

```
In [2]: import pandas as pd
```

```
In [3]: import numpy as np
```

```
In [4]: data=pd.read_csv("/home/palacement/Downloads/movies.csv")
```

```
In [5]: data.describe()
```

Out[5]:

	srno	year	rating	time
count	49590.000000	49590.000000	10814.000000	45836.000000
mean	24795.500000	2002.303428	3.451248	2628.445436
std	14315.544261	12.534555	0.495601	1604.646265
min	1.000000	1913.000000	1.400000	52.000000
25%	12398.250000	1999.000000	3.100000	1356.000000
50%	24795.500000	2007.000000	3.500000	2563.000000
75%	37192.750000	2010.000000	3.800000	2877.000000
max	49590.000000	2014.000000	4.500000	28813.000000

```
In [6]: data.head()
```

Out[6]:

	srno	movie	year	rating	time
0	1	The Nightmare Before	1993	3.9	4568.0
1	2	The Mummy	1932	3.5	4388.0
2	3	Orphans of the Storm	1921	3.2	9062.0
3	4	The Object of Beauty	1991	2.8	6150.0
4	5	Night Tide	1963	2.8	5126.0

In [7]: `data.tail(50)`

Out[7]:

	srno	movie	year	rating	time
49540	49541	Life With Boys: Season 1: This Time the Proble...	2011	NaN	1368.0
49541	49542	Life With Boys: Season 1: In the Principal's O...	2011	NaN	1368.0
49542	49543	El Fuente: 5994 MP	2013	3.5	471.0
49543	49544	Life With Boys: Season 1: Monkey Talk with Boys	2011	NaN	1368.0
49544	49545	El Fuente: 50 MP	2013	3.3	465.0
49545	49546	Bo Burnham: what.	2013	4.1	3614.0
49546	49547	Life With Boys: Season 1: A Perfect Life with ...	2011	NaN	1368.0
49547	49548	Life With Boys: Season 1: Wrestling with Boys	2011	NaN	1369.0
49548	49549	Life With Boys: Season 1	2011	4.1	NaN
49549	49550	El Fuente: 30 MP	2013	3.3	471.0
49550	49551	El Fuente: 2997 MP	2013	3.2	471.0
49551	49552	El Fuente: 25 MP	2013	3.3	465.0
49552	49553	El Fuente: 24 MP	2013	3.5	484.0
49553	49554	Max Steel	2013	4.1	NaN
49554	49555	Saving Santa	2013	3.8	5038.0
49555	49556	Lilyhammer: Season 1 (Recap)	2013	4.2	194.0
49556	49557	Shinobi Girl	2012	2.0	NaN
49557	49558	GLOW: The Story of the Gorgeous Ladies of Wres...	2012	3.7	4593.0
49558	49559	Mitt (Trailer)	2013	3.0	138.0
49559	49560	My Hope America with Billy Graham: The Cross	2013	NaN	1706.0
49560	49561	The Square (Trailer)	2014	3.6	154.0
49561	49562	My Hope America with Billy Graham	2013	3.9	NaN
49562	49563	My Hope America with Billy Graham: Defining Mo...	2013	NaN	1791.0
49563	49564	My Hope America with Billy Graham: Lose to Gain	2013	NaN	1400.0

	srno	movie	year	rating	time
49564	49565	American Addict	2013	3.5	5377.0
49565	49566	My Hope America with Billy Graham	2013	3.9	NaN
49566	49567	El Fuente: 2997 MP10	2013	2.7	470.0
49567	49568	El Fuente: 25 MP10	2013	2.9	464.0
49568	49569	El Fuente: 24 MP10	2013	2.8	484.0
49569	49570	El Fuente: 23976 MP10	2013	2.9	484.0
49570	49571	The Short Game (Trailer)	2013	4.1	156.0
49571	49572	El Fuente: 5994 MP10	2013	2.8	471.0
49572	49573	El Fuente: 50 MP10	2013	2.9	464.0
49573	49574	El Fuente: 30 MP10	2013	2.8	470.0
49574	49575	Greg Fitzsimmons: Life on Stage	2013	3.3	3671.0
49575	49576	Dave Foley: Relatively Well	2013	3.2	3446.0
49576	49577	Barbie: Life in the Dreamhouse: Barbie Life in...	2013	NaN	1390.0
49577	49578	Barbie: Life in the Dreamhouse: Barbie Life in...	2013	NaN	1458.0
49578	49579	Transformers Prime Beast Hunters: Predacons Ri...	2013	4.2	3950.0
49579	49580	Underground: The Julian Assange Story	2012	3.7	5665.0
49580	49581	Curious George: A Very Monkey Christmas	2009	3.8	3438.0
49581	49582	Mumfie's White Christmas	1996	2.4	1350.0
49582	49583	Lady Gaga & The Muppets' Holiday Spectacular	2013	3.1	3496.0
49583	49584	Sunset Strip	2012	3.0	5770.0
49584	49585	Silver Bells	2013	3.5	5287.0
49585	49586	Winter Wonderland	2013	2.8	1812.0
49586	49587	Top Gear: Series 19: Africa Special	2013	NaN	6822.0
49587	49588	Fireplace For Your Home: Crackling Fireplace w...	2010	NaN	3610.0
49588	49589	Kate Plus Ei8ht	2010	2.7	NaN
49589	49590	Kate Plus Ei8ht: Season 1	2010	2.7	NaN

```
In [8]: data.loc[(data.time>5000)]
```

```
Out[8]:
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	srno	movie	year	rating	time	
	2	3	Orphans of the Storm	1921	3.2	9062.0
	3	4	The Object of Beauty	1991	2.8	6150.0
	4	5	Night Tide	1963	2.8	5126.0
	5	6	One Magic Christmas	1985	3.8	5333.0
	6	7	Muriel's Wedding	1994	3.5	6323.0

49564	49565	American Addict	2013	3.5	5377.0	
49579	49580	Underground: The Julian Assange Story	2012	3.7	5665.0	
49583	49584	Sunset Strip	2012	3.0	5770.0	
49584	49585	Silver Bells	2013	3.5	5287.0	
49586	49587	Top Gear: Series 19: Africa Special	2013	NaN	6822.0	

5897 rows × 5 columns

```
In [9]: data.loc[(data.year==2013)]
```

```
Out[9]:
```

	srno	movie	year	rating	time
8364	8365	Rebirth: New Orleans	2013	2.7	3641.0
8434	8435	Gallowwalkers	2013	3.0	5554.0
16442	16443	Paradise	2013	3.2	5194.0
22147	22148	House of Cards: Season 1	2013	4.4	NaN
22402	22403	House of Cards	2013	4.4	NaN
...
49578	49579	Transformers Prime Beast Hunters: Predacons Ri...	2013	4.2	3950.0
49582	49583	Lady Gaga & The Muppets' Holiday Spectacular	2013	3.1	3496.0
49584	49585	Silver Bells	2013	3.5	5287.0
49585	49586	Winter Wonderland	2013	2.8	1812.0
49586	49587	Top Gear: Series 19: Africa Special	2013	NaN	6822.0

981 rows × 5 columns

```
In [10]: data.loc[(data.time>5000) | (data.year==2013)]
```

```
Out[10]:
```

srno			movie	year	rating	time
2	3		Orphans of the Storm	1921	3.2	9062.0
3	4		The Object of Beauty	1991	2.8	6150.0
4	5		Night Tide	1963	2.8	5126.0
5	6		One Magic Christmas	1985	3.8	5333.0
6	7		Muriel's Wedding	1994	3.5	6323.0
...
49582	49583	Lady Gaga & The Muppets' Holiday Spectacular		2013	3.1	3496.0
49583	49584		Sunset Strip	2012	3.0	5770.0
49584	49585		Silver Bells	2013	3.5	5287.0
49585	49586		Winter Wonderland	2013	2.8	1812.0
49586	49587	Top Gear: Series 19: Africa Special		2013	NaN	6822.0

6719 rows × 5 columns

```
In [11]: data.head(50)
```

```
Out[11]:
```

	srno	movie	year	rating	time
0	1	The Nightmare Before	1993	3.9	4568.0
1	2	The Mummy	1932	3.5	4388.0
2	3	Orphans of the Storm	1921	3.2	9062.0
3	4	The Object of Beauty	1991	2.8	6150.0
4	5	Night Tide	1963	2.8	5126.0
5	6	One Magic Christmas	1985	3.8	5333.0
6	7	Muriel's Wedding	1994	3.5	6323.0
7	8	Mother's Boys	1994	3.4	5733.0
8	9	Nosferatu: Original Version	1929	3.5	5651.0
9	10	Nick of Time	1995	3.4	5333.0
10	11	Broken Blossoms	1919	3.3	5367.0
11	12	Big Night	1996	3.6	6561.0
12	13	The Birth of a Nation	1915	2.9	12118.0
13	14	The Boys from Brazil	1978	3.6	7417.0
14	15	Big Doll House	1971	2.9	5696.0
15	16	The Breakfast Club	1985	4.0	5823.0
16	17	The Bride of Frankenstein	1935	3.7	4485.0
17	18	Beautiful Girls	1996	3.5	6755.0
18	19	Bustin' Loose	1981	3.7	5598.0
19	20	The Beguiled	1971	3.4	6307.0
20	21	Born on the Fourth of July	1989	3.4	8646.0
21	22	Broadcast News	1987	3.4	7940.0
22	23	Swimming with Sharks	1994	3.3	5586.0

	srno	movie	year	rating	time
23	24	Beavis and Butt-head Do America	1996	3.4	4852.0
24	25	Brighton Beach Memoirs	1986	3.4	6564.0
25	26	The Best of Times	1986	3.4	6247.0
26	27	Brassed Off	1996	3.5	6040.0
27	28	Last Tango in Paris	1972	3.1	7732.0
28	29	Leprechaun 2	1994	3.2	5125.0
29	30	Incident at Oglala: The Leonard Peltier Story	1992	3.7	5487.0
30	31	Kalifornia	1993	3.4	7095.0
31	32	The Lady Vanishes	1938	3.7	5762.0
32	33	Jingle All the Way	1996	3.6	5371.0
33	34	Killing Zoe	1993	3.4	5773.0
34	35	King of Beggars	1992	3.6	6025.0
35	36	Into the Woods	1990	4.0	9077.0
36	37	Joe Kidd	1972	3.7	5252.0
37	38	In Too Deep	1999	3.9	5823.0
38	39	King Kong	1976	3.2	8044.0
39	40	Internal Affairs	1990	3.5	6885.0
40	41	Jesus Christ Superstar	1973	3.6	6388.0
41	42	In the Name of the Father	1993	3.9	7972.0
42	43	Easy Money	1987	2.8	5794.0
43	44	Do the Right Thing	1989	3.6	7186.0
44	45	Days of Heaven	1978	3.4	5628.0
45	46	Drop Zone	1994	3.4	6087.0
46	47	Escape from L.A.	1996	3.3	6039.0
47	48	Emma	1996	3.5	7260.0
48	49	Disco Godfather	1979	3.0	5869.0

	srno	movie	year	rating	time
49	50	The Eiger Sanction	1975	3.5	7726.0

```
In [12]: data2=data.loc[(data.rating>=3)&(data.year>2000)&(data.year<=2010)]
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In [13]: data2
```

```
Out[13]:
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srno	movie	year	rating	time
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```
In [14]: data.loc[(data.year>2000)&(data.year<2010)]
```

```
Out[14]:
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	srno	movie	year	rating	time
438	439	Monkeybone	2001	3.1	5561.0
507	508	Impostor	2001	3.4	6143.0
514	515	Hannibal	2001	3.6	7881.0
523	524	Blow Dry	2001	3.3	5420.0
541	542	Along Came a Spider	2001	3.7	6184.0
...
49356	49357	Signing Time: Collection 1: What Time Is It: P...	2007	NaN	1428.0
49357	49358	Signing Time: Collection 1: Let's Learn About ...	2007	NaN	1433.0
49498	49499	Chanbara Beauty: The Movie - Vortex	2009	2.4	5314.0
49514	49515	Female Convict Scorpion	2008	2.8	6051.0
49580	49581	Curious George: A Very Monkey Christmas	2009	3.8	3438.0

20124 rows × 5 columns

```
In [15]: datat=data.sort_values('time')
```

```
In [16]: datat.head(10)
```

```
Out[16]:
```

	srno	movie	year	rating	time
40150	40151	Trailer: Pain	2012	3.6	52.0
41081	41082	Trailer: Get to Work	2012	3.3	55.0
41082	41083	Trailer: Give and Take	2012	3.3	66.0
43166	43167	Trailer: Emperor	2013	3.1	67.0
43330	43331	Trailer: Blood Angel	2013	4.2	69.0
40149	40150	Trailer: Lift the Veil	2012	3.6	69.0
40789	40790	Trailer: Gray Area	2012	3.7	70.0
40154	40155	Trailer: Cleave	2012	3.5	71.0
43168	43169	Trailer: Masks	2013	4.2	73.0
45745	45746	Trailer: Strip Search	2013	3.6	73.0

```
In [17]: pip install pymysql
```

Requirement already satisfied: pymysql in ./anaconda3/lib/python3.10/site-packages (1.0.3)
Note: you may need to restart the kernel to use updated packages.