```
#535230080_Georgia Sugisandhea
import pandas as pd #import package panda
```

```
from google.colab import drive
drive.mount('/content/drive') #menghubungkan google colab dengan google drive
```

```
Mounted at /content/drive
```

```
path = '/content/drive/MyDrive/Big Data/Praktikum 03/IMDB-Movie-Data-Filtered.csv' #Memasukkan path kepada file yang dipakai
movies = pd.read_csv(path) #Membaca path file dengan pandas
```

```
movies.head() #Mengeluarkan 5 data pertama
```

	color	director_name	num_critic_for_reviews	duration	actor_2_name	gross	genres	actor_1_name	movie_titl
0	Color	James Cameron	723.0	178.0	Joel David Moore	760505847.0	Action|Adventure|Fantasy|Sci-Fi	CCH Pounder	Avata
1	Color	Gore Verbinski	302.0	169.0	Orlando Bloom	309404152.0	Action|Adventure|Fantasy	Johnny Depp	Pirates of the Caribbean At World's End
2	Color	Sam Mendes	602.0	148.0	Rory Kinnear	200074175.0	Action|Adventure|Thriller	Christoph Waltz	Spectre
3	Color	Christopher Nolan	813.0	164.0	Christian Bale	448130642.0	Action|Thriller	Tom Hardy	The Dark Knight Rises
4	Color	Andrew Stanton	462.0	132.0	Samantha Morton	73058679.0	Action|Adventure|Sci-Fi	Daryl Sabara	John Carte

5 rows × 21 columns

```
movies.tail() #Mengeluarkan 5 data terakhir
```

	color	director_name	num_critic_for_reviews	duration	actor_2_name	gross	genres	actor_1_name	mov
3804	Color	Shane Carruth	143.0	77.0	David Sullivan	424760.0	Drama|Sci-Fi|Thriller	Shane Carruth	
3805	Color	Neill Dela Llana	35.0	80.0	Edgar Tancangco	70071.0	Thriller	Ian Gamazon	
3806	Color	Robert Rodriguez	56.0	81.0	Peter Marquardt	2040920.0	Action|Crime|Drama|Romance|Thriller	Carlos Gallardo	E
3807	Color	Edward Burns	14.0	95.0	Caitlin FitzGerald	4584.0	Comedy|Drama	Kerry Bishé	N
3808	Color	Jon Gunn	43.0	90.0	Brian Herzlinger	85222.0	Documentary	John August	My

5 rows × 21 columns

```
movies.info() #Mengeluarkan informasi dataset dari data yang dipakai
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 3809 entries, 0 to 3808
Data columns (total 21 columns):
 #   Column                  Non-Null Count  Dtype
---  ------                  --------------  -----
 0   color                   3809 non-null   object
 1   director_name           3809 non-null   object
 2   num_critic_for_reviews  3809 non-null   float64
 3   duration                3809 non-null   float64
 4   actor_2_name            3809 non-null   object
 5   gross                   3809 non-null   float64
 6   genres                  3809 non-null   object
 7   actor_1_name            3809 non-null   object
 8   movie_title             3809 non-null   object
 9   num_voted_users         3809 non-null   int64
 10  actor_3_name            3809 non-null   object
 11  plot_keywords           3809 non-null   object
 12  movie_imdb_link         3809 non-null   object
 13  num_user_for_reviews    3809 non-null   float64
```

```
 14   language                3809 non-null   object
 15   country                 3809 non-null   object
 16   content_rating          3809 non-null   object
 17   budget                  3809 non-null   float64
 18   title_year              3809 non-null   float64
 19   imdb_score              3809 non-null   float64
 20   movie_facebook_likes    3809 non-null   int64
dtypes: float64(7), int64(2), object(12)
memory usage: 625.0+ KB
```

```
movies.shape #Menunjukkan bentuk dataset, yaitu 3809 baris dan 21 kolom
```

```
    (3809, 21)
```

Double-click (or enter) to edit

```
movies.columns #Menampilkan nama nama kolom dari dataset yang dipakai
```

```
    Index(['color', 'director_name', 'num_critic_for_reviews', 'duration',
           'actor_2_name', 'gross', 'genres', 'actor_1_name', 'movie_title',
           'num_voted_users', 'actor_3_name', 'plot_keywords', 'movie_imdb_link',
           'num_user_for_reviews', 'language', 'country', 'content_rating',
           'budget', 'title_year', 'imdb_score', 'movie_facebook_likes'],
          dtype='object')
```

```
movies.columns = ["Colour", "Director", "Critics", "Duration", "Actor 2", "Gross Income", "Genre", "Actor 1", "Title", "Votes", "Actor 3", "
movies.columns #Mengganti nama kolom dan menampilkan hasil perubahan
```

```
    Index(['Colour', 'Director', 'Critics', 'Duration', 'Actor 2', 'Gross Income',
           'Genre', 'Actor 1', 'Title', 'Votes', 'Actor 3', 'Keywords',
           'IMDB link', 'Reviews', 'Language', 'Country', 'Content Rating',
           'Budget', 'Year', 'Score', 'Facebook Likes'],
          dtype='object')
```

```
movies[movies.duplicated()] #Menampilkan entry entry yang ganda/duplicate
```

	Colour	Director	Critics	Duration	Actor 2	Gross Income	Genre	Actor 1	Title	Votes	..
133	Color	David Yates	248.0	110.0	Alexander Skarsgård	124051759.0	Action|Adventure|Drama|Romance	Christopher Walken			
182	Color	Bill Condon	322.0	115.0	Kristen Stewart	292298923.0	Adventure|Drama|Fantasy|Romance	Robert Pattinson			
292	Color	Joe Wright	256.0	111.0	Cara Delevingne	34964818.0	Adventure|Family|Fantasy	Hugh Jackman	Pan	39956	..
377	Color	Josh Trank	369.0	100.0	Reg E. Cathey	56114221.0	Action|Adventure|Sci-Fi	Tim Blake Nelson	Fantastic Four	110486	..
383	Color	Rob Cohen	187.0	106.0	Vin Diesel	144512310.0	Action|Crime|Thriller	Paul Walker	The Fast and the Furious	272223	..
565	Color	Brett Ratner	245.0	101.0	Rufus Sewell	72660029.0	Action|Adventure	Dwayne Johnson	Hercules	115687	..
627	Color	Paul Verhoeven	196.0	113.0	Rachel Ticotin	119412921.0	Action|Sci-Fi	Ronny Cox	Total Recall	240241	..
758	Color	Joss Whedon	703.0	173.0	Robert Downey Jr.	623279547.0	Action|Adventure|Sci-Fi	Chris Hemsworth	The Avengers	995415	..
1155	Color	Angelina Jolie Pitt	322.0	137.0	Jack O'Connell	115603980.0	Biography|Drama|Sport|War	Finn Wittrock	Unbroken	103589	..
1237	Color	Paul McGuigan	159.0	110.0	Spencer Wilding	5773519.0	Drama|Horror|Sci-Fi|Thriller	Daniel Radcliffe	Victor Frankenstein	28618	..
1369	Color	Albert Hughes	208.0	122.0	Jason Flemyng	31598308.0	Horror|Mystery|Thriller	Johnny Depp	From Hell	124765	..
1910	Color	Andy Cadiff	65.0	101.0	Stark Sands	12189514.0	Comedy|Romance	Annabella Sciorra	Chasing Liberty	30092	..
2005	Color	Paul McGuigan	98.0	114.0	Christopher Cousins	12831121.0	Drama|Mystery|Romance|Thriller	Jessica Paré	Wicker Park	44979	..
2115	Color	Frank Oz	168.0	87.0	Ewen Bremner	8579684.0	Comedy	Peter Dinklage	Death at a Funeral	89547	..
2272	Black and White	Yimou Zhang	283.0	80.0	Tony Chiu Wai Leung	84961.0	Action|Adventure|History	Jet Li	Hero	149414	..
2305	Color	Neil Burger	236.0	110.0	Eddie Marsan	39825798.0	Drama|Mystery|Romance|Thriller	Rufus Sewell	The Illusionist	295375	..
2332	Color	Jon Lucas	81.0	100.0	Jay Hernandez	55461307.0	Comedy	Mila Kunis	Bad Moms	4654	..
2338	Color	Vic Armstrong	169.0	110.0	Lea Thompson	13998282.0	Action|Drama|Fantasy|Mystery|Thriller	Nicolas Cage	Left Behind	24854	..
2377	Color	John Carpenter	318.0	101.0	Donald Pleasence	47000000.0	Horror|Thriller	Jamie Lee Curtis	Halloween	157857	..
2505	Color	Ole Bornedal	264.0	92.0	Madison Davenport	49122319.0	Horror|Thriller	Kyra Sedgwick	The Possession	47169	..
2509	Color	Stephen Frears	51.0	119.0	Peter Capaldi	34700000.0	Drama|Romance	Keanu Reeves	Dangerous Liaisons	52846	..
2526	Color	Shawn Levy	69.0	88.0	Donald Faison	47811275.0	Adventure|Comedy|Family	Frankie Muniz	Big Fat Liar	29008	..
2674	Color	John Lee Hancock	106.0	137.0	Marc Blucas	22406362.0	Drama|History|War|Western	Dennis Quaid	The Alamo	16832	..
2788	Color	Guy Ritchie	151.0	104.0	Brad Pitt	30093107.0	Comedy|Crime	Jason Statham	Snatch	600996	..
2941	Color	Herbert Ross	60.0	107.0	Chris Penn	80000000.0	Drama|Music|Romance	Dianne Wiest	Footloose	51459	..
3012	Color	Paul Haggis	287.0	115.0	Loretta Devine	54557348.0	Crime|Drama|Thriller	Don Cheadle	Crash	361169	..
3034	Color	Michael Winterbottom	71.0	115.0	Sarah Polley	403932.0	Drama|Romance|Western	Milla Jovovich	The Claim	5254	..

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3208	Color	Tim Blake Nelson	92.0	95.0	Andrew Keegan	16017403.0	Drama|Romance|Thriller	Mekhi Phifer	O	17333	..
3310	Color	Wes Craven	160.0	107.0	Emily Meade	14637490.0	Horror|Mystery|Thriller	Frank Gril	My Soul to		▲
3445	Color	Rob Zombie	220.0	119.0	Tyler Mane	33386128.0	Horror	Sco Taylo Compto			
3496	Color	Kenneth Branagh	85.0	150.0	Brian Blessed	4414535.0	Drama	Jul Christie	Hamlet		
3510	Color	Bruce McCulloch	52.0	85.0	Megan Mullally	13973532.0	Comedy|Crime	Martin Starr	Stealing Harvard	11211	..
3616	Color	Peter Cattaneo	122.0	91.0	Mark Addy	45857453.0	Comedy|Drama|Music	Tom Wilkinson	The Full Monty	82232	..
3645	Color	Danny Boyle	393.0	101.0	Spencer Wilding	2319187.0	Crime|Drama|Mystery|Thriller	Rosario Dawson	Trance	92640	..
3714	Color	Tamra Davis	111.0	93.0	Katherine Boecher	37188667.0	Comedy|Drama	Britney Spears	Crossroads	34219	..

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35 rows × 21 columns

Double-click (or enter) to edit

```
moviesClean = movies.drop_duplicates() #Menghapus semua entry yang duplicate dan memasukkan ke variable baru
moviesClean[moviesClean.duplicated()] #Menampilkan entry ganda di list yang baru
```

Colour	Director	Critics	Duration	Actor 2	Gross Income	Genre	Actor 1	Title	Votes	...	Keywords	IMDB link	Reviews	Language	Country	Content Rating

0 rows × 21 columns

```
moviesClean.describe() #Mengeluarkan nilai statistik deskriptif dari dataset yang dipakai
```

	Critics	Duration	Gross Income	Votes	Reviews	Budget	Year	Score	Facebook Likes
count	3774.000000	3774.000000	3.774000e+03	3.774000e+03	3774.000000	3.774000e+03	3774.000000	3774.000000	3774.000000
mean	165.626391	110.085056	5.196059e+07	1.043776e+05	332.372814	4.576120e+07	2003.015368	6.462666	9249.777954
std	123.676886	22.652983	6.967338e+07	1.512196e+05	410.023180	2.254778e+08	9.890751	1.054046	21459.205923
min	2.000000	37.000000	1.620000e+02	4.800000e+01	2.000000	2.180000e+02	1927.000000	1.600000	0.000000
25%	75.000000	95.000000	7.743569e+06	1.865775e+04	106.000000	1.000000e+07	1999.000000	5.900000	0.000000
50%	137.000000	106.000000	2.911016e+07	5.290100e+04	207.000000	2.500000e+07	2005.000000	6.600000	218.000000
75%	223.000000	120.000000	6.648315e+07	1.269035e+05	395.000000	5.000000e+07	2010.000000	7.200000	11000.000000
max	813.000000	330.000000	7.605058e+08	1.689764e+06	5060.000000	1.221550e+10	2016.000000	9.300000	349000.000000

```
moviesClean.mode() #Mengeluarkan entry yang memiliki frekuensi terbanyak
moviesClean['Director'].mode() #Mengeluarkan director yang memiliki frekuensi terbanyak
```

```
0    Steven Spielberg
Name: Director, dtype: object
```

```python
import numpy as np #Import package numpy sebagai np
import pandas as pd #Import packaget pandas sebagai pd

#Membuat sebuah dataframe
df = pd.DataFrame([('bird', 2, 2),
                   ('mammal', 4, np.nan),
                   ('arthropod', 8, 0),
                   ('bird', 2, np.nan),
                   ('cat', 4, np.nan),
                   ('cat', 4, np.nan)],
                  index=('falcon', 'horse', 'spider', 'ostritch', 'tiger', 'lion'), #Membuat nama indexs setiap baris
                  columns=('species', 'legs', 'wings')) #Membuat nama kolom

#Mengeluarkan species dengan frekuensi terbanyak
df['species'].mode()
```

```
0    bird
1     cat
Name: species, dtype: object
```

```python
#Menampilkan data sesuai kolom yang disebutkan
moviesClean[['Title', 'Actor 1', 'Actor 2', 'Actor 3', 'Director']]
```

	Title	Actor 1	Actor 2	Actor 3	Director
0	Avatar	CCH Pounder	Joel David Moore	Wes Studi	James Cameron
1	Pirates of the Caribbean: At World's End	Johnny Depp	Orlando Bloom	Jack Davenport	Gore Verbinski
2	Spectre	Christoph Waltz	Rory Kinnear	Stephanie Sigman	Sam Mendes
3	The Dark Knight Rises	Tom Hardy	Christian Bale	Joseph Gordon-Levitt	Christopher Nolan
4	John Carter	Daryl Sabara	Samantha Morton	Polly Walker	Andrew Stanton
...	...	...	...	...	...
3804	Primer	Shane Carruth	David Sullivan	Casey Gooden	Shane Carruth
3805	Cavite	Ian Gamazon	Edgar Tancangco	Quynn Ton	Neill Dela Llana
3806	El Mariachi	Carlos Gallardo	Peter Marquardt	Consuelo Gómez	Robert Rodriguez
3807	Newlyweds	Kerry Bishé	Caitlin FitzGerald	Daniella Pineda	Edward Burns
3808	My Date with Drew	John August	Brian Herzlinger	Jon Gunn	Jon Gunn

3774 rows × 5 columns

```python
#Mencari film dengan durasi terpanjang dari semua data
longest = moviesClean[moviesClean['Duration']==moviesClean['Duration'].max()]

#Mencari film dengan durasi terpendek dari semua data
shortest = moviesClean[moviesClean['Duration']==moviesClean['Duration'].min()]

#Menggabungkan kedua hasil data dan menampilkannya
pd.concat([longest, shortest])
```

	Colour	Director	Critics	Duration	Actor 2	Gross Income	Genre	Actor 1	Title	Votes	...	Keywords
1416	Color	Taylor Hackford	12.0	330.0	Jesse Borrego	4496583.0	Crime|Drama	Delroy Lindo	Blood In, Blood Out	23181	...	1970s|1980s|barrio|gang war|mexican
3359	Color	Sam Raimi	252.0	37.0	Dan Hicks	5923044.0	Comedy|Fantasy|Horror|Thriller	Ted Raimi	Evil Dead II	113451	...	cabin|cabin in the woods|demon|evil dead|woods

2 rows × 21 columns

```python
#Mengeluarkan setiap negara yang ada di list (Ignore pengurangan, setiap negara yang ada ditampilkan hanya sekali)
moviesClean['Country'].unique()
```

```
array(['USA', 'UK', 'New Zealand', 'Canada', 'Australia', 'Germany',
       'China', 'New Line', 'France', 'Japan', 'Spain', 'Hong Kong',
       'Czech Republic', 'Peru', 'South Korea', 'Aruba', 'Denmark',
       'Ireland', 'South Africa', 'Italy', 'Romania', 'Chile',
```

```
                'Netherlands', 'Hungary', 'Russia', 'Belgium', 'Greece', 'Taiwan',
                'Official site', 'Thailand', 'Iran', 'West Germany', 'Georgia',
                'India', 'Mexico', 'Brazil', 'Finland', 'Norway', 'Iceland',
                'Argentina', 'Colombia', 'Poland', 'Israel', 'Indonesia',
                'Afghanistan', 'Philippines'], dtype=object)
```

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```
 #Mengeluarkan banyaknya negara berbeda yang ada di list (Setiap negara dihitung sekali)
len(moviesClean['Country'].unique())
```

```
    46
```

```
#Mengeluarkan baris data yang memenuhi ketentuan Score>8.3 dan Duration<120
moviesClean[(moviesClean['Score']>8.3) & (moviesClean['Duration']<120)]
```

	Colour	Director	Critics	Duration	Actor 2	Gross Income	Genre	Actor 1	Title	Votes
56	Color	Andrew Stanton	421.0	98.0	Fred Willard	223806889.0	Adventure|Animation|Family|Sci-Fi	John Ratzenberger	WALL·E	718837
487	Color	Roger Allers	186.0	73.0	Nathan Lane	422783777.0	Adventure|Animation|Drama|Family|Musical	Matthew Broderick	The Lion King	644348
1988	Color	Steven Spielberg	234.0	115.0	Karen Allen	242374454.0	Action|Adventure	Harrison Ford	Raiders of the Lost Ark	661017
2069	Black and White	Alfred Hitchcock	290.0	108.0	Vera Miles	32000000.0	Horror|Mystery|Thriller	Janet Leigh	Psycho	422432
2167	Color	Robert Zemeckis	198.0	116.0	Thomas F. Wilson	210609762.0	Adventure|Comedy|Sci-Fi	Lea Thompson	Back to the Future	732212
2837	Black and White	Tony Kaye	162.0	101.0	Beverly D'Angelo	6712241.0	Crime|Drama	Ethan Suplee	American History X	782437
2900	Color	Ridley Scott	392.0	116.0	Yaphet Kotto	78900000.0	Horror|Sci-Fi	Tom Skerritt	Alien	563827
3116	Color	Bryan Singer	162.0	106.0	Chazz Palminteri	23272306.0	Crime|Drama|Mystery|Thriller	Kevin Spacey	The Usual Suspects	740918
3198	Black and White	Christopher Nolan	274.0	113.0	Thomas Lennon	25530884.0	Mystery|Thriller	Callum Rennie	Memento	845580
3274	Color	Darren Aronofsky	234.0	102.0	Mark Margolis	3609278.0	Drama	Ellen Burstyn	Requiem for a Dream	573541
3323	Color	Ron Fricke	115.0	102.0	Balinese Tari Legong Dancers	2601847.0	Documentary|Music	Collin Alfredo St. Dic	Samsara	22457
3370	Color	Damien Chazelle	535.0	107.0	Melissa Benoist	13092000.0	Drama|Music	J.K. Simmons	Whiplash	399138
3555	Black and White	Charles Chaplin	120.0	87.0	Stanley Blystone	163245.0	Comedy|Drama|Family	Paulette Goddard	Modern Times	143086
3584	Color	Quentin Tarantino	173.0	99.0	Steve Buscemi	2812029.0	Crime|Drama|Thriller	Quentin Tarantino	Reservoir Dogs	664719
3705	Color	Marius A. Markevicius	26.0	89.0	Greg Speirs	133778.0	Documentary|Sport	Tommy Sheppard	The Other Dream Team	3086
3770	Color	Majid Majidi	46.0	89.0	Amir Farrokh Hashemian	925402.0	Drama|Family	Bahare Seddiqi	Children of Heaven	27882

16 rows × 21 columns

```
#Solution2 dari mengeluarkan baris data yang memenuhi ketentuan Score>8.3 dan Duration<120
moviesClean.query('Score>8.3 and Duration<120')
```

	Colour	Director	Critics	Duration	Actor 2	Gross Income	Genre			
56	Color	Andrew Stanton	421.0	98.0	Fred Willard	223806889.0	Adventure|Animation|Family|Sci-Fi	Ratze		
487	Color	Roger Allers	186.0	73.0	Nathan Lane	422783777.0	Adventure|Animation|Drama|Family|Musical	Matthew Broderick	The Lion King	644348
1988	Color	Steven Spielberg	234.0	115.0	Karen Allen	242374454.0	Action|Adventure	Harrison Ford	Raiders of the Lost Ark	661017
2069	Black and White	Alfred Hitchcock	290.0	108.0	Vera Miles	32000000.0	Horror|Mystery|Thriller	Janet Leigh	Psycho	422432
2167	Color	Robert Zemeckis	198.0	116.0	Thomas F. Wilson	210609762.0	Adventure|Comedy|Sci-Fi	Lea Thompson	Back to the Future	732212
2837	Black and White	Tony Kaye	162.0	101.0	Beverly D'Angelo	6712241.0	Crime|Drama	Ethan Suplee	American History X	782437
2900	Color	Ridley Scott	392.0	116.0	Yaphet Kotto	78900000.0	Horror|Sci-Fi	Tom Skerritt	Alien	563827
3116	Color	Bryan Singer	162.0	106.0	Chazz Palminteri	23272306.0	Crime|Drama|Mystery|Thriller	Kevin Spacey	The Usual Suspects	740918
3198	Black and White	Christopher Nolan	274.0	113.0	Thomas Lennon	25530884.0	Mystery|Thriller	Callum Rennie	Memento	845580
3274	Color	Darren Aronofsky	234.0	102.0	Mark Margolis	3609278.0	Drama	Ellen Burstyn	Requiem for a Dream	573541
3323	Color	Ron Fricke	115.0	102.0	Balinese Tari Legong Dancers	2601847.0	Documentary|Music	Collin Alfredo St. Dic	Samsara	22457
3370	Color	Damien Chazelle	535.0	107.0	Melissa Benoist	13092000.0	Drama|Music	J.K. Simmons	Whiplash	399138
3555	Black and White	Charles Chaplin	120.0	87.0	Stanley Blystone	163245.0	Comedy|Drama|Family	Paulette Goddard	Modern Times	143086
3584	Color	Quentin Tarantino	173.0	99.0	Steve Buscemi	2812029.0	Crime|Drama|Thriller	Quentin Tarantino	Reservoir Dogs	664719
3705	Color	Marius A. Markevicius	26.0	89.0	Greg Speirs	133778.0	Documentary|Sport	Tommy Sheppard	The Other Dream Team	3086
3770	Color	Majid Majidi	46.0	89.0	Amir Farrokh Hashemian	925402.0	Drama|Family	Bahare Seddiqi	Children of Heaven	27882

16 rows × 21 columns

```
#Solution 3 dari mengeluarkan baris data yang memenuhi ketentuan Score>8.3 dan Duration<120
moviesClean.query('Score>8.3 & Duration<120')
```

	Colour	Director	Critics	Duration	Actor 2	Gross Income	Genre	Actor 1	Title	Votes
56	Color	Andrew Stanton	421.0	98.0	Fred Willard	223806889.0	Adventure|Animation|Family|Sci-Fi	Ratze		
487	Color	Roger Allers	186.0	73.0	Nathan Lane	422783777.0	Adventure|Animation|Drama|Family|Musical	B		
1988	Color	Steven Spielberg	234.0	115.0	Karen Allen	242374454.0	Action|Adventure	Harrison Ford	of the Lost Ark	661017
2069	Black and White	Alfred Hitchcock	290.0	108.0	Vera Miles	32000000.0	Horror|Mystery|Thriller	Janet Leigh	Psycho	422432
2167	Color	Robert Zemeckis	198.0	116.0	Thomas F. Wilson	210609762.0	Adventure|Comedy|Sci-Fi	Lea Thompson	Back to the Future	732212
2837	Black and White	Tony Kaye	162.0	101.0	Beverly D'Angelo	6712241.0	Crime|Drama	Ethan Suplee	American History X	782437
2900	Color	Ridley Scott	392.0	116.0	Yaphet Kotto	78900000.0	Horror|Sci-Fi	Tom Skerritt	Alien	563827
3116	Color	Bryan Singer	162.0	106.0	Chazz Palminteri	23272306.0	Crime|Drama|Mystery|Thriller	Kevin Spacey	The Usual Suspects	740918
3198	Black and White	Christopher Nolan	274.0	113.0	Thomas Lennon	25530884.0	Mystery|Thriller	Callum Rennie	Memento	845580
3274	Color	Darren Aronofsky	234.0	102.0	Mark Margolis	3609278.0	Drama	Ellen Burstyn	Requiem for a Dream	573541
3323	Color	Ron Fricke	115.0	102.0	Balinese Tari Legong Dancers	2601847.0	Documentary|Music	Collin Alfredo St. Dic	Samsara	22457
3370	Color	Damien Chazelle	535.0	107.0	Melissa Benoist	13092000.0	Drama|Music	J.K. Simmons	Whiplash	399138
3555	Black and White	Charles Chaplin	120.0	87.0	Stanley Blystone	163245.0	Comedy|Drama|Family	Paulette Goddard	Modern Times	143086
3584	Color	Quentin Tarantino	173.0	99.0	Steve Buscemi	2812029.0	Crime|Drama|Thriller	Quentin Tarantino	Reservoir Dogs	664719
3705	Color	Marius A. Markevicius	26.0	89.0	Greg Speirs	133778.0	Documentary|Sport	Tommy Sheppard	The Other Dream Team	3086
3770	Color	Majid Majidi	46.0	89.0	Amir Farrokh Hashemian	925402.0	Drama|Family	Bahare Seddiqi	Children of Heaven	27882

16 rows × 21 columns

```
#Mengeluarkan baris data yang memenuhi ketentuan Director berisi nama Ridley Scott
moviesClean[moviesClean['Director']=="Ridley Scott"]
```

	Colour	Director	Critics	Duration	Actor 2	Gross Income	Genre	Actor 1	Title	Votes	...
21	Color	Ridley Scott	343.0	156.0	William Hurt	105219735.0	Action|Adventure|Drama|History	Mark Addy	R		
155	Color	Ridley Scott	314.0	150.0	María Valverde	65007045.0	Action|Adventure|Drama	Christian Bale			
219	Color	Ridley Scott	775.0	124.0	Charlize Theron	126464904.0	Adventure|Mystery|Sci-Fi	Michael Fassbender	Prometheus	456260	...
265	Color	Ridley Scott	239.0	194.0	Orlando Bloom	47396698.0	Action|Adventure|Drama|History|War	Liam Neeson	Kingdom of Heaven	217373	... cen
268	Color	Ridley Scott	568.0	151.0	Donald Glover	228430993.0	Adventure|Drama|Sci-Fi	Matt Damon	The Martian	472488	... a
272	Color	Ridley Scott	265.0	171.0	Connie Nielsen	187670866.0	Action|Drama|Romance	Djimon Hounsou	Gladiator	982637	...
279	Color	Ridley Scott	300.0	176.0	Ruby Dee	130127620.0	Biography|Crime|Drama	Denzel Washington	American Gangster	324671	...
319	Color	Ridley Scott	200.0	152.0	Sam Shepard	108638745.0	Drama|History|War	Ioan Gruffudd	Black Hawk Down	292022	...
614	Color	Ridley Scott	238.0	128.0	Simon McBurney	39380442.0	Action|Drama|Thriller	Leonardo DiCaprio	Body of Lies	174248	...
926	Color	Ridley Scott	97.0	125.0	Demi Moore	48154732.0	Action|Drama|War	Viggo Mortensen	G.I. Jane	60326	...
1283	Color	Ridley Scott	37.0	129.0	Jason Marsden	10300000.0	Adventure|Drama	Jeff Bridges	White Squall	17859	...
1414	Color	Ridley Scott	147.0	117.0	Albert Finney	7458269.0	Comedy|Drama|Romance	Archie Panjabi	A Good Year	70698	...
1542	Color	Ridley Scott	63.0	125.0	Ken Takakura	45645204.0	Action|Crime|Thriller	Stephen Root	Black Rain	39306	...
1658	Color	Ridley Scott	302.0	117.0	Sean Young	27000000.0	Sci-Fi|Thriller	Harrison Ford	Blade Runner	461609	...
1862	Color	Ridley Scott	336.0	138.0	Brad Pitt	16969390.0	Crime|Drama|Thriller	Michael Fassbender	The Counselor	80861	...
2900	Color	Ridley Scott	392.0	116.0	Yaphet Kotto	78900000.0	Horror|Sci-Fi	Tom Skerritt	Alien	563827	... ali
3295	Color	Ridley Scott	314.0	150.0	María Valverde	65007045.0	Action|Adventure|Drama	Christian Bale	Exodus: Gods and Kings	128694	...

17 rows × 21 columns

```python
#Solution2 dari mengeluarkan baris data yang memenuhi ketentuan Director berisi nama Ridley Scott
dir="Ridley Scott"
moviesClean.query('Director==@dir')
```

	Colour	Director	Critics	Duration	Actor 2	Gross Income	Genre	Actor 1	Title	Votes	...
21	Color	Ridley Scott	343.0	156.0	William Hurt	105219735.0	Action|Adventure|Drama|History	Mark Addy	R		
155	Color	Ridley Scott	314.0	150.0	María Valverde	65007045.0	Action|Adventure|Drama	Christian Bale			
219	Color	Ridley Scott	775.0	124.0	Charlize Theron	126464904.0	Adventure|Mystery|Sci-Fi	Michael Fassbender	Prometheus	456260	...
265	Color	Ridley Scott	239.0	194.0	Orlando Bloom	47396698.0	Action|Adventure|Drama|History|War	Liam Neeson	Kingdom of Heaven	217373	... cen
268	Color	Ridley Scott	568.0	151.0	Donald Glover	228430993.0	Adventure|Drama|Sci-Fi	Matt Damon	The Martian	472488	... a
272	Color	Ridley Scott	265.0	171.0	Connie Nielsen	187670866.0	Action|Drama|Romance	Djimon Hounsou	Gladiator	982637	...
279	Color	Ridley Scott	300.0	176.0	Ruby Dee	130127620.0	Biography|Crime|Drama	Denzel Washington	American Gangster	324671	...
319	Color	Ridley Scott	200.0	152.0	Sam Shepard	108638745.0	Drama|History|War	Ioan Gruffudd	Black Hawk Down	292022	...
614	Color	Ridley Scott	238.0	128.0	Simon McBurney	39380442.0	Action|Drama|Thriller	Leonardo DiCaprio	Body of Lies	174248	...
926	Color	Ridley Scott	97.0	125.0	Demi Moore	48154732.0	Action|Drama|War	Viggo Mortensen	G.I. Jane	60326	...
1283	Color	Ridley Scott	37.0	129.0	Jason Marsden	10300000.0	Adventure|Drama	Jeff Bridges	White Squall	17859	...
1414	Color	Ridley Scott	147.0	117.0	Albert Finney	7458269.0	Comedy|Drama|Romance	Archie Panjabi	A Good Year	70698	...
1542	Color	Ridley Scott	63.0	125.0	Ken Takakura	45645204.0	Action|Crime|Thriller	Stephen Root	Black Rain	39306	...
1658	Color	Ridley Scott	302.0	117.0	Sean Young	27000000.0	Sci-Fi|Thriller	Harrison Ford	Blade Runner	461609	...
1862	Color	Ridley Scott	336.0	138.0	Brad Pitt	16969390.0	Crime|Drama|Thriller	Michael Fassbender	The Counselor	80861	...
2900	Color	Ridley Scott	392.0	116.0	Yaphet Kotto	78900000.0	Horror|Sci-Fi	Tom Skerritt	Alien	563827	... ali
3295	Color	Ridley Scott	314.0	150.0	María Valverde	65007045.0	Action|Adventure|Drama	Christian Bale	Exodus: Gods and Kings	128694	...

17 rows × 21 columns

```
#Solution 3 dari mengeluarkan baris data yang memenuhi ketentuan Director berisi nama Ridley Scott
moviesClean.query('Director=="Ridley Scott"')
```

	Colour	Director	Critics	Duration	Actor 2	Gross Income	Genre	Actor 1	Title	Votes	...
21	Color	Ridley Scott	343.0	156.0	William Hurt	105219735.0	Action|Adventure|Drama|History	Mark Addy	R		
155	Color	Ridley Scott	314.0	150.0	María Valverde	65007045.0	Action|Adventure|Drama	Christian Bale			
219	Color	Ridley Scott	775.0	124.0	Charlize Theron	126464904.0	Adventure|Mystery|Sci-Fi	Michael Fassbender	Prometheus	456260	...
265	Color	Ridley Scott	239.0	194.0	Orlando Bloom	47396698.0	Action|Adventure|Drama|History|War	Liam Neeson	Kingdom of Heaven	217373	... cen
268	Color	Ridley Scott	568.0	151.0	Donald Glover	228430993.0	Adventure|Drama|Sci-Fi	Matt Damon	The Martian	472488	... a
272	Color	Ridley Scott	265.0	171.0	Connie Nielsen	187670866.0	Action|Drama|Romance	Djimon Hounsou	Gladiator	982637	...
279	Color	Ridley Scott	300.0	176.0	Ruby Dee	130127620.0	Biography|Crime|Drama	Denzel Washington	American Gangster	324671	...
319	Color	Ridley Scott	200.0	152.0	Sam Shepard	108638745.0	Drama|History|War	Ioan Gruffudd	Black Hawk Down	292022	...
614	Color	Ridley Scott	238.0	128.0	Simon McBurney	39380442.0	Action|Drama|Thriller	Leonardo DiCaprio	Body of Lies	174248	...
926	Color	Ridley Scott	97.0	125.0	Demi Moore	48154732.0	Action|Drama|War	Viggo Mortensen	G.I. Jane	60326	...
1283	Color	Ridley Scott	37.0	129.0	Jason Marsden	10300000.0	Adventure|Drama	Jeff Bridges	White Squall	17859	...
1414	Color	Ridley Scott	147.0	117.0	Albert Finney	7458269.0	Comedy|Drama|Romance	Archie Panjabi	A Good Year	70698	...
1542	Color	Ridley Scott	63.0	125.0	Ken Takakura	45645204.0	Action|Crime|Thriller	Stephen Root	Black Rain	39306	...
1658	Color	Ridley Scott	302.0	117.0	Sean Young	27000000.0	Sci-Fi|Thriller	Harrison Ford	Blade Runner	461609	...
1862	Color	Ridley Scott	336.0	138.0	Brad Pitt	16969390.0	Crime|Drama|Thriller	Michael Fassbender	The Counselor	80861	...
2900	Color	Ridley Scott	392.0	116.0	Yaphet Kotto	78900000.0	Horror|Sci-Fi	Tom Skerritt	Alien	563827	... ali
3295	Color	Ridley Scott	314.0	150.0	María Valverde	65007045.0	Action|Adventure|Drama	Christian Bale	Exodus: Gods and Kings	128694	...

17 rows × 21 columns

```
#Mengeluarkan baris data yang memenuhi ketentuan dimana Actor 1 atau Actor 2 atau Actor 3 berisi nama "Hugh Jackman"
moviesClean[(moviesClean['Actor 2'] == "Hugh Jackman") | (moviesClean['Actor 3'] == "Hugh Jackman") | (moviesClean['Actor 1'] == "Hugh Jackm
```

	Colour	Director	Critics	Duration	Actor 2	Gross Income	Genre	Actor 1	Title	Votes	...
33	Color	Brett Ratner	334.0	104.0	Kelsey Grammer	234360014.0	Action|Adventure|Fantasy|Sci-Fi|Thriller	Hugh Jackman			...
46	Color	Bryan Singer	539.0	149.0	Peter Dinklage	233914986.0	Action|Adventure|Fantasy|Sci-Fi|Thriller	Jennifer Lawrence	Past		
119	Color	Gavin Hood	350.0	119.0	Ryan Reynolds	179883016.0	Action|Adventure|Fantasy|Sci-Fi|Thriller	Hugh Jackman	X-Men Origins: Wolverine	361924	...
140	Color	David Bowers	135.0	85.0	Kate Winslet	64459316.0	Adventure|Animation|Comedy|Family	Hugh Jackman	Flushed Away	85086	...
141	Color	Joe Wright	256.0	111.0	Cara Delevingne	34964818.0	Adventure|Family|Fantasy	Hugh Jackman	Pan	39956	...
152	Color	Peter Ramsey	256.0	97.0	Kamil McFadden	103400692.0	Adventure|Animation|Family|Fantasy	Hugh Jackman	Rise of the Guardians	123553	...
202	Color	Bryan Singer	289.0	134.0	Bruce Davison	214948780.0	Action|Adventure|Fantasy|Sci-Fi|Thriller	Hugh Jackman	X-Men 2	405973	...
231	Color	James Mangold	440.0	138.0	Tao Okamoto	132550960.0	Action|Adventure|Sci-Fi|Thriller	Hugh Jackman	The Wolverine	328067	...
255	Color	Shawn Levy	327.0	127.0	Torey Michael Adkins	85463309.0	Action|Drama|Sci-Fi|Sport	Hugh Jackman	Real Steel	254841	...
385	Color	George Miller	206.0	108.0	Hugh Jackman	197992827.0	Animation|Comedy|Family|Music|Romance	Robin Williams	Happy Feet	132501	...
464	Color	Dominic Sena	166.0	99.0	Don Cheadle	69772969.0	Action|Crime|Thriller	Hugh Jackman	Swordfish	155532	...
504	Color	Bryan Singer	290.0	104.0	Tyler Mane	157299717.0	Action|Adventure|Sci-Fi	Hugh Jackman	X-Men	452928	...
629	Color	Tom Hooper	488.0	158.0	Eddie Redmayne	148775460.0	Drama|Musical|Romance	Hugh Jackman	Les Misérables	243834	...
987	Color	Neill Blomkamp	371.0	120.0	Sharlto Copley	31569268.0	Action|Crime|Drama|Sci-Fi|Thriller	Hugh Jackman	Chappie	172965	...
994	Color	James Mangold	125.0	123.0	Natasha Lyonne	47095453.0	Comedy|Fantasy|Romance	Hugh Jackman	Kate & Leopold	64595	...
1024	Color	Denis Villeneuve	454.0	153.0	Jake Gyllenhaal	60962878.0	Crime|Drama|Mystery|Thriller	Hugh Jackman	Prisoners	383591	...

```
#Mengumpulkan film berdasarkan kelompok value kolom 'Colour' dan menampilkan jumlah dari anggota baris data
moviesClean.groupby(['Colour']).sum()

#atau dengan cara=
moviesClean.groupby('Colour').sum()
```

```
<ipython-input-33-dacfe4c80851>:2: FutureWarning: The default value of numeric_only in C
  moviesClean.groupby(['Colour']).sum()
<ipython-input-33-dacfe4c80851>:5: FutureWarning: The default value of numeric_only in C
  moviesClean.groupby('Colour').sum()
```

	Critics	Duration	Gross Income	Votes	Reviews	Budget	Year