In [43]:
```python
!pip3 install pandas     #intalling pandas into the system
```

```
Requirement already satisfied: pandas in /home/placemnet/anaconda3/lib/python3.10/site-packages (1.5.3)
Requirement already satisfied: python-dateutil>=2.8.1 in /home/placemnet/anaconda3/lib/python3.10/site-pac
kages (from pandas) (2.8.2)
Requirement already satisfied: pytz>=2020.1 in /home/placemnet/anaconda3/lib/python3.10/site-packages (fro
m pandas) (2022.7)
Requirement already satisfied: numpy>=1.21.0 in /home/placemnet/anaconda3/lib/python3.10/site-packages (fr
om pandas) (1.23.5)
Requirement already satisfied: six>=1.5 in /home/placemnet/anaconda3/lib/python3.10/site-packages (from py
thon-dateutil>=2.8.1->pandas) (1.16.0)
```

In [44]:
```python
!pip install numpy
#'intalling the numpy'
```

```
Requirement already satisfied: numpy in /home/placemnet/anaconda3/lib/python3.10/site-packages (1.23.5)
```

In [45]:
```python
import pandas as pd     #importing pandas
import numpy as np      #importing numpy
```

In [46]:
```python
data=pd.read_csv("/home/placemnet/YUVA/movies.csv")     #reading the file
```

```
In [47]: data.describe()                    #calculating the statistical details of data of dataf
```

Out[47]:

	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 [48]: data.head()      #to return the first n rows
```

Out[48]:

	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 [49]: `data.info()`   *#to print the information of the dataframe*

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 49590 entries, 0 to 49589
Data columns (total 5 columns):
 #   Column  Non-Null Count  Dtype
---  ------  --------------  -----
 0   srno    49590 non-null  int64
 1   movie   49590 non-null  object
 2   year    49590 non-null  int64
 3   rating  10814 non-null  float64
 4   time    45836 non-null  float64
dtypes: float64(2), int64(2), object(1)
memory usage: 1.9+ MB
```

In [50]: `data["rating"].unique()`   *# to find the unique values from a series*

Out[50]: `array([3.9, 3.5, 3.2, 2.8, 3.8, 3.4, 3.3, 3.6, 2.9, 4. , 3.7, 3.1, 3. ,`
        `2.5, 2.7, 4.1, 2.6, 2.4, 2.2, 4.2, 2.1, 4.3, 1.9, 2.3, 4.4, nan,`
        `2. , 1.8, 4.5, 1.7, 1.6, 1.4, 1.5])`

In [51]: `data.tail(5)`   *#to get last n no.of rows*

Out[51]:

	srno	movie	year	rating	time
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 [52]: `data['rating'].sum()`   *#to add the data in the column*

Out[52]: `37321.799999999996`

In [53]: ```
dd=data.sort_values('year')   #to arrange the data in a order
dd
```

Out[53]:

| | srno | movie | year | rating | time |
|---|---|---|---|---|---|
| **42670** | 42671 | Fantômas II: Juve vs. Fantômas | 1913 | 2.7 | 3718.0 |
| **42664** | 42665 | Fantômas I: In the Shadow of the Guillotine | 1913 | 2.9 | 3268.0 |
| **14327** | 14328 | Fantômas III: The Murderous Corpse | 1913 | 2.6 | 5432.0 |
| **42672** | 42673 | Fantômas V: The False Magistrate | 1914 | 2.4 | 4247.0 |
| **609** | 610 | Cabiria | 1914 | 2.9 | 7684.0 |
| **...** | ... | ... | ... | ... | ... |
| **47906** | 47907 | Twisted: Season 1: Three for the Road | 2013 | NaN | 2626.0 |
| **47907** | 47908 | Twisted: Season 1: Sleeping with the Frenemy | 2013 | NaN | 2624.0 |
| **47901** | 47902 | Twisted: Season 1: The Truth Will Out | 2013 | NaN | 2627.0 |
| **47359** | 47360 | Eve of Destruction | 2013 | 3.3 | NaN |
| **49560** | 49561 | The Square (Trailer) | 2014 | 3.6 | 154.0 |

49590 rows × 5 columns

In [54]: ```
data.shape    #to know the no.of columns and rows
```

Out[54]: (49590, 5)

In [55]: ```
list(data.columns)   #to print columns in a list
```

Out[55]: ['srno', 'movie', 'year', 'rating', 'time']

```
In [56]: d1=data.drop('rating',axis=1)     #to delete the column
         d1
```

Out[56]:

	srno	movie	year	time
0	1	The Nightmare Before	1993	4568.0
1	2	The Mummy	1932	4388.0
2	3	Orphans of the Storm	1921	9062.0
3	4	The Object of Beauty	1991	6150.0
4	5	Night Tide	1963	5126.0
...	...	...	...	...
49585	49586	Winter Wonderland	2013	1812.0
49586	49587	Top Gear: Series 19: Africa Special	2013	6822.0
49587	49588	Fireplace For Your Home: Crackling Fireplace w...	2010	3610.0
49588	49589	Kate Plus Ei8ht	2010	NaN
49589	49590	Kate Plus Ei8ht: Season 1	2010	NaN

49590 rows × 4 columns

In [57]: ```
data4=data.loc[(data.time>5000)]   #to retrieve the grp of rows and columns by labels
data4
```

Out[57]:

	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 [58]:
```python
d3=data.loc[(data.rating>4.0)]
d3
```

Out[58]:

	srno	movie	year	rating	time
138	139	Pulp Fiction	1994	4.1	9265.0
287	288	Life Is Beautiful	1997	4.2	6973.0
302	303	Mulan: Special Edition	1998	4.2	5270.0
464	465	Forrest Gump	1994	4.3	8525.0
490	491	Braveheart	1995	4.2	10658.0
...	...	...	...	...	...
49548	49549	Life With Boys: Season 1	2011	4.1	NaN
49553	49554	Max Steel	2013	4.1	NaN
49555	49556	Lilyhammer: Season 1 (Recap)	2013	4.2	194.0
49570	49571	The Short Game (Trailer)	2013	4.1	156.0
49578	49579	Transformers Prime Beast Hunters: Predacons Ri...	2013	4.2	3950.0

897 rows × 5 columns

In [59]:
```
d=data.loc[(data.year==2000)&(data.time>5000)]
d
```

Out[59]:

	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 [60]:
```
data9=data.loc[(data.rating>=3.0)&(data.year>=2000)&(data.year<=2010)]
data9
```
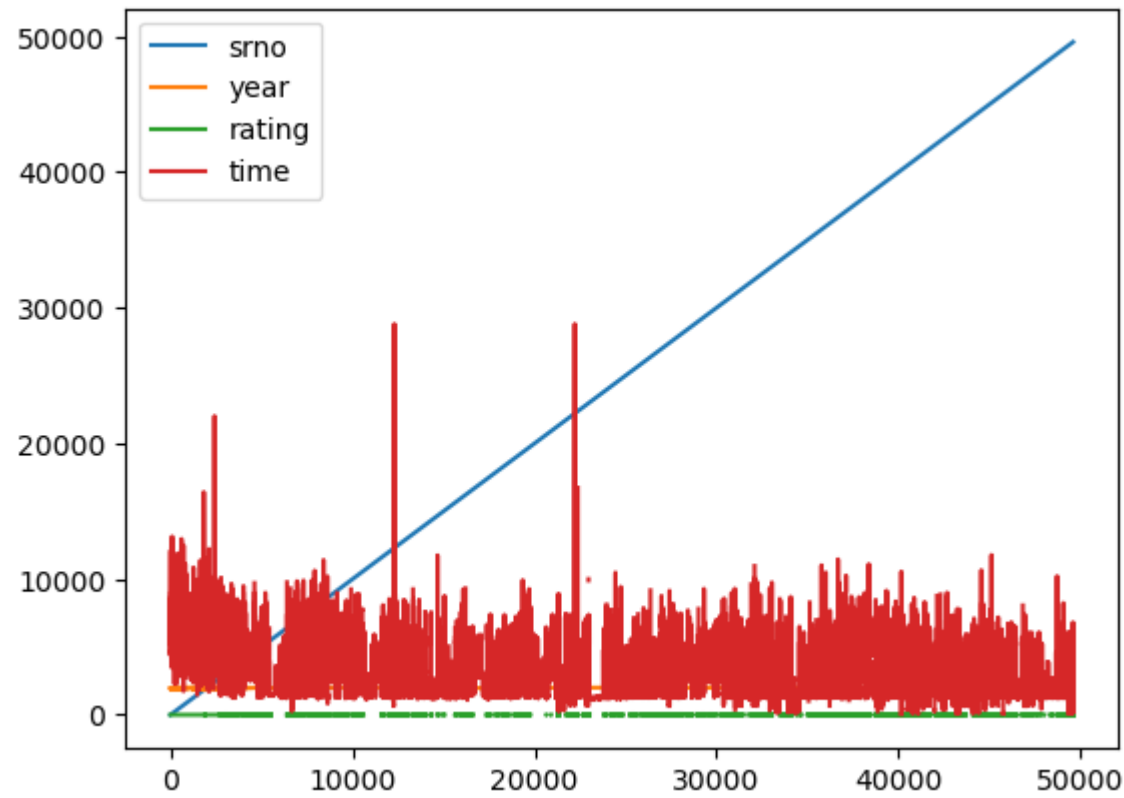
Out[60]:

	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
431	432	The Tigger Movie	2000	3.5	4626.0
432	433	Holy Smoke	2000	3.0	6855.0
...	...	...	...	...	...
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

4495 rows × 5 columns

In [61]: `data.plot()`   `#to draw graph diagram`

Out[61]: `<Axes: >`

In [ ]: