```
import pandas as pd
import matplotlib.pyplot as plt
import seaborn as sns
from google.colab import files
uploaded = files.upload()
from zipfile import ZipFile
with ZipFile("titles.zip",'r') as zip_ref:
  zip_ref.extractall()

#import dataset
df = pd.read_csv("titles.csv")
print(df)

#explore data
df.info()    # Structure of the DataFrame
df.head()    # Shows first 5 rows
df.tail()    # Shows last 5 rows
df.dtypes    # Data types of each column
df.isnull().sum()  #total missing values in entire dataset

#analyze dataset
# 1.Count the number of Movies and TV Shows.
type_counts = df['type'].value_counts()
print("Movies vs TV Shows:")
print(type_counts)

# visualize it in bar chart.
plt.figure(figsize=(6,4))
sns.barplot(x=type_counts.index, y=type_counts.values, palette = 'coolwarm')
plt.title("Movies vs TV Show on Netflix")
plt.xlabel("Type") # Added this line to explicitly label the x-axis
plt.ylabel("Count") # Added this line to explicitly label the y-axis

#2.Top genres.
#spilt and count genres(listed_in_column)
all_genres = df['genres'].dropna().str.split(',')
genre_count = pd.Series([genre for sublist in all_genres for genre in sublist]).value_counts().head(10)

#visualize it
plt.figure(figsize=(8,5))
sns.barplot(x = genre_count.values, y = genre_count.index, palette = 'mako')
plt.title("Top Genre in Netflix")
plt.xlabel("Number of titles")
plt.ylabel("genre")
plt.show()

#3.Most common countries.
#count
top_countries = df['production_countries'].dropna().value_counts().head(10)
```

```
print("Top 10 countries with most content:")
print(top_countries)

#visualize
plt.figure(figsize=(8,5))
sns.barplot(x=top_countries.values, y=top_countries.index, palette='viridis')
plt.title("Top 10 Countries Producing Netflix Content")
plt.xlabel("Number of Titles")
plt.ylabel("Country")
plt.show()

#4. year-wise release trends
release_trends = df['release_year'].value_counts().sort_index()
print("Year-wise release trends:")
print(release_trends)

#visualize line plot
plt.figure(figsize=(10, 6))
release_trends.plot(kind='line', color='tomato')
plt.title("Number of Titles Released by Year (Line Plot)")
plt.xlabel("Release Year")
plt.ylabel("Count")
plt.grid(True)
plt.show()

#visualize bar plot
plt.figure(figsize=(12,7))
sns.barplot(x=release_trends.index, y=release_trends.values, palette='viridis')
plt.title("Number of Titles Released by Year (Bar Plot)")
plt.xlabel("Release Year")
plt.ylabel("Count")
plt.xticks(rotation=90) # Rotate x-axis labels for better readability
plt.grid(True)
plt.show()
```

Choose Files No file chosen Upload widget is only available when the cell has been executed in the current browser session. Please rerun this cell to enable.

```
Saving titles.zip to titles (11).zip
             id                              title   type  \
0      ts300399  Five Came Back: The Reference Films   SHOW
1       tm82169                              Rocky  MOVIE
2       tm17823                             Grease  MOVIE
3      tm191099                          The Sting  MOVIE
4       tm69975                           Rocky II  MOVIE
...         ...                                ...    ...
6132  tm1303784                      عبود في البيت  MOVIE
6133  tm1260999                           Sweetie  MOVIE
6134  tm1310286            Sommore: Queen Chandelier  MOVIE
6135  tm1072700                      All Na Vibes  MOVIE
6136   tm561709                   Going to Heaven  MOVIE

                                        description  release_year  \
0     This collection includes 12 World War II-era p...          1945
1     When world heavyweight boxing champion, Apollo...          1976
2     Australian good girl Sandy and greaser Danny f...          1978
3     A novice con man teams up with an acknowledged...          1973
4     After Rocky goes the distance with champ Apoll...          1979
...                                                 ...           ...
6132  Two young boys must work together to stop robb...          2023
6133  ‘Theatre is my life,’ Yıldız Kenter admits in ...          2023
6134  This Queen of Comedy shines as she takes the s...          2023
6135  The lives of three teenagers and a hit-man int...          2023
6136  A story about young boy sultan, 11 years old l...          2023

     age_certification  runtime                                genres  \
0                TV-MA       51                     ['documentation']
1                   PG      119                     ['drama', 'sport']
2                   PG      110                  ['romance', 'comedy']
3                   PG      129  ['crime', 'drama', 'comedy', 'music']
4                   PG      119                     ['drama', 'sport']
...                ...      ...                                   ...
6132               NaN       81                   ['family', 'comedy']
6133               NaN      120                      ['documentation']
6134               NaN       69                              ['comedy']
6135               NaN       80                               ['drama']
6136               NaN       90                              ['family']

     production_countries  seasons     imdb_id  imdb_score  imdb_votes  \
0                 ['US']      1.0         NaN         NaN         NaN
1                 ['US']      NaN   tt0075148         8.1    588100.0
2                 ['US']      NaN   tt0077631         7.2    283316.0
3                 ['US']      NaN   tt0070735         8.3    266738.0
4                 ['US']      NaN   tt0079817         7.3    216307.0
...                  ...      ...         ...         ...         ...
6132              ['KW']      NaN         NaN         NaN         NaN
6133              ['TR']      NaN  tt26349328         7.9       209.0
6134              ['US']      NaN  tt21033382         6.1        91.0
6135              ['NG']      NaN  tt14922926         5.2        18.0
6136              ['AE']      NaN   tt4623222         7.0        40.0

      tmdb_popularity  tmdb_score
0               0.601         NaN
```