

```
In [111]: import pandas as pd
```

```
In [112]: data=pd.read_csv("/home/placement/Downloads/movies.csv")
```

```
In [113]: data.describe()
```

Out[113]:

| | 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 [114]: data.head(5)
```

Out[114]:

| | 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 [115]: data.tail(50)
```

```
Out[115]:
```

| | 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 |

```
In [116]: data1=data.loc[(data.time>5000)]  
data1
```

Out[116]:

| | 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 [117]: data1
```

```
Out[117]:
```

| | 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 [118]: data1=data.loc[(data.time>5000)]  
data1
```

Out[118]:

| | 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 [119]: data1=data.loc[(data.time>5000)]  
data1
```

Out[119]:

| 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 [120]: data2=data.loc[(data.year==2000)&(data.time>5000)]
```

```
In [121]: data2
```

```
Out[121]:
```

| | srno | movie | year | rating | time |
|--------------|-------|----------------------------|------|--------|--------|
| 409 | 410 | Believe | 2000 | 3.3 | 5767.0 |
| 416 | 417 | The Prophecy 3: The Ascent | 2000 | 3.4 | 5048.0 |
| 430 | 431 | Scream 3 | 2000 | 3.2 | 7013.0 |
| 432 | 433 | Holy Smoke | 2000 | 3.0 | 6855.0 |
| 437 | 438 | Requiem for a Dream | 2000 | 3.9 | 6087.0 |
| ... | ... | ... | ... | ... | ... |
| 32557 | 32558 | Shaded Places | 2000 | 2.9 | 5350.0 |
| 36229 | 36230 | The Three Stooges | 2000 | 3.7 | 5256.0 |
| 37333 | 37334 | Les Miserables: Pt. 2 | 2000 | NaN | 5170.0 |
| 37336 | 37337 | Les Miserables: Pt. 1 | 2000 | NaN | 5194.0 |
| 39493 | 39494 | The Prophet's Game | 2000 | 3.2 | 6486.0 |

137 rows × 5 columns

```
In [122]: data.head(100)
```

```
Out[122]:
```

| | 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 |
| ... | ... | ... | ... | ... | ... |
| 95 | 96 | The Hunted | 1995 | 3.4 | 6605.0 |
| 96 | 97 | The Great Waldo Pepper | 1975 | 3.5 | 6467.0 |
| 97 | 98 | Godzilla: King of the Monsters | 1956 | 3.5 | 4828.0 |
| 98 | 99 | Highlander 2: Renegade Version | 1991 | 3.1 | 6585.0 |
| 99 | 100 | High Noon | 1952 | 3.9 | 5087.0 |

100 rows × 5 columns


```
In [123]: data.head(50)
```

```
Out[123]:
```

| | 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 |
| 23 | 24 | Beavis and Butt-head Do America | 1996 | 3.4 | 4852.0 |

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


```
In [124]: data.tail(50)
```

```
Out[124]:
```

| | 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 [125]: data3=data.loc[(data.rating>=3)&(data.year>2000)&(data.year<=2010)]
```

```
In [126]: data3
```

```
Out[126]:
```

| 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 |
| ... | ... | ... | ... | ... | ... |
| 49320 | 49321 | Dave Gorman Stand-Up. Live. | 2010 | 3.4 | 5090.0 |
| 49333 | 49334 | Frank Skinner Stand-Up: Live from Birmingham's... | 2008 | 3.0 | 2900.0 |
| 49334 | 49335 | Signing Time: Collection 1 | 2007 | 3.8 | NaN |
| 49394 | 49395 | A Liga | 2010 | 3.8 | NaN |
| 49580 | 49581 | Curious George: A Very Monkey Christmas | 2009 | 3.8 | 3438.0 |

4339 rows × 5 columns

```
In [127]: datat=data.sort_values('time')
```

```
In [128]: datat.head(10)
```

```
Out[128]:
```

| | 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 [129]: datat=data.sort_values('rating')
```

```
In [130]: datat.head(10)
```

```
Out[130]:
```

| | srno | movie | year | rating | time |
|--------------|-------|---|------|--------|--------|
| 40934 | 40935 | Lagegi | 2007 | 1.4 | NaN |
| 42115 | 42116 | Sun Yaar Chill Maar | 2007 | 1.4 | NaN |
| 40826 | 40827 | Lagegi | 2007 | 1.4 | NaN |
| 42160 | 42161 | Sun Yaar Chill Maar | 2007 | 1.4 | NaN |
| 41396 | 41397 | Meri Toh Lag Gayi Naukri | 2011 | 1.5 | NaN |
| 41083 | 41084 | Meri Toh Lag Gayi Naukri | 2011 | 1.5 | NaN |
| 35597 | 35598 | 1313: UFO Invasion | 2011 | 1.6 | 5053.0 |
| 40035 | 40036 | Champ | 2008 | 1.6 | NaN |
| 38729 | 38730 | The Tulse Luper Suitcases - The TV Series | 2004 | 1.6 | NaN |
| 41350 | 41351 | Sid vs. Varun | 2009 | 1.6 | NaN |