawuli Gavor', 'Lydia Gitachu', 'Stycie Waweru', 'Sarah Hassan']
Chile	['Roberto Farías', 'Sergio Hernández', 'Angela Lineros', 'Hugo Medina', 'Ingrid Isensee']	['Ignacia Allamand', 'Luis Gnecco', 'Marcial Tagle', 'Alejandro Goic', 'Ramón Llao']
Luxembourg	['Claude De Demo', 'Jill Devresse', 'Joe Dennenwald', 'Jules Werner', 'Julie Kieffer']	['Paul Giamatti', 'Kodi Smit-McPhee', 'Sarah Shahi', 'Emma Watson', 'Freddie Fox']
Cambodia	[]	['Adam Pally', 'Patrick St. Esprit', 'JB Blanc', 'Jacob Hopkins', 'Jean-Paul Ly']
Bangladesh	[]	['Allen Shubhro', 'Shamol Mawla', 'Mostafizur Noor Imran', 'Manoj Kumar Pramanik']

		'Lutfur Rahman George']
Portugal	[]	['David Verdaguer', 'Adam Jezierski', 'Alba Ribas', 'Karra Elejalde', 'Leander Vyvey']
Senegal	['Christiane Dumont', 'Christophe Guybet', 'Fatou-Elise Ba', 'Issaka Sawadogo', 'Khalima Gadjil']	['Amadou Mbow', 'Amina Kane', 'Coundou Dieng', 'Diankou Sembene', 'Ibrahima Mbaye']
Serbia	[]	['Katarina Čeas', 'Ratko Turčinović', 'Ken Foree', 'Mick Garris', 'Miroljub Leđić']
Malta	['Alice Braga', 'Gerardo Taracena', 'Hemky Madera', 'Justina Machado', 'Peter Gadiot']	['Angelina Jolie', 'Brad Pitt', 'Melvil Poupaud', 'Mădălina Laurent', 'Niels Arestrup']
Namibia	[]	['Anna Louw', 'Ashwyn Mberi', 'Camilla Jo-Ann Daries', 'Robert Hara Gaeb', 'Steven Afrikaner']
Angola	[]	['Cigano Satyohamba', 'David O'Hara', 'Hakeem Kae-Kazim', 'Neide Vieira', 'Nompilo Gwala']
Peru	[]	['Pietro Sibile', 'Andrés Salas', 'Carlos Alcántara', 'Cristián de la Fuente', 'Gisela Ponce de León']
Mozambique	[]	['Aldovina Chiziane', 'Arlete Bombe', 'Candido Quembo', 'Gil Alexandre', 'Jorge Amade']
Belarus	['Dmitri Davidovich', 'Svetlana Tsimokhina']	[]
Zimbabwe	[]	['Charmaine Mujeri', 'Chimwemwe Chipidza', 'Eddie Sandifolo', 'Eugene Zimbudzi', 'Fungai Majaya']
Puerto Rico	['Ana Lucia Dominguez', 'Darkiel', 'Diego Cadavid', 'Jarlín Javier Martínez', 'Luis Gonzaga']	[]
Pakistan	['Qavi Khan', 'Fawad Khan', 'Mahira Khan', 'Rehan Sheikh', 'Sheheryar Munawar']	['Nayyar Ejaz', 'Javed Sheikh', 'Shafqat Cheema', 'Shamim Hilaly', 'Faris Khalid']
Cyprus	['Colin Hanks', 'James Adomian', 'Lisa Schwartz', 'Maria Bamford', 'Tom Kenny']	[]
Mauritius	['Anthony Oseyemi', 'Khumbulani Kay Sibiya', 'Manie Malone', 'Michaella Russell', 'Sisanda Henna']	[]
Guatemala	[]	['Christian Morales', 'Costanza Andrade', 'Juan Pablo Olyslager', 'Mario Zaragoza', 'Saúl Lisazo']
Iraq	[]	['Michael Ware']
Malawi	[]	['Aissa Maïga', 'Chiwetel Ejiofor', 'Joseph Marcell', 'Lemogang Tsipa', 'Lily Banda']
Paraguay	[]	['Andrea Frigerio', 'Andrea Quattrochi', 'Bruno Sosa', 'David Gerber', 'Fabio Chamorro']
Croatia	['Aleksandar Cvetković', 'Alen Liverić', 'Anja Matković', 'Branka Katić', 'Dajana Čeuljak']	['Juraj Dabić', 'Helena Beljan', 'Sebastian Cavazza', 'Natasa Janjić', 'Natasa Đorđić']
Iran	[]	['Edmond O'Brien', 'Cameron Mitchell', 'Norman Foster', 'John Huston', 'Oja Kodar']
Cayman Islands	[]	['Becky G.', 'David Koechner', 'George Lopez', 'Jeff Dunham', 'Josh Peck']
West Germany	['Michael Palin', 'Terry Jones', 'Eric Idle', 'Graham Chapman', 'Connie Booth']	['Denise Nickerson', 'Dodo Denney', 'Ursula Reit', 'Roy Kinnear', 'Peter Ostrum']
Albania	[]	['Claudio Santamaria', 'Flonja Kodheli', 'Jerzy Stuhr', 'Marco Giullini']
Georgia	[]	['Berta Khapava', 'Dimitri Oragvelidze', 'Giorgi Khurtsilava', 'Giorgi Tabidze', 'Goven Cheishvili']
Soviet Union	[]	['Zeenat Aman', 'Naseeruddin Shah', 'Yakub Ahmedov', 'Varsha Usgaonkar', 'Tanuja']
Morocco	[]	['Halima Karaouane', 'Sara El Mhamdi Elaaloui', 'Abdellah Didane', 'Asmaa Lazrak', 'Camilia Montassere']
Slovakia	[]	['Anna Fialová', 'Gedeon Burkhard', 'Jiří Májdl', 'Karl Markovics', 'Lenka Vlasáková']
Ukraine	['Nikolay Chindyaykin', 'Stanislav Moskvin', 'Anastasiya Makeeva', 'Ivan Oganesyan', 'Kirill Káro']	[]
Bermuda	[]	['Bryce Groark', 'Carl Safina', 'James Cameron', 'Jeremy Jackson', 'Michael deGruy']
Ecuador	[]	['Bryce Groark', 'Carl Safina', 'James Cameron', 'Jeremy Jackson', 'Michael deGruy']
Armenia	[]	[]
Mongolia	[]	[]
Bahamas	[]	['Daniel Craig', 'Eva Green', 'Giancarlo Giannini', 'Jeffrey Wright', 'Judi Dench']
Sri Lanka	[]	['K.G. Chandani Renuka Ratnayake']
Latvia	[]	['Antti Reini', 'Claes Malmberg', 'Elin Petersdottir', 'Johanna af Schultén', 'Kaija Pakarinen']
Liechtenstein	[]	['Alec Guinness', 'Geraldine Chaplin', 'Jeffrey Rockland', 'Julie Christie', 'Omar Sharif']
Cuba	['Carlos Enrique Almirante', 'Jorge Perugorría', 'Juana Acosta', 'Laura Ramos', 'Luis Alberto García']	[]
Nicaragua	[]	['Freeway Rick Ross']
Slovenia	[]	['Mick Garris', 'Monte Markham', 'Dragan Mićanović', 'Sonja Vukićević', 'Ratko Turčinović']
Dominican Republic	[]	['Chris Johnson', 'Claire Holt', 'Mandy Moore', 'Matthew Modine', 'Santiago Segura']
Samoa	[]	[]
Azerbaijan	['Aras Bulut Aydemir', 'Eva Dedova', 'Fahreddin Manafov', 'Kristina Krepela', 'Mehmet Äfek']	[]
Botswana	[]	[]
Vatican City	[]	['Pope Francis']
Jamaica	[]	['Aiden Moodie', 'Bryshere Gray', 'Dale Elliott', 'David Alan Grier', 'Dennis Titus']

Lithuania	[]	['Andy Nyman', 'Anthony LaPaglia', 'Ben Addis', 'Ben Lloyd-Hughes', 'Caroline Bartleet']
Afghanistan	[]	['Sohrab Nazari']
Somalia	[]	['Abdi Sidow Farah', 'Al Pacino', 'Armaan Haggio', 'Barkhad Abdi', 'Evan Peters']
Sudan	[]	['Abdi Sidow Farah', 'Al Pacino', 'Armaan Haggio', 'Barkhad Abdi', 'Evan Peters']
Panama	[]	['Fumio Demura']
Uganda	[]	[]
East Germany	[]	['Denise Nickerson', 'Dodo Denney', 'Gene Wilder', 'Jack Albertson', 'Julie Dawn Cole']
Montenegro	[]	['Ana Begic', 'Goran Hajdukovic', 'Helena Beljan', 'Juraj Dabic', 'Krunoslav Saric']

13. Identifying the most famous actor pairs in different countries.

The list of top 5 actor pairs Countrywise and for both TV Show and Movie content type are given in the table below. For code, refer line 53-54 in the Jupyter Notebook.

Country	Top 5 Movie_actor_pair	Top 5 T Show actor pair
United States	['adam sandler and rob schneider', 'adam sandler and allen covert', 'billy burke and robert pattinson', 'billy burke and kristen stewart', 'kellan lutz and taylor lautner']	['catherine siachoque and fabián ríos', 'alice dinnean and donna kimball', 'carmen villalobos and catherine siachoque', 'fabián ríos and juan pablo urrego', 'fabián ríos and gregorio pernía']
Ghana	['adjetey anang and joselyn dumas', 'chris attoh and joselyn dumas', 'adjetey anang and chris attoh', 'adjetey anang and akofa edjeani asiedu', 'gideon okeke and richard mofe-damijo']	[]
Burkina Faso	['afemo omilami and alexandra duah', 'afemo omilami and kofi ghanaba', 'nick medley and reggie carter', 'nick medley and oyafunmike ogunlano', 'mzuri and reggie carter']	[]
United Kingdom	['eric idle and terry gilliam', 'eric idle and terry jones', 'john cleese and michael palin', 'john cleese and terry gilliam', 'eric idle and michael palin']	['michael palin and terry jones', 'eric idle and michael palin', 'graham chapman and michael palin', 'graham chapman and john cleese', 'graham chapman and terry jones']
Germany	['lina larissa strahl and lisa-marie koroll', 'lina larissa strahl and michael maertens', 'lisa-marie koroll and louis held', 'lisa-marie koroll and michael maertens', 'lina larissa strahl and louis held']	['aaron altaras and alex reid', 'ivan shvedoff and lars eidinger', 'jeanne goursaud and sophie rois', 'jeanne goursaud and ronald zehrfeld', 'jeanne goursaud and nikolai kinski']
Ethiopia	['afemo omilami and alexandra duah', 'afemo omilami and kofi ghanaba', 'nick medley and reggie carter', 'nick medley and oyafunmike ogunlano', 'mzuri and reggie carter']	[]
India	['akshay kumar and paresh rawal', 'rani mukerji and shah rukh khan', 'paresh rawal and shakti kapoor', 'boman irani and shah rukh khan', 'harby sangha and karamjit anmol']	['gautham vasudev menon and prakash raj', 'aranya kaur and nishka raheja', 'anjali and gautham vasudev menon', 'anjali and prakash raj', 'rajesh kava and shanoor mirza']
France	['jesse richman and matt annetts', 'matt annetts and wille lindberg', 'jesse richman and wille lindberg', 'davide carrera and matt annetts', 'jesse richman and loic collomb-patton']	['kobi frumer and mattea conforti', 'abdillah assoumani and abdramane diakité', 'hugo becker and joséphine de la baume', 'hugo becker and julie farenc', 'hugo becker and karim barras']
China	['donnie yen and kent cheng', 'donnie yen and simon yam', 'donnie yen and lynn hung', 'kent cheng and lynn hung', 'angelina jolie and jack black']	['jiang guangtao and wen sen', 'luo jin and tiffany tang', 'adam longworth and ashton frank', 'li he and wu xudong', 'li huan and sun jialing']
Canada	['john paul tremblay and robb wells']	['john paul tremblay and robb wells', 'mike smith and robb wells', 'john paul']

	wells', 'john dunsworth and john paul tremblay', 'john dunsworth and robb wells', 'john paul tremblay and mike smith', 'mike smith and robb wells']	tremblay and mike smith', 'sarah dunsworth and tyrone parsons', 'john paul tremblay and tyrone parsons']
South Africa	['jailoshini naidoo and mishqah parthiephal', 'maeshni naicker and mariam bassa', 'madhushan singh and maeshni naicker', 'madhushan singh and mariam bassa', 'madhushan singh and mishqah parthiephal']	['abdul khoza and buhle samuels', 'khosi ngema and mekaila mathys', 'khathu ramabulana and loyiso madinga', 'khathu ramabulana and otto nobela', 'khathu ramabulana and pearl thusi']
Japan	['chie nakamura and junko takeuchi', 'houko kuwashima and satsuki yukino', 'kappei yamaguchi and kumiko watanabe', 'kappei yamaguchi and koji tsujitani', 'koji tsujitani and satsuki yukino']	['daisuke ono and yuki kaji', 'takahiro sakurai and tomokazu sugita', 'daisuke ono and takahiro sakurai', 'daisuke ono and mamoru miyano', 'jun fukuyama and mamoru miyano']
Spain	['blanca suárez and carmen machi', 'francesc orella and itziar aizpuru', 'benn northover and marta etura', 'benn northover and itziar aizpuru', 'imanol arias and leonardo sbaraglia']	['adriana ozores and llorenç gonzález', 'daniel lundh and josé sacristán', 'carlos cuevas and pereponce', 'llorenç gonzález and marta hazas', 'ingrid rubio and javier rey']
Singapore	['alan tan and angeline yap', 'jim sturgess and tom hanks', 'kahyun kim and seth morris', 'kahyun kim and noureen dewulf', 'kahyun kim and lili simmons']	['rui en and zhang zhenhuan', 'elvin ng and zhang zhenhuan', 'elvin ng and tay ping hui', 'jeanette aw and zhang zhenhuan', 'rebecca lim and zhang zhenhuan']
Australia	['adam tuominen and emily morris', 'elysia markou and emily morris', 'adam tuominen and nina pearce', 'magda szubanski and peter rowsthorn', 'gina riley and peter rowsthorn']	['aaron jakubenko and alex dimitriades', 'jacqueline mckenzie and tess haubrich', 'jacki weaver and matt zeremes', 'jacki weaver and mekhi phifer', 'jacqueline brennan and kate atkinson']
Mexico	['cassandra ciangherotti and humberto busto', 'andrés almeida and cassandra ciangherotti', 'fernando becerillo and humberto busto', 'cézar rodríguez and mauricio argüelles', 'cassandra ciangherotti and fernando becerillo']	['manuel landeta and sebastián rulli', 'angelique boyer and margarita magaña', 'antonio de la vega and luis rábago', 'emilio savinni and mauricio isaac', 'rodrigo abed and teté espinoza']
Italy	['riccardo scamarcio and valentina cervi', 'riccardo scamarcio and valerio mastandrea', 'sophia loren and vittorio de sica', 'virgilio riento and vittorio de sica', 'valentina cervi and valerio mastandrea']	['abigail cowen and danny griffin', 'fortunato cerlino and salvatore esposito', 'fiona fullerton and roy dotrice', 'fiona fullerton and trevor howard', 'fiona fullerton and tu nokwe']
Romania	['crina semciuc and olimpia melinte', 'alex călin and sali levent', 'alex călin and olimpia melinte', 'alex călin and vlad logigan', 'olimpia melinte and vlad logigan']	[]
Hong Kong	['donnie yen and kent cheng', 'donnie yen and simon yam', 'lam suet and louis koo', 'miriam chin wah yeung and shawn yue', 'matt chow and shawn yue']	['adam pak and ava liu', 'justin cheung and myolie wu', 'jordan chan and sam lee', 'jordan chan and samuel pang', 'joyce cheng and kelly chen jia-li']
New Zealand	['dominic monaghan and viggo mortensen', 'liv tyler and sean astin', 'billy boyd and cate blanchett', 'cate blanchett and viggo mortensen', 'billy boyd and dominic monaghan']	['aaron jakubenko and austin butler', 'aaron jakubenko and brooke williams', 'jarred blakiston and jordan mooney', 'ivana baquero and poppy drayton', 'ivana baquero and marcus vanco']
Israel	['igal naor and itzik cohen', 'aaron burns and ana de armas', 'kodi smit-mcphee and michael	['aki avni and hana laszlo', 'lisa vidal and nathalie kelley', 'meirav shirom and yehonatan vilozny', 'meirav shirom and suzanna papian', 'meirav shirom and shai avivi']

	[landes', 'konstantin anikienko and veronika shostak', 'konstantin anikienko and mariya khomutova']	
Nigeria	['broda shaggi and toyin abraham', 'ayo makun and ramsey nouah', 'alex ekubo and blossom chukwujekwu', 'adesua etomi and sola sobowale', 'ayo makun and falz']	['bimbo manuel and jude chukwuka', 'bimbo manuel and lord frank', 'bimbo manuel and richard mofe-damijo', '"najite dede and funmi eko", "keira hewatch and omoni oboli"]
Bulgaria	['antonio banderas and robert forster', 'atanas srebrev and lillian blankenship', 'emilian oprea and lucretia mandric', 'jack kesy and milo gibson', 'jack kesy and jonathan yunger']	[]
Switzerland	['adriano tardiolo and agnese graziani', 'john cusack and pavlo bubryak', 'joel basman and oriana schrage', 'joel basman and rachel braunschweig', 'joel basman and sunnyi melles']	['alexandra vandernoot and baptiste gilliéron', 'bernard yerlès and gaspard boesch', 'lavinia longhi and roland vouilloz', 'lavinia longhi and marie fontannaz', 'gaspard boesch and roland vouilloz']
Kuwait	['abdel imam abdullah and abdulaziz el nassar', 'abdel imam abdullah and ali al-hamdaan', 'ghanim alzerlli and nancy khoury', 'ghanim alzerlli and nawar youssef', 'ghanim alzerlli and samr ismaiel']	['abdullah al-turkumani and ahmed el hozeem', 'foaz al -shatti and nour al ghandour', 'foaz al -shatti and ghorour', 'foaz al -shatti and hassan ibrahim', 'foaz al -shatti and huda el khateib']
Ireland	["fionn o'shea and michael mcelhatton", 'adam scott and alan devlin', 'hugo weaving and james frecheville', 'ian mcelhinney and matthew goode', 'ian mcelhinney and john lithgow']	['adam rothenberg and amanda hale', 'jonathan rhys meyers and natalie dormer', 'joanne whalley and vernon dobtcheff', 'john boyega and lee ingleby', 'john boyega and mackenzie crook']
Hungary	['adám fekete and dusan vitanovic', 'jimmy akingbola and max martini', 'joel edgerton and tom glynn-carney', 'joel edgerton and timothée chalamet', 'joel edgerton and thomasin mckenzie']	['colm feore and david oakes', 'françois arnaud and vernon dobtcheff', 'holliday grainger and joanne whalley', 'holliday grainger and lotte verbeek', 'holliday grainger and peter sullivan']
Denmark	['sophie kennedy clark and stacy martin', 'sophie kennedy clark and stellan skarsgård', 'charlotte gainsbourg and stacy martin', 'charlotte gainsbourg and stellan skarsgård', 'stellan skarsgard and stellan skarsgård']	['ellen hillingsø and lise bastrup', 'dar salim and søren malling', 'lars mikkelsen and solbjørg højfeldt', 'alastair mackenzie and anders juul', 'jessica dinnage and lars simonsen']
Russia	['alexa penavega and amber heard', 'jacob wysocki and moses storm', 'jacob wysocki and matthew bohrer', 'ilya naishuller and tim roth', 'ilya naishuller and svetlana ustinova']	['eldar kalimulin and kirill käro', 'alexander petrov and fillip gorenshtein', 'aleksandr kuznetsov and aleksandr ustjugov', 'ivan dobromarov and kirill poluhin', 'kate bristol and marc thompson']
Czech Republic	['adnan haskovic and alison pill', 'james fox and luke mably', 'jaromír dulava and robert gant', 'jaromír dulava and vica kerekes', 'jaromír dulava and vladimír javorský']	['brigitte hobmeier and klaus steinbacher', 'markus krojer and vladimir burlakov', 'martin feifel and maximilian brückner', 'martin feifel and mercedes müller', 'martin feifel and michael kranz']
Poland	['adrianna biedrzyńska and wiesław komasa', 'adrianna biedrzyńska and krzysztof stroński', 'michał bajor and władysław kowalski', 'adrianna biedrzyńska and aleksander bednarz', 'adrianna biedrzyńska and andrzej mellin']	['adam levy and anna shaffer', 'karolina chapko and sebastian fabijański', 'krzysztof wach and maciej musiał', 'karolina kominek and zdzisław wardejn', 'karolina kominek and wojciech zieliński']
Thailand	['wiradit srimalai and yingsak chonglertjetsadawong', 'kachapa toncharoen and wiradit srimalai', 'celina jade']	['chutavuth pattarakampol and oabnithi wiwattanawarang', 'gunn junhavat and sutatta udomsilp', 'gunn junhavat and sirachuch chienthaworn', 'sirachuch chienthaworn and sutatta udomsilp', 'narupornkamol chaisang and nichaphat catchaipholrat']

	[and michael jai white', 'jaturong mokjok and yingsak chonglertjetsadawong', 'jaturong mokjok and wiradit srimalai']	
Colombia	['nelson polanía and ricardo quevedo', 'iván marín and ricardo quevedo', 'liss pereira and ricardo quevedo', 'fabiola posada and iván marín', 'ana cristina botero and nelson polanía']	['catherine siachoque and fabián ríos', 'carolina gaitán and juan pablo urrego', 'carmen villalobos and catherine siachoque', 'carolina gaitán and catherine siachoque', 'catherine siachoque and gregorio pernía']
Cambodia	['adam pally and alexa nisenson', "jack o'connell and ni ni", 'jacob hopkins and thomas barbusca', 'jacob hopkins and rob riggle', 'jacob hopkins and retta']	[]
Belgium	['alan cumming and fred armisen', 'sophie kennedy clark and uma thurman', 'christian slater and uma thurman', 'shia labeouf and sophie kennedy clark', 'shia labeouf and stacy martin']	['lynn van royen and mieke de groote', 'aissatou diop and alexis loret', 'joren seldeslachts and katrin lohmann', 'josse de pauw and peter gorissen', 'josse de pauw and mieke de groote']
Portugal	['adam jezierski and bárbara santa-cruz', 'ingrid garcía jonsson and leander vyvey', 'goran visnjic and jorge lamelas', 'goran visnjic and lúcia moniz', "goran visnjic and marco d'almeida"]	[]
South Korea	['do-won kwak and woo-sung jung', 'nam mun-cheol and park hae-joon', 'eui-sung kim and kyeong-yeong lee', 'joo-hyun kim and shin-il kang', 'joo-hyun kim and seung-mok yoo']	['lee il-hwa and sung dong-il', 'kim yong-rim and lee re', 'jeon seok-ho and ju ji-hoon', 'se-yoon yoo and si-kyung sung', 'hwang bo-ra and lee gyoung-young']
Finland	['antti reini and claes malmberg', 'josh gad and tiffany haddish', 'joonas saartamo and raúl villegas', 'joonas saartamo and ville virtanen', 'joonas saartamo and ximena guzmán']	['anu sinisalo and ilkka villi', 'matleena kuusniemi and olivia ainali', 'matleena kuusniemi and matti laine', 'lenita susi and ville virtanen', 'lenita susi and olivia ainali']
Philippines	['daniel padilla and kathryn bernardo', 'enrique gil and liza soberano', 'al tantay and john lloyd cruz', 'john lloyd cruz and sarah geronimo', 'john lloyd cruz and joross gamboa']	['allen dizon and derek ramsay', 'allen dizon and felix roco', 'herbert bautista and riva quenery', 'herbert bautista and kathryn bernardo', 'herbert bautista and huybs azarcon']
Iceland	['anders danielsen lie and jaden smith', 'jaden smith and ola g. furuseth', 'jonas strand gravli and thorbjörn harr', 'jonas strand gravli and ola g. furuseth', 'jonas strand gravli and maria bock']	['aldís amah hamilton and arndís hrönn egilsdóttir', 'aldís amah hamilton and bergur ebbi', 'davíð freyr þórunnarson and magnús jónsson', 'davíð freyr þórunnarson and nína dögg filippusdóttir', 'davíð freyr þórunnarson and steinunn ólína þorsteinsdóttir']
Serbia	['aaron mccusker and alaa seif', 'jonas bloquet and marc Andréoni', 'helena beljan and krunoslav saric', 'helena beljan and lana baric', 'helena beljan and natasa dorcic']	[]
Malta	['alfred molina and audrey tautou', 'alfred molina and etienne chicot', 'etienne chicot and tom hanks', 'ian mckellen and jean reno', 'ian mckellen and jean-pierre marielle']	['alice braga and gerardo taracena', 'alice braga and hemky madera', 'alice braga and justina machado', 'alice braga and peter gadiot', 'alice braga and veronica falcón']
Lebanon	['bshara atallah and nada abou farhat', 'abboudy mallah and junaid zeineldine', 'khaled abol naga and maha abou ouf', 'junaid zeineldine and tanya nasr', 'junaid zeineldine and tony benn']	['daniella rahme and nada abou farhat', 'bassel khayyat and daniella rahme', 'abdo chahine and mona wassef', 'gabriel yammine and nada abou farhat', 'eisa diab and maram al bloushi']

United Arab Emirates	['khaled al-nuaimi and muhammed murshed', 'khaled al-nuaimi and yaser alneyadi', 'muhammed murshed and yaser alneyadi', 'abdullah al-ramsi and yaser alneyadi', 'abdullah al-ramsi and aisha al-suwaidi']	['abdulmohsen alnemr and ahmad aljasmii', 'khaled el sayed and yaser alneyadi', 'leen gherra and yaser alneyadi', 'leen gherra and samr ismaiel', 'leen gherra and samar sami']
Luxembourg	['adam moussamih and alexandre harough', 'joe chrest and jordana brewster', 'jon hamm and sarah shahi', 'jon hamm and sami gayle', 'jon hamm and robin wright']	['claude de demo and jil devresse', 'claude de demo and joe dennenwald', 'konstantin rommelfangen and sophie mousel', 'konstantin rommelfangen and luc schiltz', 'julie kieffer and sophie mousel']
Turkey	['ata demirer and demet akbağ', 'ata demirer and salih kalyon', 'ata demirer and tarık ünlüoğlu', 'cezmi baskın and yılmaz erdoğan', 'bican günalan and demet akbağ']	['ayça eren and erdal beşikçioğlu', 'ayça eren and berkan şal', 'berkan şal and erdal beşikçioğlu', 'ali atay and serkan keskin', 'haluk bilginer and ismail filiz']
Jordan	['ahd and ali suliman', 'abdullah al gohani and ahd', 'hassan akkouch and mohammed azaay', 'fahad albutairi and maha abou ouf', 'fahad albutairi and samer al masri']	['andria tayeh and joanna arida', 'joanna arida and reem saadeh', 'joanna arida and yara mustafa', 'nadera emran and noor taher', "nadera emran and rakeen sa'ad"]
Saudi Arabia	['abdel imam abdullah and dana jabr', 'fayez al-malki and reem abdel aziz', 'hani r. eskander and hashem el garhy', 'hani r. eskander and saif abu-kandil', 'hani r. eskander and sedky sakhr']	['abdulaziz alshehri and malik nejer', 'khaled bamashmoos and moayed althagafi', 'fahad ghazoli and reem alhabib', 'hind alsaign and khairiah abulaban', 'hind alsaign and khaled bamashmoos']
Netherlands	['djamila and fenna ramos', 'djamila and donny roelvink', 'donny roelvink and défano holwijn', 'djamila and jolijn henneman', 'fenna ramos and jill schirnhofer']	['alexander brouwer and dennis rudge', 'ian bok and lisa smit', 'janni goslinga and lisa smit', 'janni goslinga and minne koole', 'janni goslinga and rifka lodeizen']
Puerto Rico	[]	['ana lucia dominguez and darkiel', 'ana lucia dominguez and diego cadavid', 'diego cadavid and osvaldo friger', 'jarlin javier martinez and luis gonzaga', 'jarlin javier martinez and luis rivera']
Norway	['maria bock and ola g. furuseth', 'anders danielsen lie and thorbjørn harr', 'jaden smith and thorbjørn harr', 'jaden smith and ola g. furuseth', 'jaden smith and maria bock']	['dennis storhøi and mads sjøgård pettersen', 'marian saastad ottesen and trond fausa', 'harald rosenstrøm and torfinn nag', 'henrik mestad and kristine riis', 'henrik mestad and kristin braut-solheim']
Kenya	['abdi sidow farah and al pacino', 'kagwe mungai and martin githinji', 'evan peters and kiana madani', 'evan peters and melanie griffith', 'evan peters and mohamed barre']	[]
Chile	['ignacia allamand and ramón llao', 'ignacia allamand and lorenza izzo', 'alejandro goic and luis gnecco', 'ariel levy and ignacia allamand', 'ariel levy and ramón llao']	['roberto farías and sergio hernández', 'adriana barraza and alberto jiménez', 'jorge hernández and juan pablo llano', 'jorge hernández and jorge zabaleta', 'iván álvarez de araya and sergio hernández']
Taiwan	['chen yi-wen and liu kuan-ting', 'ada pan and chen yi-wen', 'jay chou and kai-xuan tseng', 'jason wang and tseng ching-hua', 'jason wang and tsai chen-nan']	['janel tsai and patrick lee', 'james wen and patrick lee', 'tien hsin and weber yang', 'bobby dou and vivi lee', 'ehlo huang and ming dao']
Argentina	['andrea tenuta and enrique punti', 'antonio gasalla and juan manuel tenuta', 'antonio gasalla and luis brandoni', 'betiana blum and cecilia rossetto', 'betiana blum and china zorrilla']	['chino darín and victoria almeida', 'abel ayala and carlos portaluppi', 'gustavo garzón and mauricio paniagua', 'graciela tenenbaum and victorio d'alessandro', 'guillermo toledo and julieta zylberberg']
Sweden	['jakob oftebro and pål sverre hagen', 'anders baasmo christiansen and jakob oftebro',	['adam godley and björn granath', 'felix engström and jacob lundqvist', 'even pedersen and marina popovic', 'even pedersen and morten svartveit', 'even pedersen and ole christoffer ertvaag']

	'anders baasmo christiansen and pål sverre hagen', 'stellan skarsgard and stellan skarsgård', 'joely richardson and steven berkoff']	[]
Iran	['akash gopal and goutam ghose', "leila hatami and merila zare'i", 'leila hatami and sahabanu zolghadr', 'leila hatami and sareh bayat', 'leila hatami and sarina farhadi']	[]
Cayman Islands	['becky g. and david koechner', 'george lopez and tara strong', 'jeff dunham and madison de la garza', 'jeff dunham and nash grier', 'jeff dunham and olivia holt']	[]
Indonesia	['bunga citra lestari and reza rahadian', 'cut mini theo and tora sudiro', 'aminah tjendrakasih and cornelia agatha', 'maudy koesnaedi and suty karno', 'aminah tjendrakasih and mandra naih']	['aci resti and adjis doaibu', 'dion wiyoko and jenny zhang', 'denny gitong and ernest prakasa', 'denny gitong and jenny zhang', 'denny gitong and morgan oey']
Brazil	['karina ramil and rafael portugal', 'antonio tabet and fábio porchat', 'antonio tabet and evelyn castro', 'fábio porchat and rafael portugal', 'jéssica diehl and luccas neto']	['adriano garib and alice valverde', 'jimmy london and josé dumont', 'jesus luz and teca pereira', 'jesus luz and sabrina sato', 'jesus luz and ravel andrade']
Bermuda	['bryce groark and carl safina', 'bryce groark and james cameron', 'bryce groark and jeremy jackson', 'bryce groark and michael degruy', 'bryce groark and sylvia earle']	[]
Ecuador	['bryce groark and carl safina', 'bryce groark and james cameron', 'bryce groark and jeremy jackson', 'bryce groark and michael degruy', 'bryce groark and sylvia earle']	[]
Egypt	['ahmed helmy and lotfy labib', 'bayoumi fouad and mohammed tharwat', 'ahmed helmy and menna shalaby', 'ahmed fathy and mohammed tharwat', 'lotfy labib and menna shalaby']	['arwa gouda and mohamed farraag', 'ahmed dawood and arwa gouda', 'ahmed dawood and mohamed farraag', 'ahmed dawood and sawsan badr', 'hesham ismail and mahmoud el-bezzawy']
Austria	['ahmed abdelhafiz and khaled raafat', 'lars bitterlich and león orlandianyi', 'lavinia wilson and lukas spisser', 'lars bitterlich and michael somma', 'lars bitterlich and michael pink']	['anja kling and brigitte kren', 'christoph krutzler and ella rumpf', 'georg friedrich and robert finster', 'georg friedrich and philipp hochmair', 'ella rumpf and robert finster']
Bahamas	['daniel craig and eva green', 'daniel craig and giancarlo giannini', 'daniel craig and jeffrey wright', 'daniel craig and judi dench', 'daniel craig and mads mikkelsen']	[]
Bangladesh	['allen shubhro and intekhab dinar', 'mostafizur noor imran and orchita sporshia', 'mosharraf karim and samia said', 'manoj kumar pramanik and trapa majumder', 'manoj kumar pramanik and shamol mawla']	[]
Liechtenstein	['alec guinness and geraldine chaplin', 'alec guinness and jeffrey rockland', 'jeffrey rockland and tom courtenay', 'julie christie and omar sharif', 'julie christie and ralph richardson']	[]
Pakistan	['nayyar ejaz and shafqat	['adnan malik and mahira khan', 'mahira khan and naveen waqar', 'muhammad

	cheema', 'javed sheikh and shafqat cheema', 'mahira khan and sheheryar munawar', 'javed sheikh and nayyar ejaz', 'jamal shah and nimra bucha']	mubarik ali and sana javed', 'muhammad mubarik ali and saman ansari', 'muhammad mubarik ali and salma hasan']
Dominican Republic	['chris johnson and claire holt', 'chris johnson and mandy moore', 'chris johnson and matthew modine', 'chris johnson and santiago segura', 'chris johnson and yani gellman']	[]
Qatar	['abdel nasser maraqbi and amal assaf', 'john krasinski and john rhys-davies', 'john rhys-davies and salma hayek', 'john rhys-davies and quvenzhané wallis', 'john rhys-davies and liam neeson']	[]
Greece	['adam driver and bill camp', 'adam driver and jaeden martell', 'john carroll lynch and michael keaton', 'john carroll lynch and nick offerman', 'john carroll lynch and patrick wilson']	[]
Morocco	["abdelaziz n'mila and abdelilah wahbi", "abdelilah wahbi and el mahmoudi m'barek", "el mahmoudi m'barek and selva rasalingam", "abdelaziz n'mila and ait youssef youssef", "ait youssef youssef and selva rasalingam"]	[]
West Germany	['denise nickerson and dodo denney', 'jerzy zelnik and władysław kowalski', 'jerzy zelnik and Michał Bajor', 'jerzy stuhr and Zygmunt Zintel', 'jerzy stuhr and władysław kowalski']	['christopher lee and conrad magwaza', 'christopher lee and dudu mkhize', 'gugu nxumalo and tu nokwe', 'gugu nxumalo and trevor howard', 'gugu nxumalo and roy dotrice']
Jamaica	['aiden moodie and bryshere gray', 'aiden moodie and dale elliot', 'dale elliot and shantol jackson', 'david alan grier and dennis titus', 'david alan grier and kadeem wilson']	[]
Somalia	['abdi sidow farah and al pacino', 'armaan haggio and sabrina hassan abdulle', 'barkhad abdi and kiana madani', 'barkhad abdi and melanie griffith', 'barkhad abdi and mohamed barre']	[]
Sudan	['abdi sidow farah and al pacino', 'armaan haggio and sabrina hassan abdulle', 'barkhad abdi and kiana madani', 'barkhad abdi and melanie griffith', 'barkhad abdi and mohamed barre']	[]
East Germany	['denise nickerson and dodo denney', 'gene wilder and ursula reit', 'jack albertson and leonard stone', 'jack albertson and paris themmen', 'jack albertson and peter ostrum']	[]
Angola	["cigano satyohamba and david o'hara", 'cigano satyohamba and hakeem kae-kazim', 'paulo americano and raul rosario', 'paulo americano and rapulana seiphemo', 'nompilo gwala and raul rosario']	[]
Mauritius	[]	['anthony oseyemi and khumbulani kay sibiya', 'manie malone and yannick konnan', 'michaella russell and tarynn wyngaard', 'michaella russell and thabo malema', 'michaella russell and vinaya sungkur']
Unknown	['david spade and london	['anna claire bartlam and eric peterson', 'anna claire bartlam and jamie watson',

	'hughes', 'david spade and fortune feimster', 'fortune feimster and london hughes', 'andrea libman and ian james corlett', 'alessandro juliani and vincent tong']	'anna claire bartlam and michela luci', 'jamie watson and michela luci', 'eric peterson and michela luci']
Nepal	['aarif rahman and amyra dastur', 'aarif rahman and disha patani', 'binod pradhan and saran rai', 'disha patani and eric tsang', 'disha patani and jackie chan']	[]
Soviet Union	['achyut potdar and amrish puri', 'irina kushnareva and naseeruddin shah', 'madan puri and sofiko chiaureli', 'madan puri and rolan bykov', 'madan puri and prem chopra']	[]
Malaysia	['amerul affendi and nam ron', 'hairul azreen and henley hii', 'hafizul kamal and henley hii', 'iedil putra and zahiril adzim', 'hairul azreen and nam ron']	['amyra rosli and fadlan hazim', 'kim ji-young and yoon du-jun', 'kim hee-won and kim ji-young', 'kim hee-won and kwon yul', 'kim hee-won and lee ju-seung']
	["ala' hanani and ameer khlawe", 'maisa abd elhadi and malak ermileh', 'karam elayyan and maryam kaniel basha', 'karam elayyan and maryam kanj', 'karam elayyan and saleh bakri']	['jung hae-in and kim sung-kyun', 'jung hae-in and koo kyo-hwan', 'jung hae-in and son suk-ku', 'kim sung-kyun and koo kyo-hwan', 'kim sung-kyun and son suk-ku']
Malawi	['aïssa maïga and chiwetel ejiofor', 'aïssa maïga and joseph marcell', 'maxwell simba and philbert falakeza', 'maxwell simba and noma dumezweni', 'lily banda and philbert falakeza']	[]
Croatia	['alessandro nivola and alice englert', 'juraj dabic and lana baric', 'jodhi may and timothy spall', 'jodhi may and oliver platt', 'jodhi may and oliver milburn']	['aleksandar cvetković and alen liverić', 'edita karađole and zdenko jelcic', 'edita karađole and tihana lazovic', 'edita karađole and olga pakalović', 'edita karađole and mijo jurišić']
Lithuania	['andy nyman and anthony lapaglia', 'caroline bartleet and zora bishop', 'dylan edwards and zora bishop', 'dylan edwards and vaidotas martinaitis', 'dylan edwards and rebecca front']	[]
Peru	['amiel cayo and claudia solís', 'haysen percovich and sandro calderón', 'felipe izquierdo and pablo granados', 'gaby espino and marcela guerty', 'gaby espino and pablo granados']	[]
Uruguay	['alejandra flechner and alián devetac', 'jorge bolani and josé pedro bujaruz', 'jeannette sauksteliskis and maría noel gutiérrez', 'jeannette sauksteliskis and olivia molinaro eijo', 'jeannette sauksteliskis and tomás wahrmann']	[]
Georgia	['bertha khapava and dimitri oragvelidze', 'bertha khapava and giorgi khurtsilava', 'giorgi khurtsilava and tsisia qumishvili', 'giorgi tabidze and goven cheishvili', 'giorgi tabidze and ia shugliashvili']	[]
Latvia	['antti reini and claes malmberg', 'lauri tanskanen and maria sid', 'johanna af schultén and maria sid', 'johanna af schultén and pirkko hämäläinen', 'johanna af	[]

	[schultén and sonja halla-aho']	[]
Slovakia	['anna fialová and gedeon burkhard', 'jirí mádl and zdenka procházková', 'karl markovics and martin huba', 'karl markovics and pavel kríz', 'karl markovics and simona stasová']	[]
Azerbaijan	[]	['aras bulut iynemli and eva dedova', 'mehmet çevik and polat bilgin', 'ilker kızmaz and polat bilgin', 'ilker kızmaz and shamil suleimanov', 'ilker kızmaz and ufuk şen']
Algeria	['abdalla mahmoud and ahmed zaki', 'abdalla mohmoud and ezzat el alaili', 'laila fawzy and naglaa fathi', 'laila fawzy and mohsen mohiedine', 'laila fawzy and mahmoud el meleigy']	[]
Syria	['abdel moneim amayri and caress bashar', 'mohammad alsayyed ali and owiss mokhallati', 'mostafa alkar and samer ismael', 'mostafa alkar and reham kassar', 'mostafa alkar and owiss mokhallati']	['aseel omran and ayman mabrouk', 'eisa diab and rashed al shamrani', 'dima al jundi and mona shaddad', 'dima al jundi and rashed al shamrani', 'dima al jundi and sayed rajab']
Senegal	['amadou mbow and amina kane', 'amadou mbow and coumba dieng', 'coumba dieng and nicole sougou', 'diankou sembene and ibrahima mbaye', 'diankou sembene and ibrahima traore']	['christiane dumont and christophe guybet', 'christiane dumont and fatou-elise ba', 'ndiaga mbow and yann gael', 'ndiaga mbow and ricky tribord', 'khalima gadji and yann gael']
Cuba	[]	['carlos enrique almirante and jorge perugorría', 'carlos enrique almirante and juana acosta', 'carlos enrique almirante and laura ramos', 'carlos enrique almirante and luis alberto garcía', 'carlos enrique almirante and mario guerra']
Slovenia	['ana begic and goran hajdukovic', 'juraj dabic and natasa dorcic', 'krunoslav saric and sebastian cavazza', 'krunoslav saric and natasa janjic', 'krunoslav saric and natasa dorcic']	[]
Albania	['claudio santamaria and flonja kodheli', 'claudio santamaria and jerzy stuhr', 'claudio santamaria and marco giallini', 'flonja kodheli and jerzy stuhr', 'flonja kodheli and marco giallini']	[]
Venezuela	['andrea garrote and germán de silva', 'guillermo pfening and joaquín furriel', 'luis ziembrowski and victoria raposo', 'luis ziembrowski and mónica lairana', 'joaquín furriel and victoria raposo']	[]
Paraguay	['andrea frigerio and andrea quattrocchi', 'fabio chamorro and silvio rodas', 'felix medina and silvio rodas', 'felix medina and sergio quiñonez román', 'felix medina and roberto weiss']	[]
Vietnam	['anh dung and hoang dung', 'mai cat vi and tran nghia', 'mai cat vi and nguyen lam thao tam', 'mai cat vi and nguyen ngoc huyen dieu', 'mai cat vi and pham anh khoa']	[]
Cameroon	['casson chinepoh and daphne nijke', 'faith fidel and zoe elora ebai mayohchu', 'kang quintus and neba godwill awantu', 'kang quintus and onyama laura', 'kang quintus and prince sube']	[]
Montenegro	['ana begic and goran hajdukovic', 'helena beljan and vojislav brajovic', 'juraj dabic and lana baric', 'juraj dabic and	[]

	natasa dorcic', 'juraj dabic and natasa janjic']	
Namibia	['anna louw and ashwyn mberi', 'anna louw and camilla jo-ann daries', 'anna louw and robert hara gaeb', 'anna louw and steven afrikaner', 'anna louw and wafeeq narimab']	[]
Mozambique	['aldovina chiziane and arlete bombe', 'aldovina chiziane and candido quembo', 'laquino fonseca and tomas bie', 'laquino fonseca and rashid abdul', 'jorge amade and tomas bie']	[]
Belarus	[]	['dmitri davidovich and svetlana tsimokhina']
Zimbabwe	['charmaine mujeri and chimwemwe chipidza', 'jesese mungoshi and tendaiishe chitima', 'eugene zimbudzi and tendai nguni', 'eugene zimbudzi and tendaiishe chitima', 'eugene zimbudzi and zihlo']	[]
Cyprus	[]	['colin hanks and james adomian', 'colin hanks and lisa schwartz', 'colin hanks and maria bamford', 'colin hanks and tom kenny', 'james adomian and lisa schwartz']
Guatemala	['costanza andrade and juan pablo oylslager', 'costanza andrade and mario zaragoza', 'costanza andrade and saúl lisazo', 'juan pablo oylslager and mario zaragoza', 'juan pablo oylslager and saúl lisazo']	[]
Ukraine	[]	['aleksandr pikalov and anna koshmal', 'natalya sumskaya and vladimir zelenskiy', 'natalya sumskaya and stanislav boklan', 'mariya anikanova and taras gotovtsev', 'mariya anikanova and stanislav moskvin']

14. Generating Business Insights.

- 69.6% of the contents are movies and 30.4% are TV Shows. Refer Jupyter notebook code line 17.
- United States, India, United Kingdom, Canada and Japan are the top 5 countries where maximum contents (countwise) are available. Refer Jupyter notebook code line 18.
- While US, India, UK, Canada and France are top 5 countries which have maximum movie contents, US, UK, Japan, South Korea and Canada have maximum TV Show contents. Refer codeline 20, 21 in the Jupyter Notebook.
- The M/TV Show count ratio in graphs can be used to identify type of content preferred in a country. While countries like UAE, Indonesia, Philippines, Hong Kong and Switzerland are the countries which have high ratio (implying more movies were released in these countries), Taiwan, South Korea, Ukraine, Colombia and Japan have low ratio implying more TV Shows were released in these countries compared to Movie contents. NetFlix can adopt two Strategies. They can either recommend the content types which are less provided in a country (There is a difference between less provided and less liked) or they can recommend the content types which are more preferred in a country. For graph refer codeline 22 in Jupyter Notebook.

If TV Shows were released in significant numbers but the ratio of Movie/ TV Shows is still high, it might indicate Movies are more preferred in that country. Similarly, if M/TV Shows ratio is high but only very few TV Shows were released, NetFlix might release TV Show contents as there are chances TV Shows might be preferred equally with Movies in such countries.

- There has been a decline in both TV Shows and Movie content in the years 2019 and onwards. Refer Jupyter Notebook codeline 23. In India, while there has been a significant decline in movies content since 2018, TV Shows released have remained almost constant. Refer Jupyter Notebook codeline 24.
- Over the years, there has been significant decline in M/TV Show ratio. This indicates NetFlix has provided more Movie Content as compared to TV Show content but relatively, this declining ratio might indicate it's increasing inclination towards TV Shows. We cannot say it for certain as there has been a decrease in both Movie contents as well as TV Show contents since 2019, but the relative decrease in Movies content is more. This might also be a cause of decreasing M/TV Show content ratio.
- The content count remains low in countries where NetFlix was launched 50 months back. The content counts appear to increase for countries where age of NetFlix is more than 50 months. Refer to scatterplot in codeline 27 of the Jupyter Notebook.
- In 75% of the countries, less than 42 contents has been released. There is a huge scope for growth in these countries. Refer codeline 28-29 of the Jupyter Notebook.
- Majority of contents on NetFlix are for age groups Child>17 and Adult age group categories. For both these age groups, while movie content has decreased since 2019, TV Show content increased from 2019 to 2020. Also, the relative decrease in TV Show content was less as compared to Movie content on NetFlix. Refer code line 32 of the Jupyter Notebook.
- Some of the common genres that are released in Child>17 and Adult and have highest content counts are Dramas, International Movies, Comedies, International TV Shows and Independent Movies. There are also Action and Adventures and Thrillers contents for these age groups in the top 10 genres. Refer codeline 34 of Jupyter Notebook.
- The top 10 genres in different countries can also be identified by running the codeline 35 of the Jupyter Notebook.

For example, in India, for both Child>17 and adult age groups, preferred genres appear to be International Movies, Dramas and Independent

Movies. Noticeable genres for these age groups include Thrillers, Romantic Movies, Action and adventure and Horror movies. While age group Child>17 has Music and Musicals genre in the top 10, adult age group has TV dramas in the top 10 genres.

- In the age group Child > 17, for the genres, Dramas, International Movies, Comedies and International TV Shows, Independent movies, the contents have decreased over the past 3 years, contents in Action and Adventure, Thrillers contents have remained almost constant.
- For age group Child > 17, Horror Movies was in the top 10 genres for age group Child > 17 in the year 2019 but Crime TV Shows have appeared in top 10 genres in 2020 and 2021. Refer codeline 36 in the Jupyter Notebook.
- In the Adult age group, for the genres, Dramas, International Movies, Comedies and International TV Shows, Independent movies, the contents have decreased over the past 3 years, contents in Action and Adventures, Thrillers contents have remained almost constant.
- For the Adult age group, Documentaries and Horror Movies genre contents was in top 10 in 2019 but has been removed off the top 10 genre list since 2020. This indicates NetFlix has launched less contents in Horror Movies and Documentaries genre in the past 3 years.
- For Adult age group, Crime TV Shows have appeared in top 10 genres in 2020 and 2021. Refer codeline 36 in the Jupyter Notebook.
- In Movie Type content, majority are Normal movies (46.5 minutes to 154.5minutes), very few of the contents are Short Movies or Long movies. Refer codeline 40-43 in Jupyter Notebook.
- For majority of TV Shows, only 1 season is released. Refer codeline 46 in the Jupyter Notebook.
- Across all months, Friday is the first or second day when most contents were released. Refer codeline 49 in Jupyter Notebook.
- In India, majority of contents are released in March, April, August, October, November and December. Refer codeline 50 in Jupyter Notebook.
- The top 5 actors in each country with maximum content on NetFlix are listed in Table above. Refer codelines 51-55 of the Jupyter Notebook. Often audience loves to see a pair work in a movie or audience loves particular actors and would watch their movie. Thus, this would help NetFlix in identifying the actors and launching their movies on Platform or bidding for selling rights for such movies.