

```
import numpy as np
import pandas as pd
import matplotlib.pyplot as plt
import seaborn as sns
%matplotlib inline

df=pd.read_csv('C:\\Users\\HP\\Downloads\\disney_plus_titles.csv')
df.head()
```

	show_id	type	title \
0	s1	Movie	A Spark Story
1	s2	Movie	Spooky Buddies
2	s3	Movie	The Fault in Our Stars
3	s4	TV Show	Dog: Impossible
4	s5	TV Show	Spidey And His Amazing Friends

	director \
0	Jason Sterman, Leanne Dare
1	Robert Vince
2	Josh Boone
3	NaN
4	NaN

	cast	country \
0	Apton Corbin, Louis Gonzales	NaN
1	Tucker Albrizzi, Diedrich Bader, Ameko Eks Mas...	United States, Canada
2	Shailene Woodley, Ansel Elgort, Laura Dern, Sa...	United States
3	Matt Beisner	United States
4	Benjamin Valic, Lily Sanfelippo, Jakari Fraser...	United States

	date_added	release_year	rating	duration \
0	September 24, 2021	2021	TV-PG	88 min
1	September 24, 2021	2011	G	93 min
2	September 24, 2021	2014	PG-13	127 min
3	September 22, 2021	2019	TV-PG	2 Seasons
4	September 22, 2021	2021	TV-Y	1 Season

	listed_in \
0	Documentary
1	Comedy, Fantasy, Kids
2	Coming of Age, Drama, Romance
3	Animals & Nature, Docuseries, Family
4	Action-Adventure, Animation, Kids

```

description
0 Two Pixar filmmakers strive to bring their uni...
1 The puppies go on a spooky adventure through a...
2 Hazel and Gus share a love that sweeps them on...
3 Matt Beisner uses unique approaches to modifyi...
4 Spidey teams up with pals to become The Spidey...

```

```
df.tail()
```

	show_id	type	title	director	\
1363	s1364	Movie	The Sword in the Stone	Wolfgang Reitherman	
1364	s1365	Movie	Those Calloways	Norman Tokar	
1365	s1366	TV Show	Disney Kirby Buckets	NaN	
1366	s1367	TV Show	Disney Mech-X4	NaN	
1367	s1368	TV Show	Imagination Movers	NaN	

	cast	country
1363	Sebastian Cabot, Karl Swenson, Rickie Sorensen...	United States
1364	Brian Keith, Vera Miles, Brandon de Wilde, Wal...	United States
1365	Jacob Bertrand, Mekai Curtis, Cade Sutton, Oli...	United States
1366	Nathaniel Potvin, Raymond Cham, Kamran Lucas, ...	Canada
1367	Rich Collins, Dave Poche, Scott Durbin, Scott ...	United States

	date_added	release_year	rating	duration	\
1363	October 1, 2019	1963	G	80 min	
1364	October 1, 2019	1965	PG	132 min	
1365	NaN	2014	TV-Y7	3 Seasons	
1366	NaN	2016	TV-Y7	2 Seasons	
1367	NaN	2008	TV-Y	3 Seasons	

	listed_in	\
1363	Action-Adventure, Animation, Comedy	
1364	Animals & Nature, Drama, Family	
1365	Action-Adventure, Comedy, Coming of Age	
1366	Action-Adventure, Comedy, Science Fiction	
1367	Kids, Music	

```

description
1363 Merlin trains a young orphan who's destined to...
1364 A strong-willed family struggles to establish ...
1365 Welcome to Kirby's world! It's rude and sketchy.
1366 Ryan discovers his ability to control a giant ...
1367 Rock out with the Imagination Movers, Disney J...

```

```
print(df.head())
print(df.dtypes)
```

	show_id	type	title \
0	s1	Movie	A Spark Story
1	s2	Movie	Spooky Buddies
2	s3	Movie	The Fault in Our Stars
3	s4	TV Show	Dog: Impossible
4	s5	TV Show	Spidey And His Amazing Friends

	director \
0	Jason Sterman, Leanne Dare
1	Robert Vince
2	Josh Boone
3	NaN
4	NaN

	cast	country \
0	Apton Corbin, Louis Gonzales	NaN
1	Tucker Albrizzi, Diedrich Bader, Ameko Eks Mas...	United States, Canada
2	Shailene Woodley, Ansel Elgort, Laura Dern, Sa...	United States
3	Matt Beisner	United States
4	Benjamin Valic, Lily Sanfelippo, Jakari Fraser...	United States

	date_added	release_year	rating	duration \
0	September 24, 2021	2021	TV-PG	88 min
1	September 24, 2021	2011	G	93 min
2	September 24, 2021	2014	PG-13	127 min
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4	September 22, 2021	2021	TV-Y	1 Season

	listed_in \
0	Documentary
1	Comedy, Fantasy, Kids
2	Coming of Age, Drama, Romance
3	Animals & Nature, Docuseries, Family
4	Action-Adventure, Animation, Kids

	description
0	Two Pixar filmmakers strive to bring their uni...
1	The puppies go on a spooky adventure through a...
2	Hazel and Gus share a love that sweeps them on...
3	Matt Beisner uses unique approaches to modifyi...
4	Spidey teams up with pals to become The Spidey...

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

```
df.columns.values
```

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

```
df.isna().sum()
```

```
show_id      0
type         0
title        0
director     440
cast         174
country      175
date_added    3
release_year  0
rating        2
duration     0
listed_in    0
description   0
dtype: int64
```

```
df.info()
```

```
<class 'pandas.core.frame.DataFrame'>
```

```
RangeIndex: 1368 entries, 0 to 1367
```

```
Data columns (total 12 columns):
```

#	Column	Non-Null Count	Dtype
0	show_id	1368 non-null	object
1	type	1368 non-null	object
2	title	1368 non-null	object
3	director	928 non-null	object
4	cast	1194 non-null	object
5	country	1193 non-null	object
6	date_added	1365 non-null	object

```

7   release_year  1368 non-null    int64
8   rating        1366 non-null    object
9   duration      1368 non-null    object
10  listed_in     1368 non-null    object
11  description   1368 non-null    object

```

```
dtypes: int64(1), object(11)
```

```
memory usage: 128.4+ KB
```

```
import pandas as pd
```

```
import matplotlib.pyplot as plt
```

```
df=pd.read_csv('C:\\Users\\HP\\Downloads\\disney_plus_titles.csv')
```

```
print(df)
```

```

      show_id  type  title \
0         s1  Movie  A Spark Story
1         s2  Movie  Spooky Buddies
2         s3  Movie  The Fault in Our Stars
3         s4  TV Show  Dog: Impossible
4         s5  TV Show  Spidey And His Amazing Friends
...      ...  ...  ...
1363    s1364  Movie  The Sword in the Stone
1364    s1365  Movie  Those Callows
1365    s1366  TV Show  Disney Kirby Buckets
1366    s1367  TV Show  Disney Mech-X4
1367    s1368  TV Show  Imagination Movers

```

```

              director \
0  Jason Stermann, Leanne Dare
1              Robert Vince
2              Josh Boone
3              NaN
4              NaN
...      ...
1363    Wolfgang Reitherman
1364    Norman Tokar
1365              NaN
1366              NaN
1367              NaN

```

```

              cast \
0  Apton Corbin, Louis Gonzales
1  Tucker Albrizzi, Diedrich Bader, Ameko Eks Mas...
2  Shailene Woodley, Ansel Elgort, Laura Dern, Sa...
3              Matt Beisner
4  Benjamin Valic, Lily Sanfelippo, Jakari Fraser...
...      ...
1363  Sebastian Cabot, Karl Swenson, Rickie Sorensen...
1364  Brian Keith, Vera Miles, Brandon de Wilde, Wal...

```

1365 Jacob Bertrand, Mekai Curtis, Cade Sutton, Oli...
 1366 Nathaniel Potvin, Raymond Cham, Kamran Lucas, ...
 1367 Rich Collins, Dave Poche, Scott Durbin, Scott ...

	country	date_added	release_year	
rating \				
0	NaN	September 24, 2021	2021	TV-PG
1	United States, Canada	September 24, 2021	2011	G
2	United States	September 24, 2021	2014	PG-13
3	United States	September 22, 2021	2019	TV-PG
4	United States	September 22, 2021	2021	TV-Y
...
1363	United States	October 1, 2019	1963	G
1364	United States	October 1, 2019	1965	PG
1365	United States	NaN	2014	TV-Y7
1366	Canada	NaN	2016	TV-Y7
1367	United States	NaN	2008	TV-Y

	duration	listed_in \
0	88 min	Documentary
1	93 min	Comedy, Fantasy, Kids
2	127 min	Coming of Age, Drama, Romance
3	2 Seasons	Animals & Nature, Docuseries, Family
4	1 Season	Action-Adventure, Animation, Kids
...
1363	80 min	Action-Adventure, Animation, Comedy
1364	132 min	Animals & Nature, Drama, Family
1365	3 Seasons	Action-Adventure, Comedy, Coming of Age
1366	2 Seasons	Action-Adventure, Comedy, Science Fiction
1367	3 Seasons	Kids, Music

	description
0	Two Pixar filmmakers strive to bring their uni...
1	The puppies go on a spooky adventure through a...
2	Hazel and Gus share a love that sweeps them on...
3	Matt Beisner uses unique approaches to modifyi...
4	Spidey teams up with pals to become The Spidey...
...	...
1363	Merlin trains a young orphan who's destined to...
1364	A strong-willed family struggles to establish ...

```
1365 Welcome to Kirby's world! It's rude and sketchy.
1366 Ryan discovers his ability to control a giant ...
1367 Rock out with the Imagination Movers, Disney J...
```

```
[1368 rows x 12 columns]
```

```
import matplotlib.pyplot as plt
import pandas as pd
data={'show_id':[1,2,3,4,5],
      'type':[2,3,4,5,6],
      'title':[3,4,5,6,7],
      'director':[4,5,6,7,8],
      'cast':[5,6,7,8,9],
      'country':[6,7,8,9,10],
      'date_added':[7,8,9,10,11],
      'release_year':[8,9,10,11,12],
      'rating':[9,10,11,12,13],
      'duration':[10,11,12,13,14],
      'listed_in':[11,12,13,14,15],
      'description':[12,13,14,15,16]}
df=pd.DataFrame(data)
plt.hist(df[column],bins=10)
plt.title('Histogram of {column}')
plt.xlabel('value')
plt.ylabel('frequency')
plt.show()
```

```
-----
-----
NameError                                Traceback (most recent call
last)
```

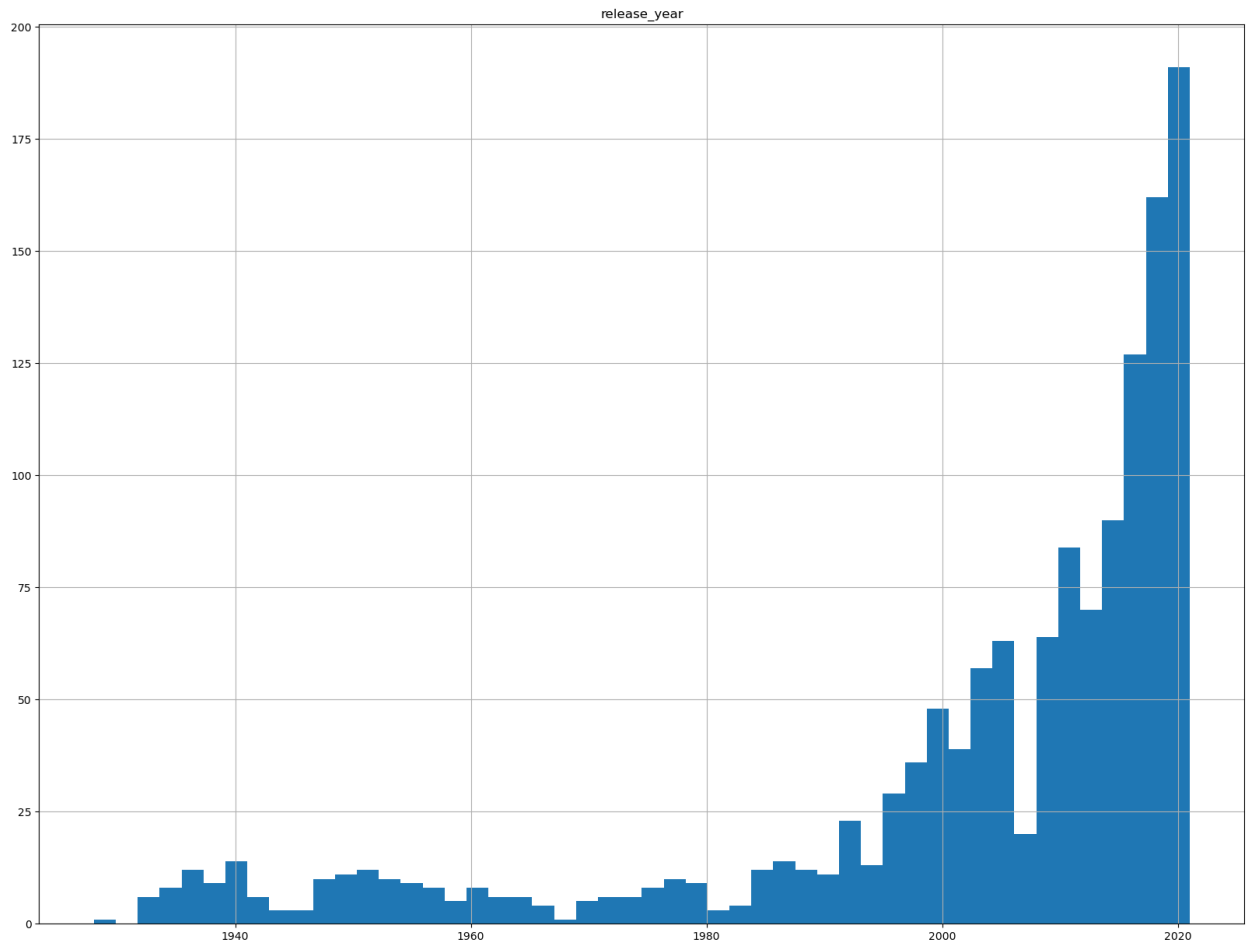
```
Cell In[2], line 16
```

```
3 data={'show_id':[1,2,3,4,5],
4       'type':[2,3,4,5,6],
5       'title':[3,4,5,6,7],
(...)
13       'listed_in':[11,12,13,14,15],
14       'description':[12,13,14,15,16]}
15 df=pd.DataFrame(data)
--> 16 plt.hist(df[column],bins=10)
17 plt.title('Histogram of {column}')
18 plt.xlabel('value')
```

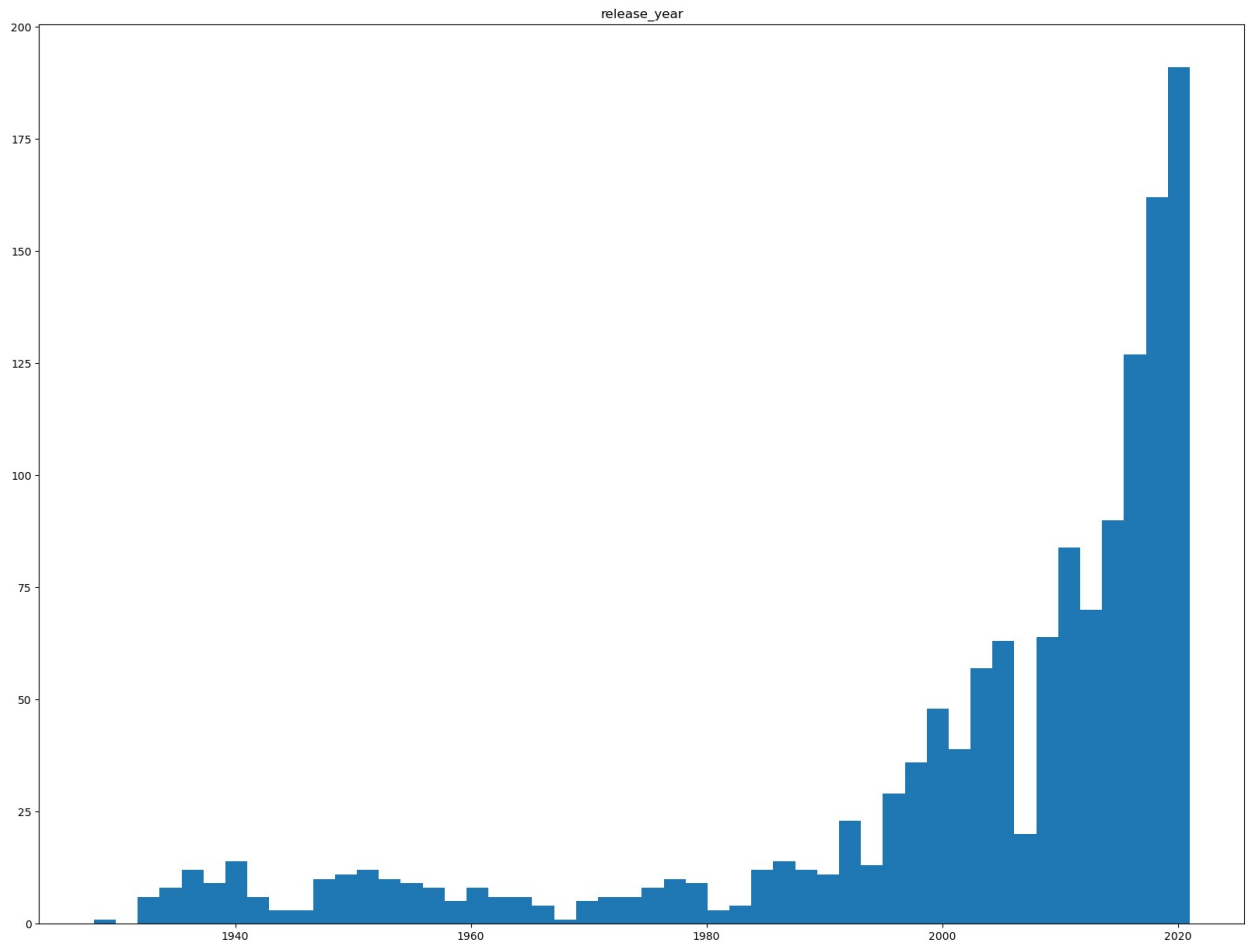
```
NameError: name 'column' is not defined
```

```
df.hist(bins=50,grid=True ,figsize=(20,15))
```

```
array([[<Axes: title={'center': 'release_year'}>]], dtype=object)
```



```
df.hist(bins=50,grid=False ,figsize=(20,15))  
array([[<Axes: title={'center': 'release_year'}>]], dtype=object)
```

```
df.describe()
```

```
      release_year
count    1368.000000
mean     2002.348684
std       22.127559
min      1928.000000
25%      1998.000000
50%      2011.000000
75%      2018.000000
max      2021.000000
```

```
questions =["1. how many people watch movies and how many dont?",
            "2.do people prefer disney or not?",
            "3.people from which place usually watch disney?",
            "4.do they like it?"]
```

```
questions
```

```
['1. how many people watch movies and how many dont?',
 '2.do people prefer disney or not?',
```

```
'3.people from which place usually watch disney?',  
'4.do they like it?']
```

```
df.description.value_counts()
```

```
description
```

```
Miguel journeys to the magical land of his ancestors.
```

```
2
```

```
Cooper and Cami Wrather co-host "Would You Wrather."
```

```
2
```

```
Two Pixar filmmakers strive to bring their uniquely personal  
SparkShorts visions to the screen.
```

```
1
```

```
A snowman longs to break out of his snow globe.
```

```
1
```

```
In the remote, majestic landcape of the high Arctic, a photographer  
seeks the legendary white wolf.
```

```
1
```

```
..
```

```
The story of Disney's most iconic villain continues.
```

```
1
```

```
As the voice of Goofy and Pluto, Bill Farmer crosses the country  
meeting dogs doing incredible work!
```

```
1
```

```
A journey through the lives of the prolific, award-winning songwriting  
duo.
```

```
1
```

```
The Big Fib is a comedy game show where a truth-seeking kid chooses  
between a liar and an expert.
```

```
1
```

```
Rock out with the Imagination Movers, Disney Junior's favorite  
alternative band for preschoolers!
```

```
1
```

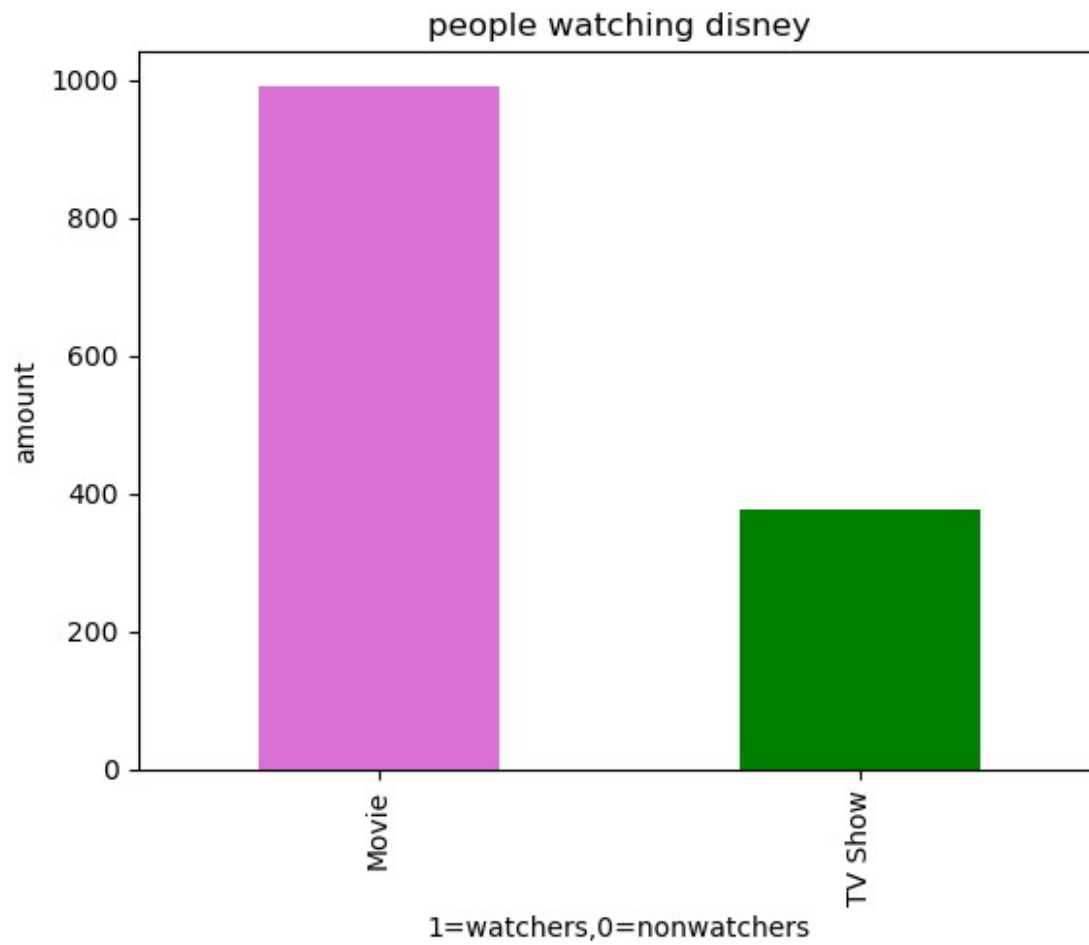
```
Name: count, Length: 1366, dtype: int64
```

```
df.type.value_counts().plot(kind='bar',color=["orchid","green"])
```

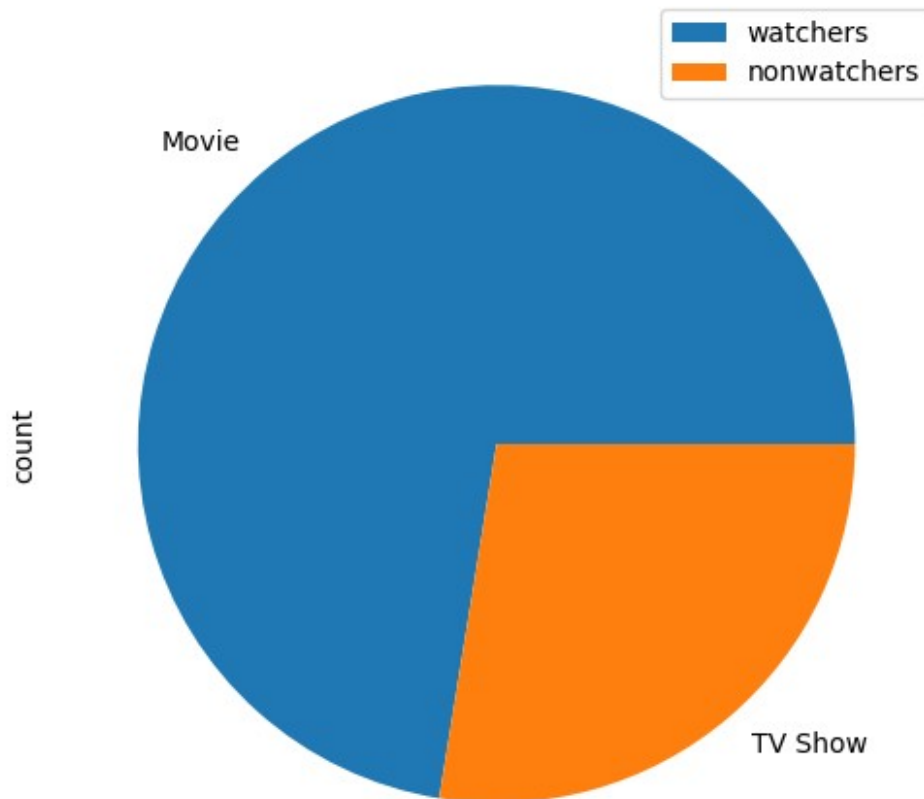
```
plt.title("people watching disney")
```

```
plt.xlabel("1=watchers,0=nonwatchers")
```

```
plt.ylabel("amount");
```



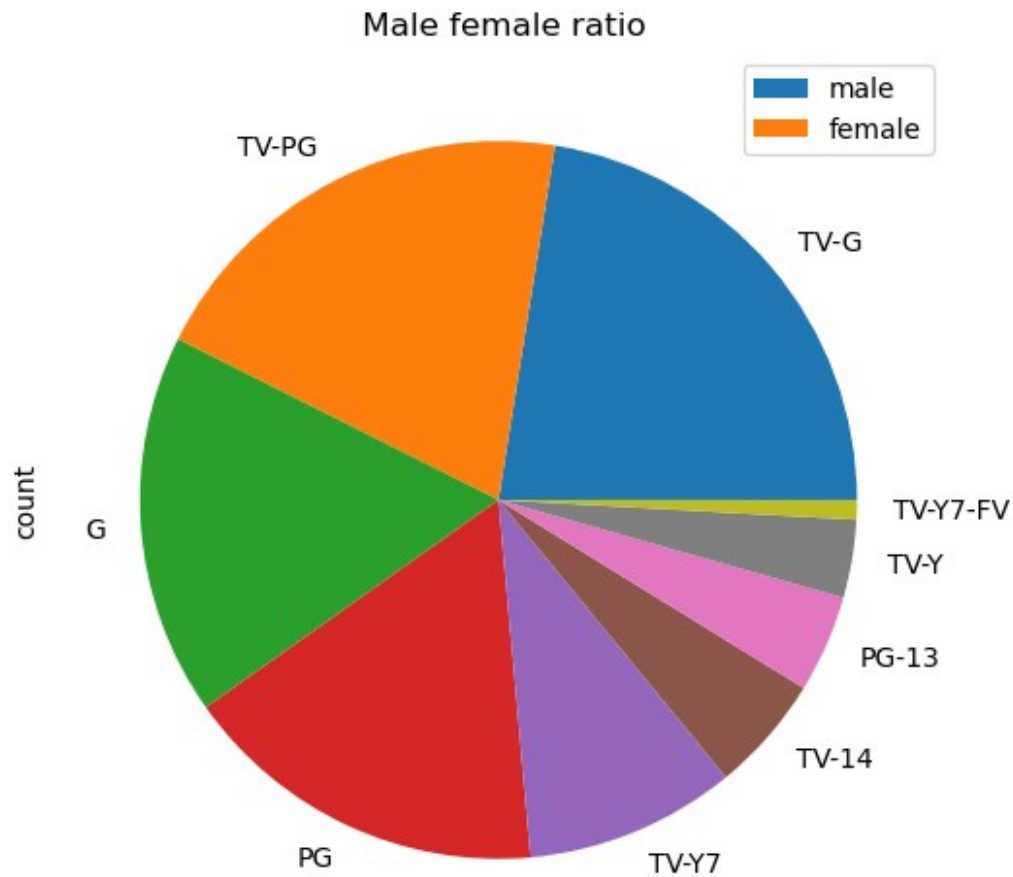
```
df.type.value_counts().plot(kind='pie',figsize=(8,6))  
plt.legend(["watchers","nonwatchers"]);
```



```
df.rating.value_counts()
```

```
rating
TV-G      307
TV-PG     275
G         235
PG        227
TV-Y7     130
TV-14      72
PG-13      60
TV-Y       48
TV-Y7-FV   12
Name: count, dtype: int64
```

```
df.rating.value_counts().plot(kind='pie',figsize=(8,6))
plt.title(' Male female ratio')
plt.legend(['male','female']);
```



```
pd.crosstab(df.type,df.rating)
```

rating	G	PG	PG-13	TV-14	TV-G	TV-PG	TV-Y	TV-Y7	TV-Y7-FV
type									
Movie	235	226	60	36	224	165	2	36	6
TV Show	0	1	0	36	83	110	46	94	6

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

```
df = pd.read_csv('C:\\Users\\HP\\Downloads\\disney_plus_titles.csv')
```

```
print(df.head())
print(df.columns)
```

	show_id	type	title
0	s1	Movie	A Spark Story
1	s2	Movie	Spooky Buddies
2	s3	Movie	The Fault in Our Stars
3	s4	TV Show	Dog: Impossible

```

4      s5  TV Show  Spidey And His Amazing Friends

                                director \
0  Jason Sterman, Leanne Dare
1                                Robert Vince
2                                Josh Boone
3                                NaN
4                                NaN

                                cast
country \
0                                Apton Corbin, Louis Gonzales
NaN
1  Tucker Albrizzi, Diedrich Bader, Ameko Eks Mas...  United States,
Canada
2  Shailene Woodley, Ansel Elgort, Laura Dern, Sa...  United
States
3                                Matt Beisner  United
States
4  Benjamin Valic, Lily Sanfelippo, Jakari Fraser...  United
States

    date_added  release_year  rating  duration \
0  September 24, 2021      2021  TV-PG    88 min
1  September 24, 2021      2011    G     93 min
2  September 24, 2021      2014  PG-13   127 min
3  September 22, 2021      2019  TV-PG   2 Seasons
4  September 22, 2021      2021  TV-Y    1 Season

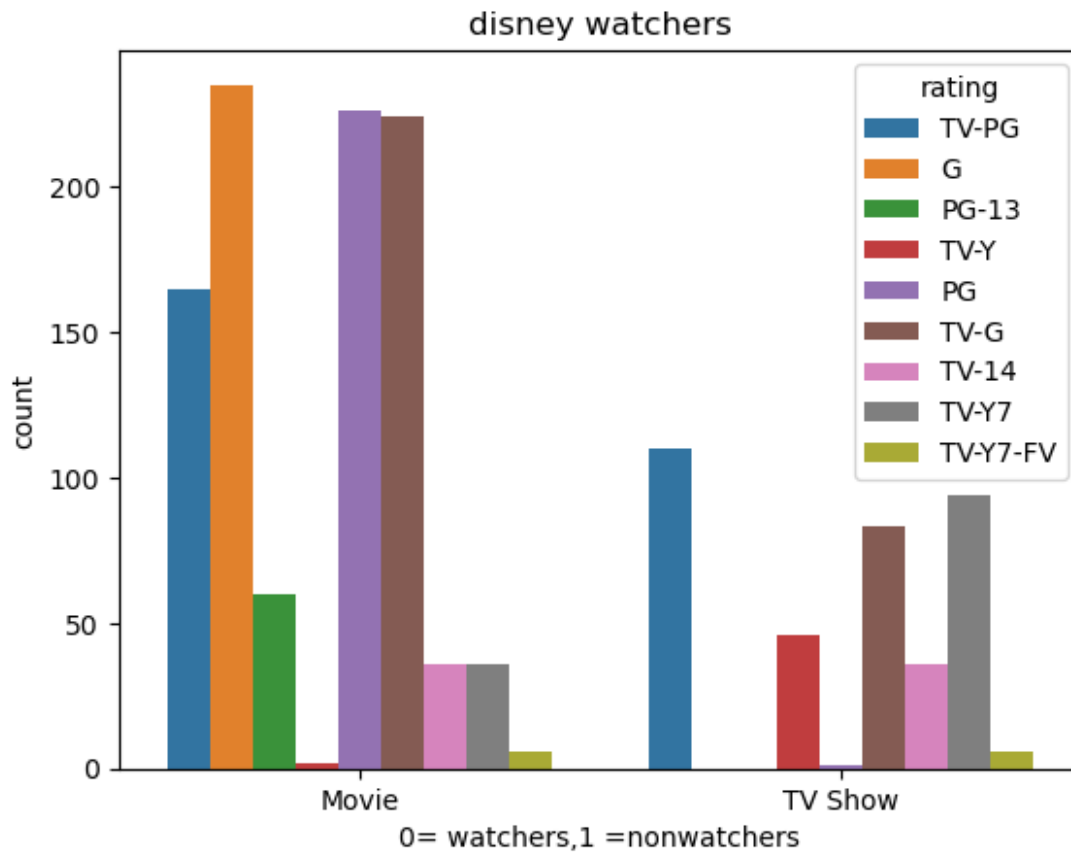
                                listed_in \
0                                Documentary
1                                Comedy, Fantasy, Kids
2                                Coming of Age, Drama, Romance
3  Animals & Nature, Docuseries, Family
4  Action-Adventure, Animation, Kids

                                description
0  Two Pixar filmmakers strive to bring their uni...
1  The puppies go on a spooky adventure through a...
2  Hazel and Gus share a love that sweeps them on...
3  Matt Beisner uses unique approaches to modifyi...
4  Spidey teams up with pals to become The Spidey...
Index(['show_id', 'type', 'title', 'director', 'cast', 'country',
'date_added',
      'release_year', 'rating', 'duration', 'listed_in',
'description'],
      dtype='object')

import seaborn as sns

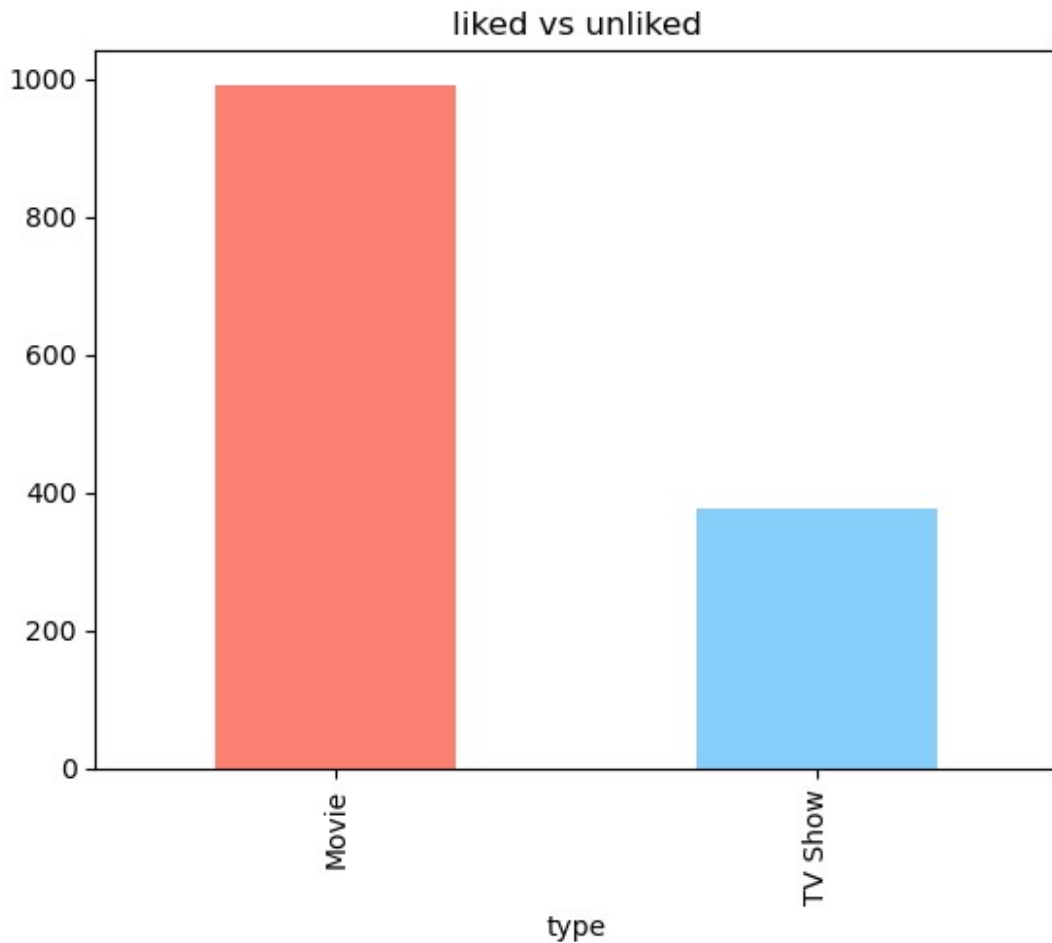
```

```
sns.countplot(x= 'type',data= df, hue='rating')
plt.title("disney watchers")
plt.xlabel("0= watchers,1 =nonwatchers");
plt.ylabel("count")
Text(0, 0.5, 'count')
```

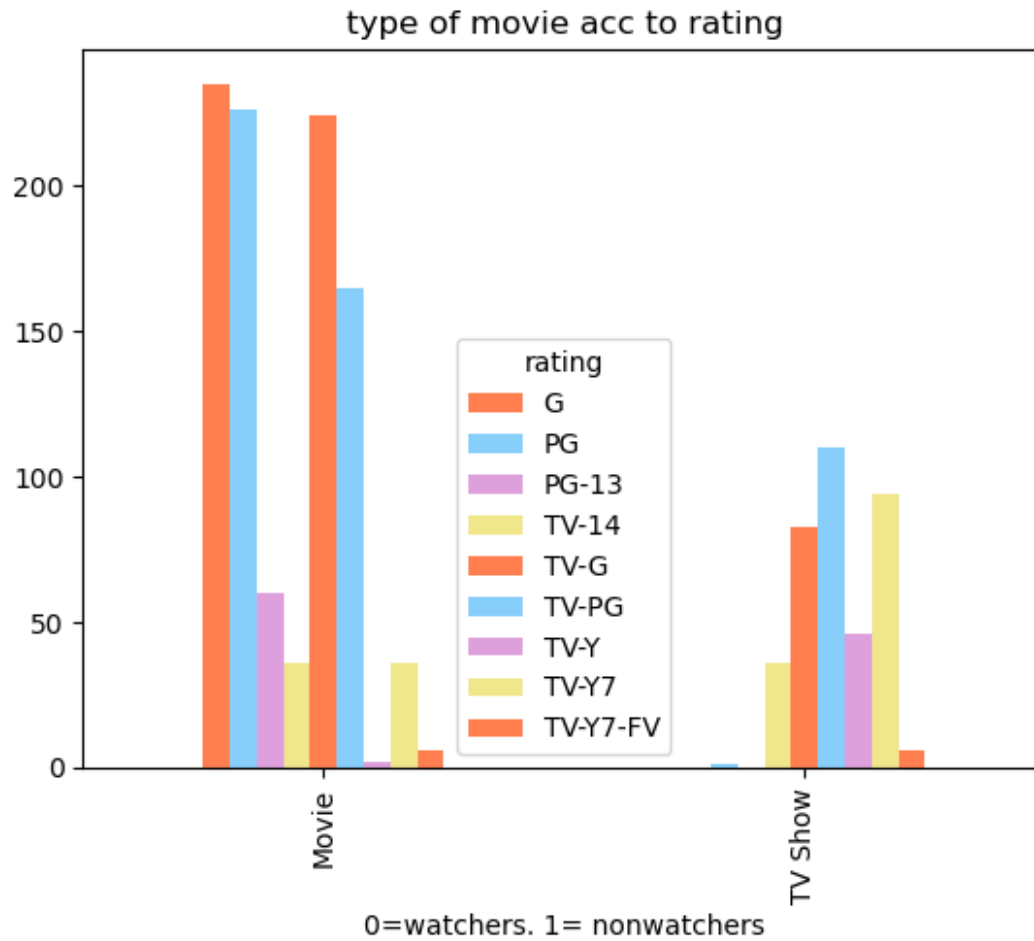


```
df.director.value_counts()
director
Jack Hannah      17
John Lasseter    16
Paul Hoen        16
Charles Nichols  12
Robert Stevenson 12
..
Jim Abrahams      1
Frank Coraci      1
Tom McCarthy      1
Wayne Wang        1
John Musker, Ron Clements, Dave Michener 1
Name: count, Length: 578, dtype: int64
```

```
df.type.value_counts().plot(kind='bar',color=['salmon','lightskyblue',
'springgreen','khaki'])
plt.title('liked vs unliked');
```



```
pd.crosstab(df.type,df.rating).plot(kind='bar',color=['coral','lightsk
yblue','plum','khaki'])
plt.title('type of movie acc to rating')
plt.xlabel('0=watchers. 1= nonwatchers');
```

```
pd.crosstab(df.rating,df.duration)
```

duration min \ rating	1 Season	10 Seasons	10 min	100 min	101 min	102 min	103
G	0	0	1	3	3	1	
PG	0	0	1	3	12	3	
PG-13	0	0	0	0	0	1	
TV-14	22	1	0	0	0	0	
TV-G	39	0	2	2	1	0	
TV-PG	81	0	0	0	1	1	
TV-Y	16	0	0	0	0	0	
TV-Y7	41	0	2	0	0	0	

0							
TV-Y7-FV	4	0	0	0	0	0	0
0							

duration	104 min	105 min	106 min	...	90 min	91 min	92 min	93 min
rating				...				

G	3	3	1	...	7	4	4
PG	7	8	8	...	5	4	4
PG-13	0	2	1	...	0	0	0
TV-14	0	0	0	...	0	2	0
TV-G	0	0	1	...	7	5	6
TV-PG	0	0	1	...	7	2	0
TV-Y	0	0	0	...	0	0	0
TV-Y7	0	0	0	...	0	0	0
TV-Y7-FV	0	0	0	...	0	0	0

duration	94 min	95 min	96 min	97 min	98 min	99 min
rating						

G	6	2	3	2	4	4
PG	10	7	7	7	10	5
PG-13	0	0	0	0	1	1
TV-14	0	0	1	0	0	0
TV-G	5	4	1	3	1	1
TV-PG	5	3	0	3	1	1
TV-Y	0	0	0	0	0	0
TV-Y7	0	0	0	0	0	0
TV-Y7-FV	0	0	0	0	0	0

[9 rows x 156 columns]

```

if df['type'].dtype != 'object':
    df['type'] = df['type'].astype(str)

print(df.head())
print(df.dtypes)

```

show_id	type	title
0 s1	Movie	A Spark Story
1 s2	Movie	Spooky Buddies

2	s3	Movie	The Fault in Our Stars
3	s4	TV Show	Dog: Impossible
4	s5	TV Show	Spidey And His Amazing Friends

	director \
0	Jason Sterman, Leanne Dare
1	Robert Vince
2	Josh Boone
3	NaN
4	NaN

	cast	country \
0	Apton Corbin, Louis Gonzales	NaN
1	Tucker Albrizzi, Diedrich Bader, Ameko Eks Mas...	United States, Canada
2	Shailene Woodley, Ansel Elgort, Laura Dern, Sa...	United States
3	Matt Beisner	United States
4	Benjamin Valic, Lily Sanfelippo, Jakari Fraser...	United States

	date_added	release_year	rating	duration \
0	September 24, 2021	2021	TV-PG	88 min
1	September 24, 2021	2011	G	93 min
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	listed_in \
0	Documentary
1	Comedy, Fantasy, Kids
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	description
0	Two Pixar filmmakers strive to bring their uni...
1	The puppies go on a spooky adventure through a...
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4	Spidey teams up with pals to become The Spidey...
show_id	object
type	object
title	object
director	object
cast	object
country	object

```

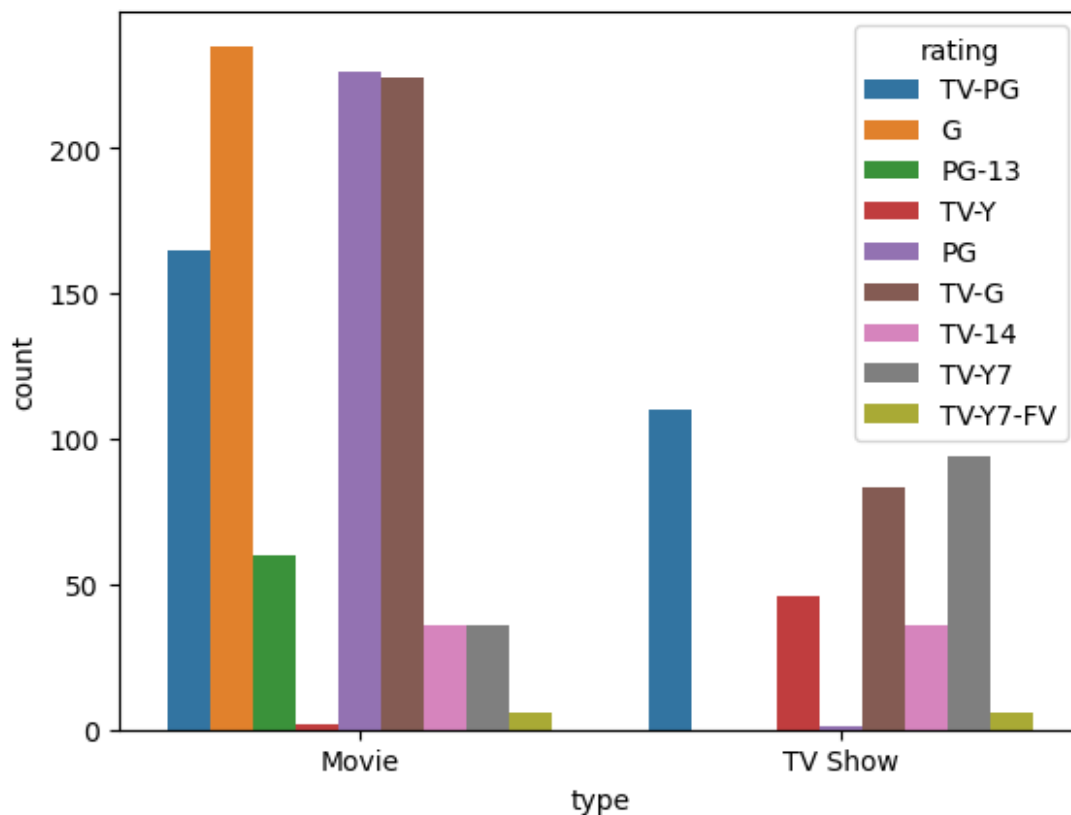
date_added      object
release_year    int64
rating          object
duration        object
listed_in       object
description      object
dtype: object

import pandas as pd
import seaborn as sns
import matplotlib.pyplot as plt

df = pd.read_csv('C:\\Users\\HP\\Downloads\\disney_plus_titles.csv')

sns.countplot(x='type', data=df, hue='rating')
plt.show()

```

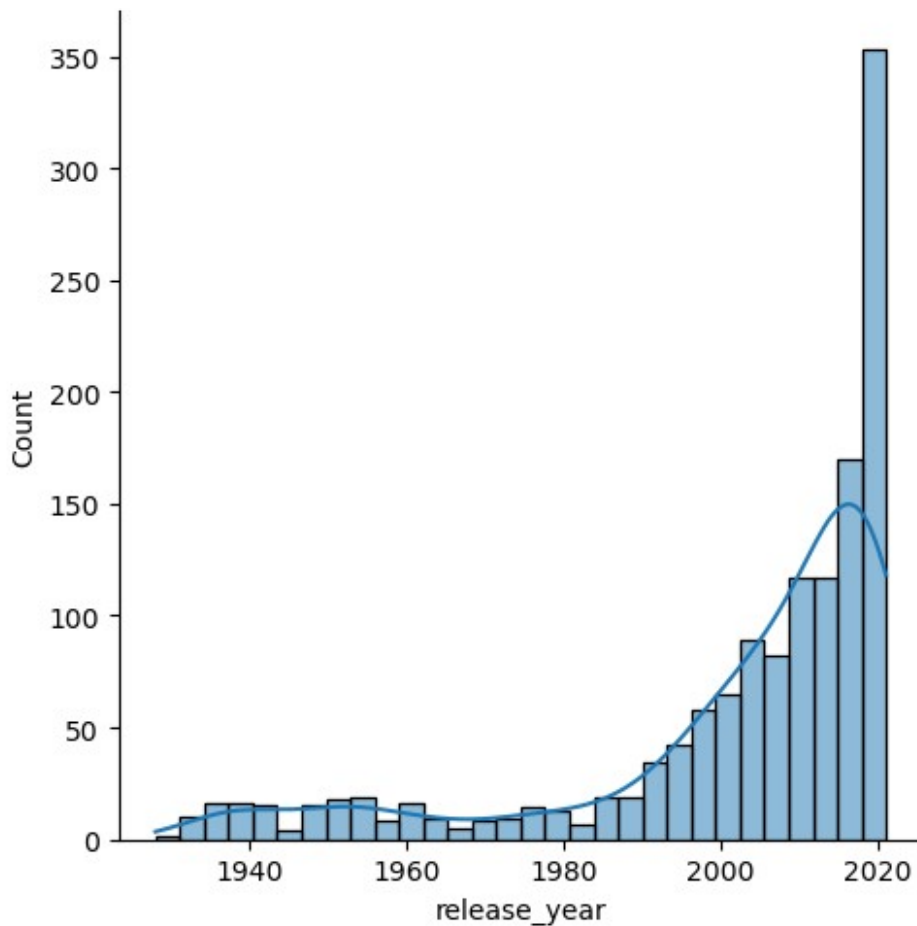


```

sns.displot(x='release_year', data=df, bins=30, kde=True);

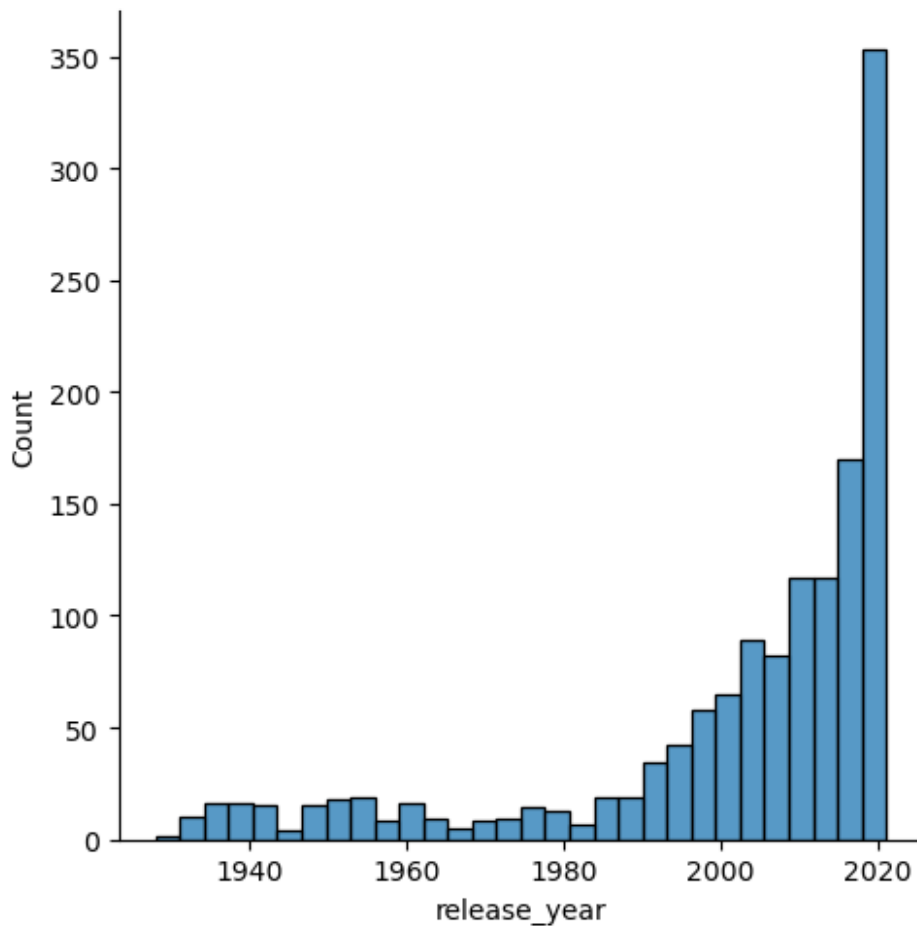
```

C:\Users\HP\anaconda3\Lib\site-packages\seaborn_oldcore.py:1119:
FutureWarning: use_inf_as_na option is deprecated and will be removed
in a future version. Convert inf values to NaN before operating
instead.
with pd.option_context('mode.use_inf_as_na', True):



```
sns.displot(x='release_year',data=df,bins=30,kde=False);
```

```
C:\Users\HP\anaconda3\Lib\site-packages\seaborn\_oldcore.py:1119:  
FutureWarning: use_inf_as_na option is deprecated and will be removed  
in a future version. Convert inf values to NaN before operating  
instead.  
with pd.option_context('mode.use_inf_as_na', True):
```



```
sns.displot(x='rating',data=df,bins=10,kde=True,color='plum');
```

```
C:\Users\HP\anaconda3\Lib\site-packages\seaborn\_oldcore.py:1119:  
FutureWarning: use_inf_as_na option is deprecated and will be removed  
in a future version. Convert inf values to NaN before operating  
instead.  
with pd.option_context('mode.use_inf_as_na', True):
```

