```
In [7]: import numpy as np
        import pandas as pd
```

```
In [8]: df=pd.read_csv('netflix_titles.csv')
```

```
In [9]: df.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
```

```
In [10]: df.columns
```

```
Out[10]: Index(['show_id', 'type', 'title', 'director', 'cast', 'country', '
         date_added',
                'release_year', 'rating', 'duration', 'listed_in', 'descript
         ion'],
               dtype='object')
```

In [18]: df

Out[18]:

	show_id	type	title	director	cast	country	date_added	release_year	
0	s1	Movie	Dick Johnson Is Dead	Kirsten Johnson	NaN	United States	September 25, 2021	2020	
1	s2	TV Show	Blood & Water	NaN	Ama Qamata, Khosi Ngema, Gail Mabalane, Thaban...	South Africa	September 24, 2021	2021	
2	s3	TV Show	Ganglands	Julien Leclercq	Sami Bouajila, Tracy Gotoas, Samuel Jouy, Nabi...	NaN	September 24, 2021	2021	
3	s4	TV Show	Jailbirds New Orleans	NaN	NaN	NaN	September 24, 2021	2021	
4	s5	TV Show	Kota Factory	NaN	Mayur More, Jitendra Kumar, Ranjan Raj, Alam K...	India	September 24, 2021	2021	
...	...	...	...	...	...	...	...	...	...
8802	s8803	Movie	Zodiac	David Fincher	Mark Ruffalo, Jake Gyllenhaal, Robert Downey J...	United States	November 20, 2019	2007	
8803	s8804	TV Show	Zombie Dumb	NaN	NaN	NaN	July 1, 2019	2018	
8804	s8805	Movie	Zombieland	Ruben Fleischer	Jesse Eisenberg, Woody Harrelson, Emma Stone, ...	United States	November 1, 2019	2009	

	show_id	type	title	director	cast	country	date_added	release_year	
8805	s8806	Movie	Zoom	Peter Hewitt	Tim Allen, Courteney Cox, Chevy Chase, Kate Ma...	United States	January 11, 2020	2006	
					Vicky				

In [19]: `df1=df.set_index('show_id')`

	show_id	type	title	director	cast	country	date_added	release_year	
8805	s8806	Movie	Zoom	Peter Hewitt	Tim Allen, Courteney Cox, Chevy Chase, Kate Ma...	United States	January 11, 2020	2006	
					Vicky				

In [20]: df1

Out[20]:

show_id	type	title	director	cast	country	date_added	release_year	rating
s1	Movie	Dick Johnson Is Dead	Kirsten Johnson	NaN	United States	September 25, 2021	2020	PG-13
s2	TV Show	Blood & Water	NaN	Ama Qamata, Khosi Ngema, Gail Mabalane, Thaban...	South Africa	September 24, 2021	2021	TV-MA
s3	TV Show	Ganglands	Julien Leclercq	Sami Bouajila, Tracy Gotoas, Samuel Jouy, Nabi...	NaN	September 24, 2021	2021	TV-MA
s4	TV Show	Jailbirds New Orleans	NaN	NaN	NaN	September 24, 2021	2021	TV-MA
s5	TV Show	Kota Factory	NaN	Mayur More, Jitendra Kumar, Ranjan Raj, Alam K...	India	September 24, 2021	2021	TV-MA
...	...	...	...	...	...	...	...	...
s8803	Movie	Zodiac	David Fincher	Mark Ruffalo, Jake Gyllenhaal, Robert Downey J...	United States	November 20, 2019	2007	R
s8804	TV Show	Zombie Dumb	NaN	NaN	NaN	July 1, 2019	2018	TV-Y7
s8805	Movie	Zombieland	Ruben Fleischer	Jesse Eisenberg, Woody Harrelson, Emma Stone, ...	United States	November 1, 2019	2009	R

	type	title	director	cast	country	date_added	release_year	rating
show_id								
s8806	Movie	Zoom	Peter Hewitt	Tim Allen, Courteney Cox, Chevy Chase, Kate Ma...	United States	January 11, 2020	2006	PG
				Vicky				

In [24]: `missing_count=df.isnull().sum()`

In [25]: `missing_count`

```
Out[25]: 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
```

In [26]: `df[df['director'].isnull()]`

Out[26]:

	show_id	type	title	director	cast	country	date_added	release_year	
1	s2	TV Show	Blood & Water	NaN	Ama Qamata, Khosi Ngema, Gail Mabalane, Thaban...	South Africa	September 24, 2021	2021	
3	s4	TV Show	Jailbirds New Orleans	NaN	NaN	NaN	September 24, 2021	2021	
4	s5	TV Show	Kota Factory	NaN	Mayur More, Jitendra Kumar, Ranjan Raj, Alam K...	India	September 24, 2021	2021	
10	s11	TV Show	Vendetta: Truth, Lies and The Mafia	NaN	NaN	NaN	September 24, 2021	2021	
14	s15	TV Show	Crime Stories: India Detectives	NaN	NaN	NaN	September 22, 2021	2021	
...	...	...	...	...	...	...	...	...	
8795	s8796	TV Show	Yu-Gi-Oh! Arc-V	NaN	Mike Liscio, Emily Bauer, Billy Bob Thompson, ...	Japan, Canada	May 1, 2018	2015	
8796	s8797	TV Show	Yunus Emre	NaN	Gökhan Atalay, Payidar Tüfekçioglu, Baran Akbu...	Turkey	January 17, 2017	2016	
8797	s8798	TV Show	Zak Storm	NaN	Michael Johnston, Jessica Gee-George, Christin...	United States, France, South Korea, Indonesia	September 13, 2018	2016	
8800	s8801	TV Show	Zindagi Gulzar Hai	NaN	Sanam Saeed, Fawad Khan, Ayesha Omer, Mehreen ...	Pakistan	December 15, 2016	2012	

	show_id	type	title	director	cast	country	date_added	release_year	r
8803	s8804	TV Show	Zombie Dumb	NaN	NaN	NaN	July 1, 2019	2018	

In [27]: `df['director'].isnull()`

Out[27]:
```
0       False
1        True
2       False
3        True
4        True
         ...
8802    False
8803     True
8804    False
8805    False
8806    False
Name: director, Length: 8807, dtype: bool
```

In [28]: `df1['director'].isnull()`

Out[28]:
```
show_id
s1       False
s2        True
s3       False
s4        True
s5        True
          ...
s8803    False
s8804     True
s8805    False
s8806    False
s8807    False
Name: director, Length: 8807, dtype: bool
```

In [ ]: