



# Exercise 1

## Exercise 1

```
%matplotlib inline
import pandas as pd
```

```
titles = pd.read_csv('/content/titles.csv')
titles.head()
```

```
cast = pd.read_csv('/content/cast.csv', index_col=None)
cast.head()
```

	title	year	name	type	character	n
0	Closet Monster	2015	Buffy #1	actor	Buffy 4	31.0
1	Suuri illusioni	1985	Homo \$	actor	Guests	22.0
2	Battle of the Sexes	2017	\$hutter	actor	Bobby Riggs Fan	10.0
3	Secret in Their Eyes	2015	\$hutter	actor	2002 Dodger Fan	NaN
4	Steve Jobs	2015	\$hutter	actor	1988 Opera House Patron	NaN

▼ How many movies are listed in the titles dataframe?

```
len(titles)
```

```
244914
```

▼ What are the earliest two films listed in the titles dataframe?

```
titles.sort_values(by='year').head(2)
```

	title	year
193222	Miss Jerry	1894

51388 The Startled Lover 1898

## ▼ How many movies have the title "Hamlet"?

```
len(titles[titles.title == "Hamlet"])
```

20

## ▼ How many movies are titled "North by Northwest"?

```
len(titles[titles.title == "North by Northwest"])
```

1

## ▼ When was the first movie titled "Hamlet" made?

```
titles[titles.title == "Hamlet"].year.min()
```

1910

## ▼ List all of the "Treasure Island" movies from earliest to most recent.

```
titles[titles.title == "Treasure Island"].sort_values(by='year')
```

	title	year
55686	Treasure Island	1918
196514	Treasure Island	1920
141822	Treasure Island	1934
77354	Treasure Island	1950
65051	Treasure Island	1972
37238	Treasure Island	1973

**173051** Treasure Island 1985

**27076** Treasure Island 1999

How many movies were made in the year 1950?

```
len(titles[titles.year == 1950])  
  
1113
```

How many movies were made in the year 1960?

```
len(titles[titles.year == 1960])  
  
1549
```

How many movies were made from 1950 through 1959?

```
len(titles[(titles.year >= 1950) & (titles.year <= 1959)])  
  
12934
```

In what years has a movie titled "Batman" been released?

```
titles[titles.title == "Batman"]
```

	title	year
<b>39349</b>	Batman	1943
<b>240896</b>	Batman	1989

How many roles were there in the movie "Inception"?

```
len(cast[cast.title == "Inception"])
```

78

How many roles in the movie "Inception" are NOT ranked by an "n" value?

```
len(cast[(cast.title == "Inception") & (cast.n.isnull())])
```

27

But how many roles in the movie "Inception" did receive an "n" value?

```
len(cast[(cast.title == "Inception") & (cast.n.notnull())])
```

51

Display the cast of "North by Northwest" in their correct "n"-value order, ignoring roles that did not earn a numeric "n" value.

```
cast[(cast.title == "North by Northwest") & (cast.n.notnull())].sort_values(by='n')
```

	title	year	name	type	character	n
<b>871426</b>	North by Northwest	1959	Cary Grant	actor	Roger O. Thornhill	1.0
<b>3518333</b>	North by Northwest	1959	Eva Marie Saint	actress	Eve Kendall	2.0
<b>1457165</b>	North by Northwest	1959	James Mason	actor	Phillip Vandamm	3.0
<b>3157232</b>	North by Northwest	1959	Jessie Royce Landis	actress	Clara Thornhill	4.0
<b>356707</b>	North by Northwest	1959	Leo G. Carroll	actor	The Professor	5.0

<b>3048272</b>	North by Northwest	1959	Josephine Hutchinson	actress	Mrs. Townsend	6.0
<b>1695173</b>	North by Northwest	1959	Philip Ober	actor	Lester Townsend	7.0
<b>1275337</b>	North by Northwest	1959	Martin Landau	actor	Leonard	8.0
<b>2447081</b>	North by Northwest	1959	Adam Williams	actor	Valerian	9.0
<b>1811387</b>	North by Northwest	1959	Edward Platt	actor	Victor Larrabee	10.0
<b>665769</b>	North by Northwest	1959	Robert Ellenstein	actor	Light	11.0

Display the entire cast, in "n"-order, of the 1972 film "Sleuth".

```
cast[(cast.title == "Sleuth") & (cast.year == 1972) & (cast.n.notnull())].sort_values(by='r
```

	title	year	name	type	character	n
<b>1705394</b>	Sleuth	1972	Laurence Olivier	actor	Andrew Wyke	1.0
<b>326773</b>	Sleuth	1972	Michael Caine	actor	Milo Tindle	2.0
<b>373876</b>	Sleuth	1972	Alec Cawthorne	actor	Inspector Doppler	3.0
<b>1465483</b>	Sleuth	1972	John (II) Matthews	actor	Detective Sergeant Tarrant	4.0
<b>2724553</b>	Sleuth	1972	Eve (III) Channing	actress	Marguerite Wyke	5.0
<b>1448690</b>	Sleuth	1972	Teddy Martin	actor	Police Constable Higgs	6.0

Now display the entire cast, in "n"-order, of the 2007 version of "Sleuth".

```
cast[(cast.title == "Sleuth") & (cast.year == 2007) & (cast.n.notnull())].sort_values(by='r
```

	title	year	name	type	character	n
<b>326774</b>	Sleuth	2007	Michael Caine	actor	Andrew	1.0
<b>1293634</b>	Sleuth	2007	Jude Law	actor	Milo	2.0
<b>1805907</b>	Sleuth	2007	Harold Pinter	actor	Man on T.V.	3.0

How many roles were credited in the silent 1921 version of Hamlet?

```
len(cast[(cast.title == "Hamlet") & (cast.year == 1921)])
```

9

How many roles were credited in Branagh's 1996 Hamlet?

```
len(cast[(cast.title == "Hamlet") & (cast.year == 1996)])
```

54

How many "Hamlet" roles have been listed in all film credits through history?

```
len(cast[cast.character == "Hamlet"])
```

96

How many people have played an "Ophelia"?

```
len(cast[cast.character == "Ophelia"])
```

117

How many people have played a role called "The Dude"?

```
len(cast[cast.character == "The Dude"])
```

19

How many people have played a role called "The Stranger"?

```
len(cast[cast.character == "The Stranger"])
```

212

How many roles has Sidney Poitier played throughout his career?

```
len(cast[cast.name == "Sidney Poitier"])
```

43

How many roles has Judi Dench played?

```
len(cast[cast.name == "Judi Dench"])
```

55

List the supporting roles (having n=2) played by Cary Grant in the 1940s, in order by year.

```
cast[
    (cast.name == 'Cary Grant') &
    (cast.year // 10 == 194) &
    (cast.n == 2)
].sort_values(by='year')
```

	title	year	name	type	character	n
<b>871423</b>	My Favorite Wife	1940	Cary Grant	actor	Nick Arden	2.0
<b>871433</b>	Penny Serenade	1941	Cary Grant	actor	Roger Adams	2.0

List the leading roles that Cary Grant played in the 1940s in

order by year.

```
cast[
    (cast.name == 'Cary Grant') &
    (cast.year // 10 == 194) &
    (cast.n == 1)
].sort_values(by='year')
```

	title	year	name	type	character	n
871448	The Howards of Virginia	1940	Cary Grant	actor	Matt Howard	1.0
871407	His Girl Friday	1940	Cary Grant	actor	Walter Burns	1.0
871450	The Philadelphia Story	1940	Cary Grant	actor	C. K. Dexter Haven	1.0
871438	Suspicion	1941	Cary Grant	actor	Johnnie Aysgarth	1.0
871452	The Talk of the Town	1942	Cary Grant	actor	Leopold Dilg	1.0
871429	Once Upon a Honeymoon	1942	Cary Grant	actor	Patrick 'Pat' O'Toole	1.0
871398	Destination Tokyo	1943	Cary Grant	actor	Capt. Cassidy	1.0
871422	Mr. Lucky	1943	Cary Grant	actor	Joe Adams -posing as Joe Bascopolous	1.0
871430	Once Upon a Time	1944	Cary Grant	actor	Jerry Flynn	1.0
871390	Arsenic and Old Lace	1944	Cary Grant	actor	Mortimer Brewster	1.0
871425	None But the Lonely Heart	1944	Cary Grant	actor	Ernie Mott	1.0
871424	Night and Day	1946	Cary Grant	actor	Cole Porter	1.0

How many roles were available for actors in the 1950s?

```
len(cast[
    (cast.year // 10 == 195) &
    (cast.type == "actor")
])
```



```
])  
  
157738
```

How many roles were available for actresses in the 1950s?

```
len(cast[  
    (cast.year // 10 == 195) &  
    (cast.type == "actress")  
])  
  
57733
```

How many leading roles (n=1) were available from the beginning of film history through 1980?

```
len(cast[  
    (cast.year <= 1980) &  
    (cast.n == 1)  
])  
  
65140
```

How many non-leading roles were available through from the beginning of film history through 1980?

```
len(cast[  
    (cast.year <= 1980) &  
    (cast.n != 1)  
])  
  
1117667
```

How many roles through 1980 were minor enough that they did not warrant a numeric "n" rank?

```
len(cast[
  (cast.year <= 1980) &
  (cast.n.isnull())
])
```

448347

Double-click (or enter) to edit