```
import pandas as pd
df = pd.read_csv("netflix_titles.csv", encoding='latin1')
df.head()
```

	show_id	type	title	director	cast	country	date_added	release_year	rating	duration	listed_in	description
0	s1	Movie	Dick Johnson Is Dead	Kirsten Johnson	NaN	United States	September 25, 2021	2020	PG-13	90 min	Documentaries	As her father nears the end of his life, filmm...
1	s2	TV Show	Blood & Water	NaN	Ama Qamata, Khosi Ngema, Gail Mabalane, Thaban...	South Africa	September 24, 2021	2021	TV-MA	2 Seasons	International TV Shows, TV Dramas, TV Mysteries	After crossing paths at a party, a Cape Town t...
2	s3	TV Show	Ganglands	Julien Leclercq	Sami Bouajila, Tracy Gotoas, Samuel Jouy, Nabi...	NaN	September 24, 2021	2021	TV-MA	1 Season	Crime TV Shows, International TV Shows, TV Act...	To protect his family from a powerful drug lor...
		TV	Jailbirds				September				Docuseries,	Feuds, flirtations and

```
print("Shape of dataset:", df.shape)
print("\nColumn names:\n", df.columns)
print("\nDataset Info:")
df.info()
print("\nMissing values in each column:")
print(df.isnull().sum())
```

```
Shape of dataset: (8807, 12)

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

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

Missing values in each column:
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
```

```
df = df.drop_duplicates()
df['date_added'] = pd.to_datetime(df['date_added'], errors='coerce')
df['year_added'] = df['date_added'].dt.year
df['month_added'] = df['date_added'].dt.month

df['duration_num'] = df['duration'].str.extract(r'(\d+)')
df['duration_num'] = pd.to_numeric(df['duration_num'], errors='coerce')
df[['title', 'duration', 'duration_num', 'date_added', 'year_added', 'month_added']].head()
```

	title	duration	duration_num	date_added	year_added	month_added
0	Dick Johnson Is Dead	90 min	90.0	2021-09-25	2021.0	9.0
1	Blood & Water	2 Seasons	2.0	2021-09-24	2021.0	9.0
2	Ganglands	1 Season	1.0	2021-09-24	2021.0	9.0
3	Jailbirds New Orleans	1 Season	1.0	2021-09-24	2021.0	9.0
4	Kota Factory	2 Seasons	2.0	2021-09-24	2021.0	9.0

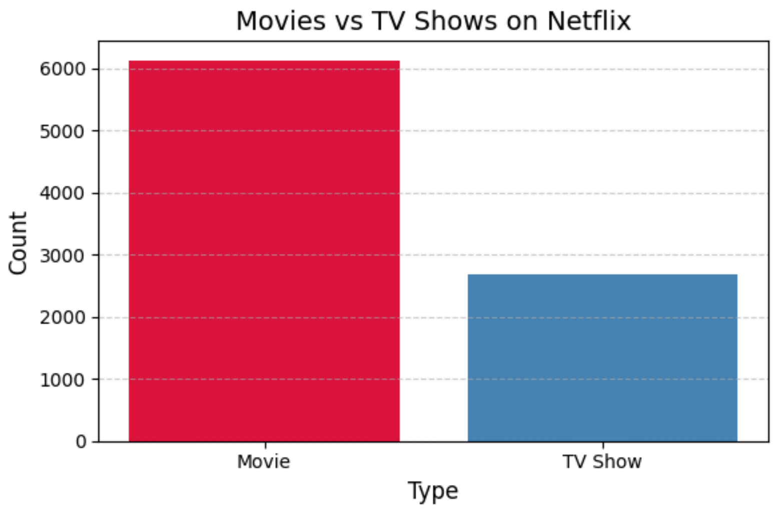
Start coding or generate with AI.

```
print("🔹 Count of Movies vs TV Shows\n")
print(df['type'].value_counts().to_string())
print("\n" + "-"*50)

print("🔹 Top 10 Countries with Most Content\n")
print(df['country'].value_counts().head(10).to_string())
print("\n" + "-"*50)

print("🔹 Content Releases by Year (Top 10 Most Recent Years)\n")
print(df['release_year'].value_counts().sort_index(ascending=False).head(10).to_string())
print("\n" + "-"*50)

print("🔹 Top 10 Most Common Ratings\n")
print(df['rating'].value_counts().head(10).to_string())
print("\n" + "-"*50)

df['main_genre'] = df['listed_in'].str.split(',').str[0]
print("🔹 Top 10 Most Common Genres\n")
print(df['main_genre'].value_counts().head(10).to_string())
print("\n" + "-"*50)

print("🔹 Number of Indian TV Shows Released After 2017:")
print(df[(df['country'] == 'India') & (df['type'] == 'TV Show') & (df['release_year'] > 2017)].shape[0])
```

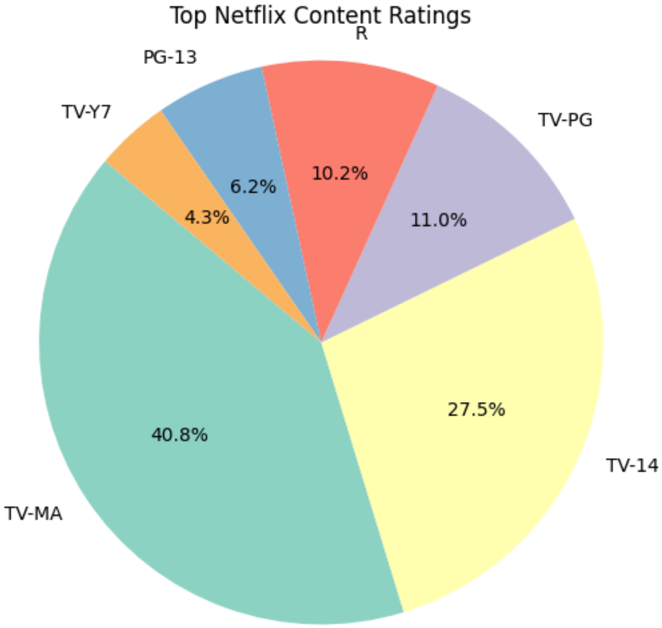
```
🔹 Count of Movies vs TV Shows

type
Movie      6131
TV Show    2676

--------------------------------------------------
🔹 Top 10 Countries with Most Content

country
United States     2818
India              972
United Kingdom     419
Japan              245
South Korea        199
Canada             181
Spain              145
France             124
Mexico             110
Egypt              106

--------------------------------------------------
🔹 Content Releases by Year (Top 10 Most Recent Years)

release_year
2021     592
2020     953
2019    1030
2018    1147
2017    1032
2016     902
2015     560
2014     352
2013     288
2012     237
```

```
--------------------------------------------------
🔹 Top 10 Most Common Ratings

rating
TV-MA    3207
TV-14    2160
TV-PG     863
R         799
PG-13     490
TV-Y7     334
TV-Y      307
PG        287
TV-G      220
NR         80

--------------------------------------------------
🔹 Top 10 Most Common Genres

main_genre
Dramas                          1600
Comedies                        1210
```

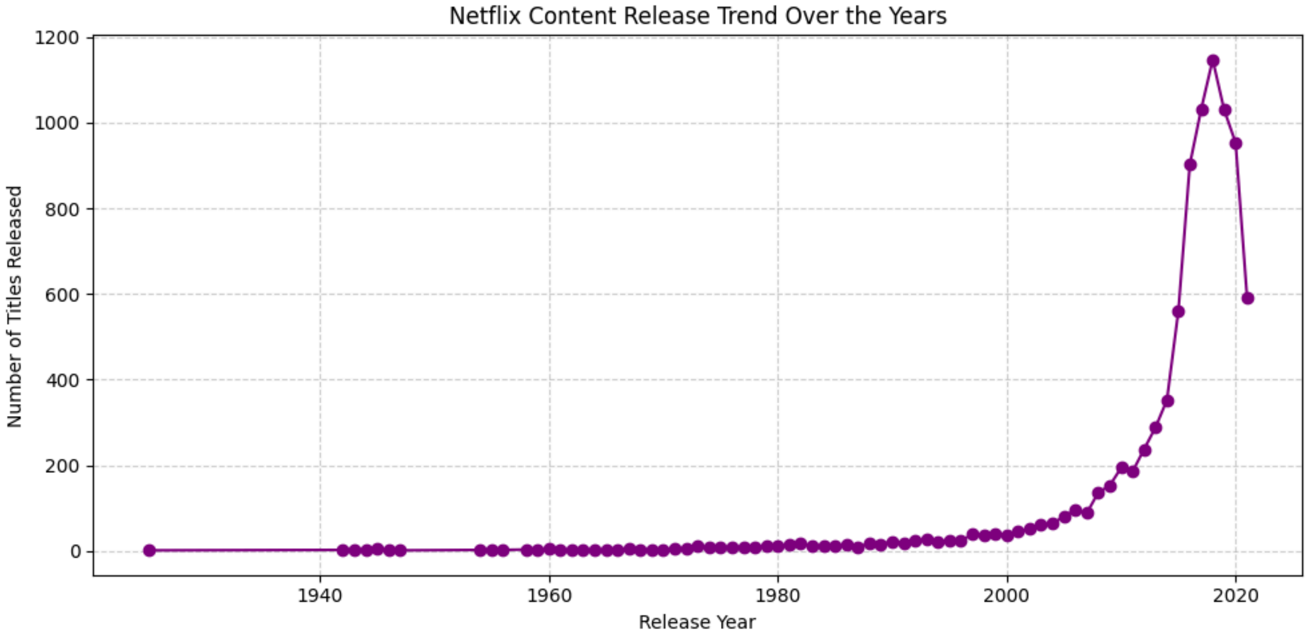
```python
import matplotlib.pyplot as plt
type_counts = df['type'].value_counts()

plt.figure(figsize=(6, 4))
plt.bar(type_counts.index, type_counts.values, color=['crimson', 'steelblue'])
plt.title("Movies vs TV Shows on Netflix", fontsize=14)
plt.xlabel("Type", fontsize=12)
plt.ylabel("Count", fontsize=12)
plt.grid(axis='y', linestyle='--', alpha=0.6)
plt.tight_layout()
plt.show()
```



```python
rating_counts = df['rating'].value_counts().head(6)

plt.figure(figsize=(6, 6))
plt.pie(rating_counts.values, labels=rating_counts.index, autopct='%1.1f%%', startangle=140, colors=plt.cm.Set3.colors)
plt.title("Top Netflix Content Ratings")
plt.axis('equal')
plt.show()
```



```
content_by_year = df['release_year'].value_counts().sort_index()

plt.figure(figsize=(10, 5))
plt.plot(content_by_year.index, content_by_year.values, color='purple', marker='o')
plt.title("Netflix Content Release Trend Over the Years")
plt.xlabel("Release Year")
plt.ylabel("Number of Titles Released")
plt.grid(True, linestyle='--', alpha=0.6)
plt.tight_layout()
plt.show()
```



Double-click (or enter) to edit

Netflix had rapid content growth between 2015–2019, with a peak in 2020 year. The content count dropped in 2020, likely due to the pandemic."

.. . . . .

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... .

📌 Project Summary: Netflix Data Analysis

Subject: Python for Computing
Name: D. Arjun
Roll Number: 24B81A67L3

This project involved exploring the Netflix Movies and TV Shows dataset using Python, Pandas, and Matplotlib.

🎯 Objectives:

- Understand trends in Netflix content over the years
- Analyze types, ratings, countries, and genres
- Visualize data for clear interpretation

🔍 Key Observations:

- 🔸 Netflix has more **Movies** than TV Shows
- 🔸 **United States**, **India**, and **United Kingdom** are the top content-producing countries
- 🔸 The most common rating is **TV-MA**, followed by **TV-14** and **TV-PG**
- 🔸 Genres like **Dramas**, **Comedies**, and **Documentaries** are most popular
- 🔸 There was a rise in content between **2016 and 2019**, followed by a slight drop (possibly due to the pandemic)
- 🔸 Over **[fill number]** Indian TV shows were added after 2017

📈 Visualizations Created:

- Movies vs TV Shows (Bar chart)
- Rating Distribution (Pie chart)
- Content Trend Over Years (Line chart)

✅ Skills Gained:

- Data cleaning using Pandas
- Extracting insights using group, filter, and value counts
- Visualizing trends using Matplotlib
- Working with real-world datasets in a structured project

🏁 Conclusion:

This project helped me understand how to handle real-world data, clean it, extract useful insights, and visualize trends in a clear, simple, and