In [1]:

```
import pandas as pd
import matplotlib.pyplot as plt

df = pd.read_csv('netflix_titles.csv')

df = df.dropna(subset=['type','release_year','rating','country','duration'])

type_counts = df['type'].value_counts()
plt.figure(figsize = (6,4))
plt.bar(type_counts.index,type_counts.values,color = ['skyblue','orange'])
plt.title('number of movies vs tv shows on netflix')
plt.xlabel('type')
plt.ylabel('count')
plt.tight_layout()
plt.savefig('movies_vs_tvshows.png')
plt.show()

rating_counts = df['rating'].value_counts()
plt.figure(figsize=(8,6))
plt.pie(rating_counts,labels = rating_counts.index,autopct = '%1.1f%%',startangle = 90)
plt.title('percentage of content rating')
plt.tight_layout()
plt.savefig('content_rating.png')
plt.show()

movie_df = df[df['type'] == 'Movie'].copy()
movie_df['duration_int'] = movie_df['duration'].str.replace(' min','').astype(int)

plt.figure(figsize = (8,6))
plt.hist(movie_df['duration_int'],bins = 30,color = 'purple',edgecolor = 'black')
plt.title('distribution of movie duration')
plt.xlabel('duration minutes')
plt.ylabel('number of movies')
plt.tight_layout()
plt.savefig('movies_vs_tvshows.png')
plt.show()

release_counts = df['release_year'].value_counts().sort_index()
plt.figure(figsize=(10,6))
plt.scatter(release_counts.index,release_counts.values,color = 'red')
```

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plt.title('release year vs no of shows')
plt.xlabel('release year')
plt.ylabel('number of shows')
plt.tight_layout()
plt.savefig('release_year.png')
plt.show()

country_counts = df['country'].value_counts().head(10)
plt.figure(figsize=(8,6))
plt.barh(country_counts.index,country_counts.values,color = 'teal')
plt.title('top 10 countries')
plt.xlabel('no. of shows')
plt.ylabel('country')
plt.tight_layout()
plt.savefig('top10_countries.png')
plt.show()

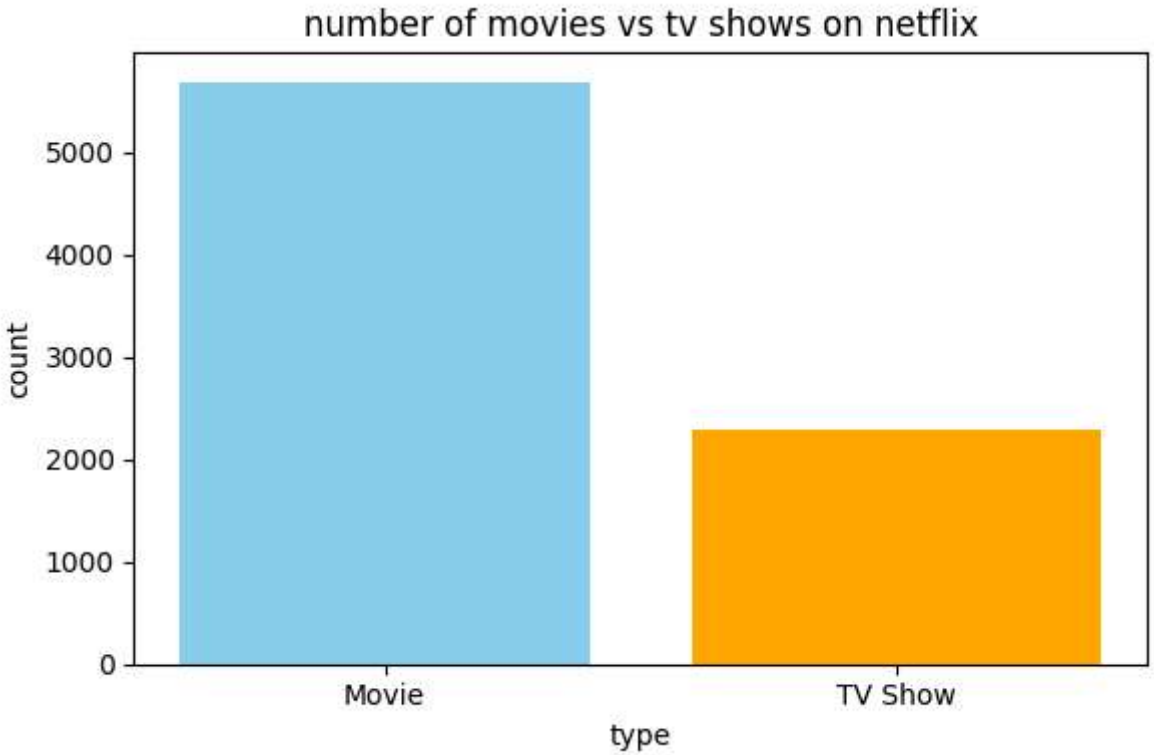
content_year = df.groupby(['release_year','type']).size().unstack().fillna(0)
fig, ax = plt.subplots(1,2,figsize = (12,5))

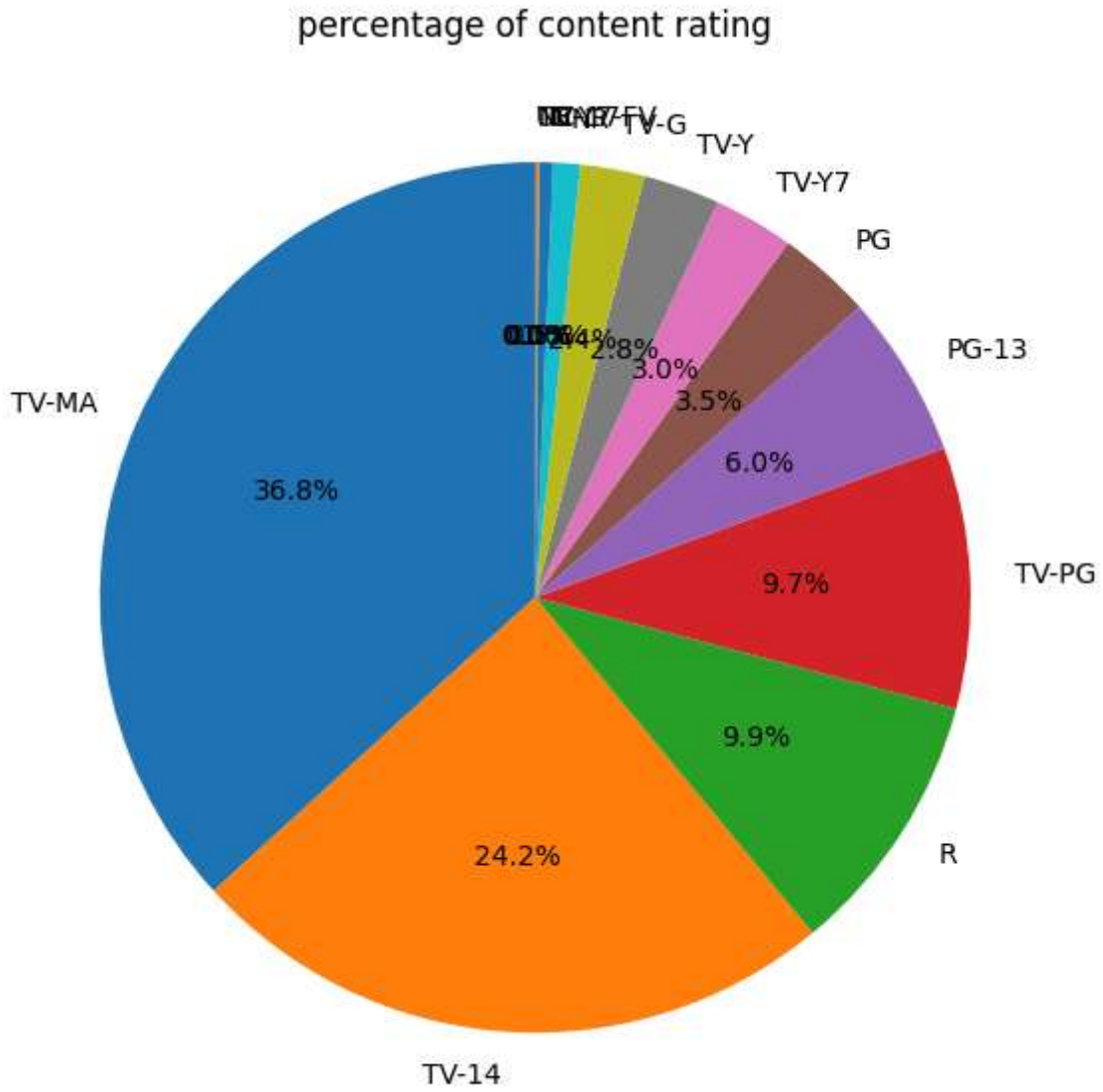
ax[0].plot(content_year.index,content_year['Movie'],color = 'orange')
ax[0].set_title('movies released per year')
ax[0].set_xlabel('year')
ax[0].set_ylabel('number of movies')

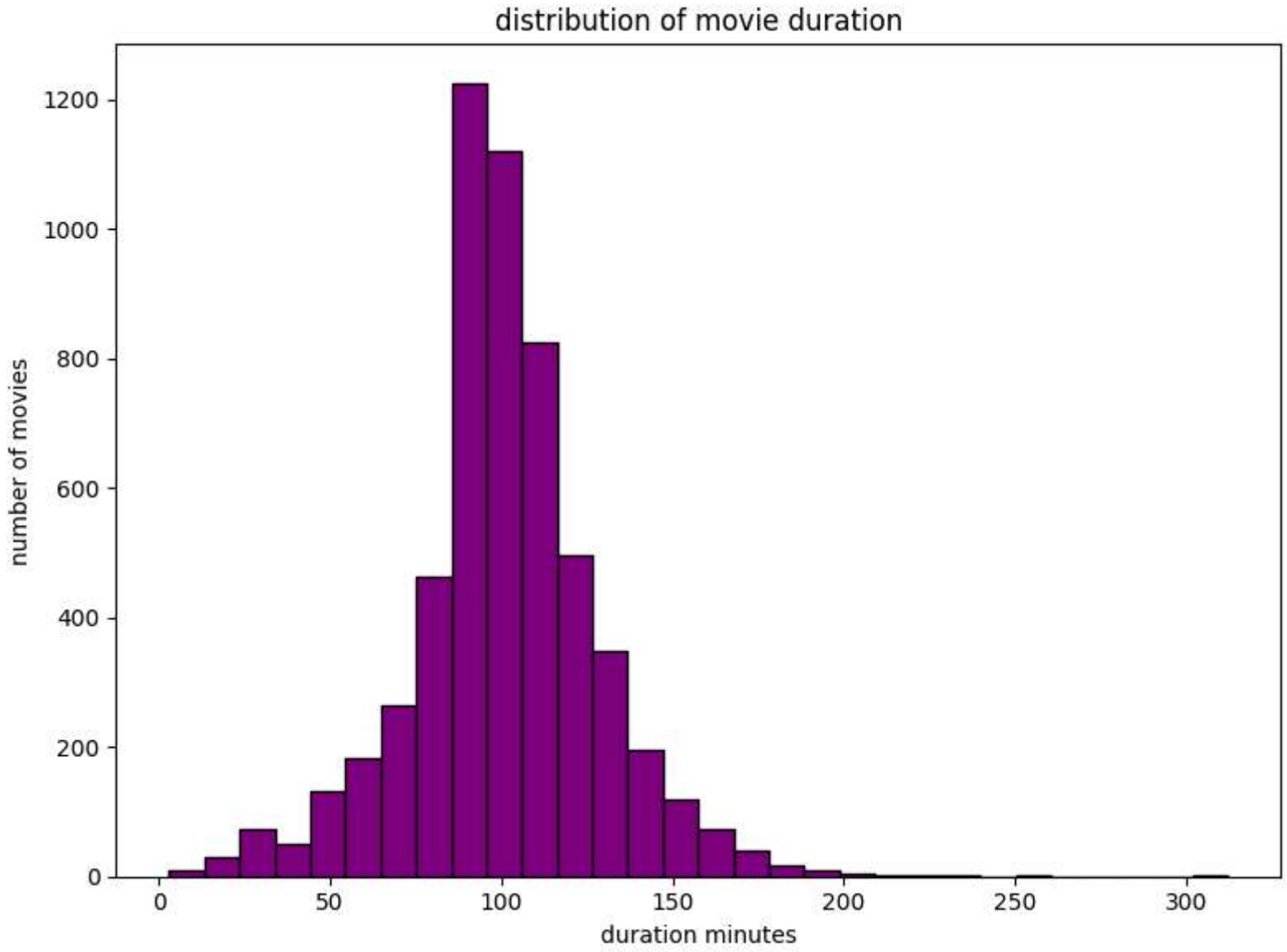
ax[1].plot(content_year.index,content_year['TV Show'],color = 'orange')
ax[1].set_title('shows released per year')
ax[1].set_xlabel('year')
ax[1].set_ylabel('number of shows')

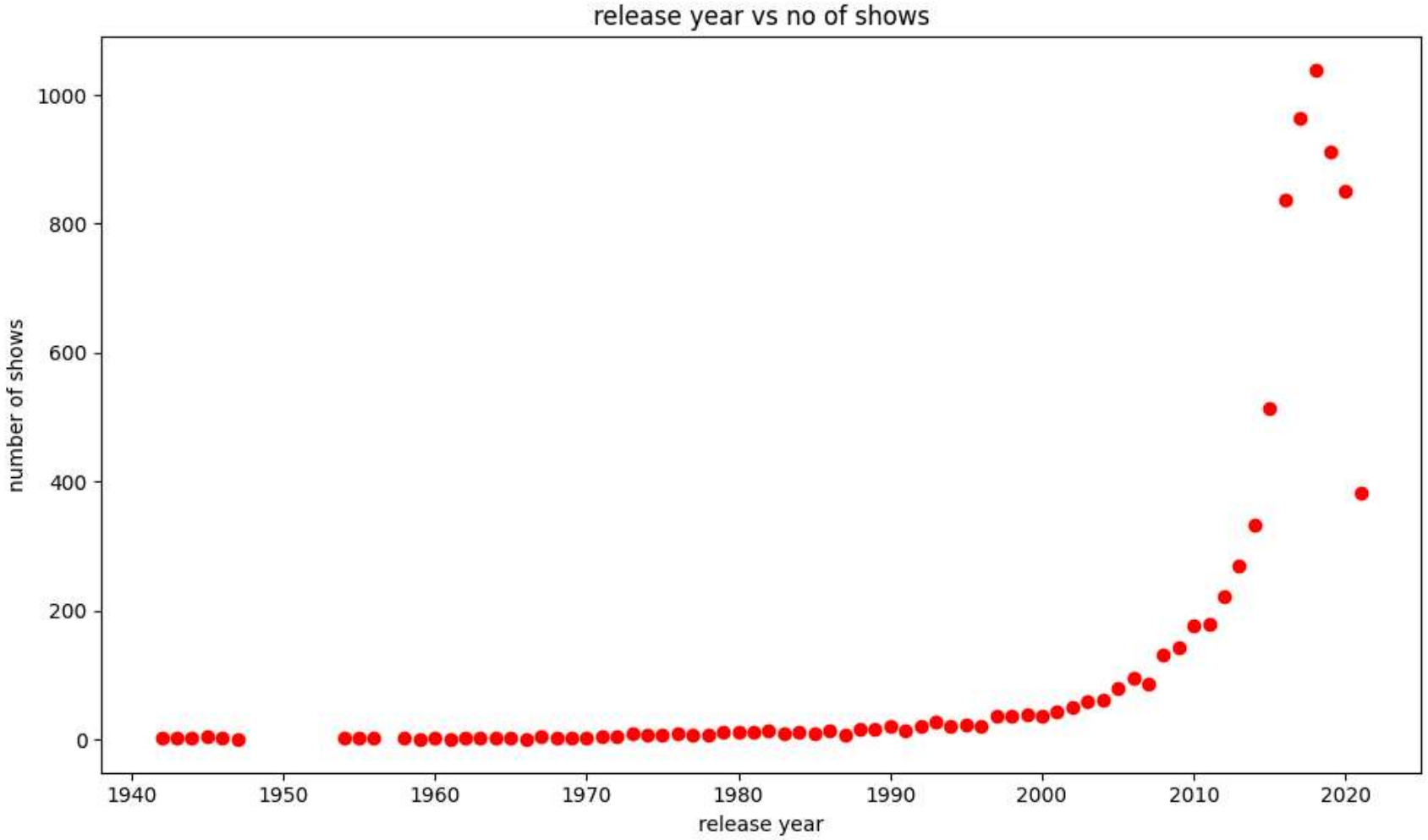
fig.suptitle('comparison of movies and tv shows released over years')

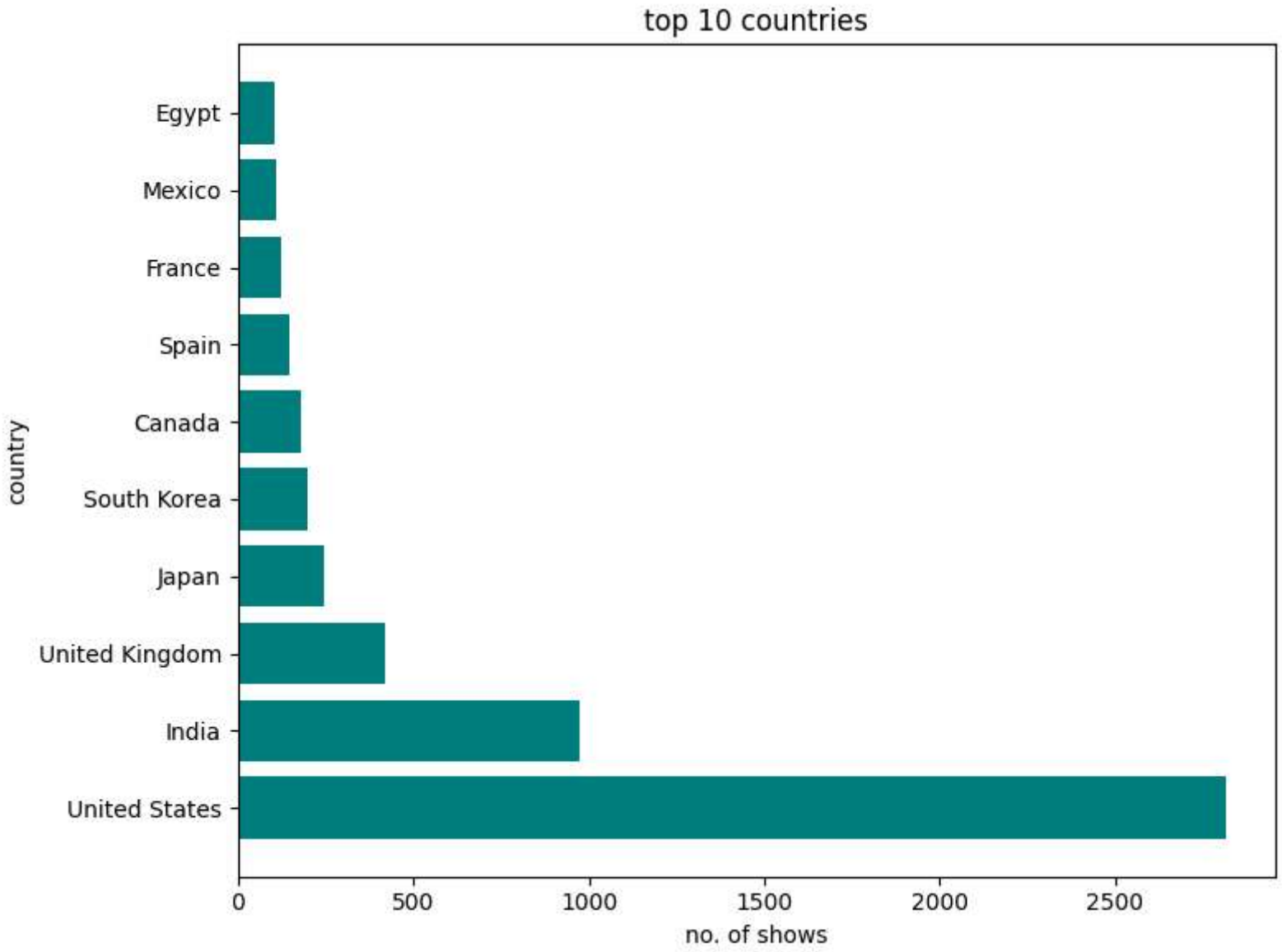
plt.tight_layout()
plt.savefig('movies_tv_shows.png')
plt.show()
```

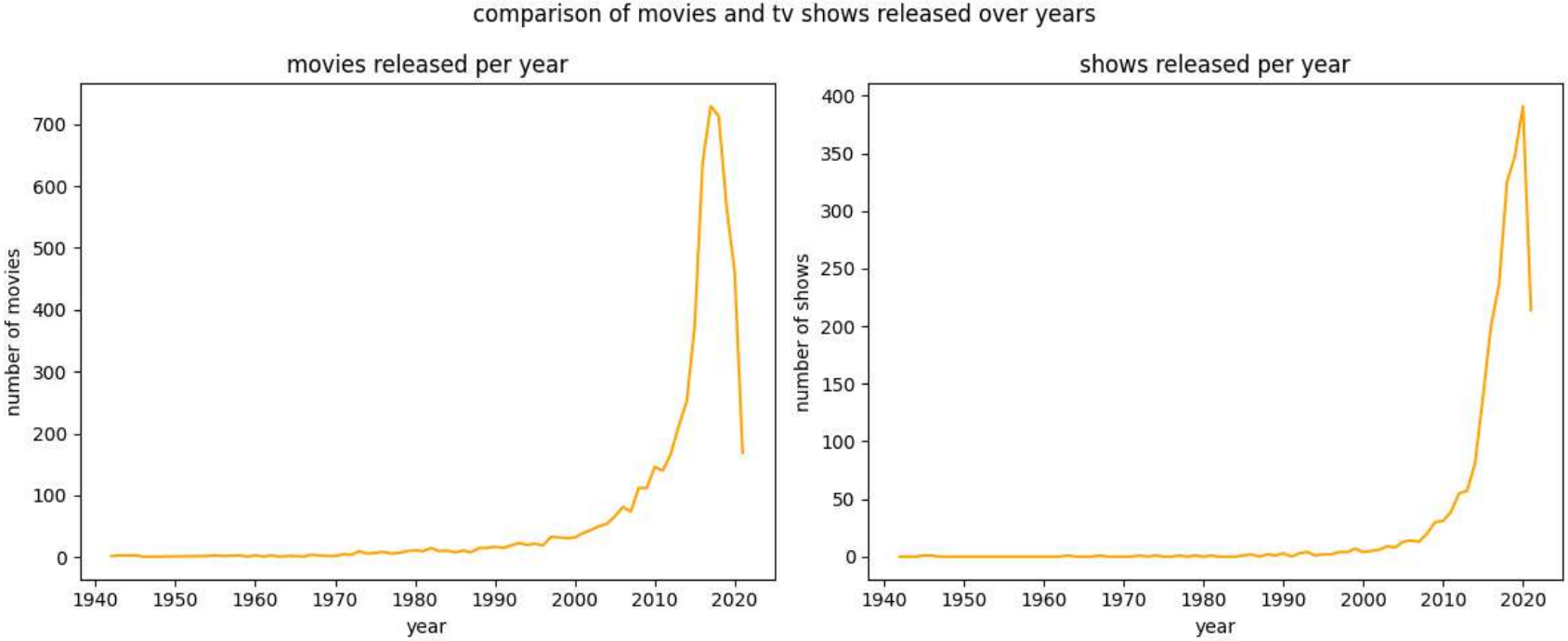

number of movies vs tv shows on netflix
5000
4000
3000
2000
1000
0
count
Movie
TV Show
type


percentage of content rating
TV-G
TV-Y
TV-Y7
PG
PG-13
TV-PG
R
TV-14
TV-MA
2.8%
3.0%
3.5%
6.0%
9.7%
9.9%
24.2%
36.8%


distribution of movie duration
number of movies
duration minutes
0
200
400
600
800
1000
1200
0
50
100
150
200
250
300


release year vs no of shows
number of shows
release year
0
200
400
600
800
1000
1940
1950
1960
1970
1980
1990
2000
2010
2020


top 10 countries
Egypt
Mexico
France
Spain
Canada
South Korea
Japan
United Kingdom
India
United States
country
0
500
1000
1500
2000
2500
no. of shows


comparison of movies and tv shows released over years
movies released per year
number of movies
year
shows released per year
number of shows
year

In [ ]: