In [2]:
```
import pandas as pd
import numpy as np
import warnings
warnings.filterwarnings("ignore")
```

In [3]:
```
data= pd.read_csv('/home/placement/Desktop/movies.csv')
```

In [4]:
```
print(data)
```

```
        srno                                              movie  year  rating  \
0          1                          The Nightmare Before  1993     3.9
1          2                                      The Mummy  1932     3.5
2          3                          Orphans of the Storm  1921     3.2
3          4                          The Object of Beauty  1991     2.8
4          5                                    Night Tide  1963     2.8
...      ...                                           ...   ...     ...
49585  49586                               Winter Wonderland  2013     2.8
49586  49587           Top Gear: Series 19: Africa Special  2013     NaN
49587  49588  Fireplace For Your Home: Crackling Fireplace w...  2010     NaN
49588  49589                                  Kate Plus Ei8ht  2010     2.7
49589  49590                    Kate Plus Ei8ht: Season 1  2010     2.7

         time
0      4568.0
1      4388.0
2      9062.0
3      6150.0
4      5126.0
...       ...
49585  1812.0
49586  6822.0
49587  3610.0
49588     NaN
49589     NaN

[49590 rows x 5 columns]
```

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(10)
```

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
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

In [7]:
```
data.isna().sum()
```

Out[7]:
```
srno          0
movie         0
year          0
rating    38776
time       3754
dtype: int64
```

In [8]:
```
data.shape
```

Out[8]:
```
(49590, 5)
```

In [9]:
```
data.info()
```

```
<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 [10]:
```
data.sample(20)
```

Out[10]:

	srno	movie	year	rating	time
26595	26596	Pinky Dinky Doo: Season 1: Pinky's Wintery Din...	2006	NaN	1413.0
25279	25280	NY Ink: Season 1	2011	3.8	NaN
14630	14631	Toddlers & Tiaras: Season 1: Universal Roy...	2009	NaN	2620.0
28506	28507	The Haunted: Season 1: The Ghost Box Prophecies	2009	NaN	2606.0
37107	37108	Breakout Kings: Season 2	2012	4.1	NaN
13856	13857	Drop Dead Diva: Season 2: Will & Grayson	2010	NaN	2653.0
48363	48364	Nightmare Next Door: Season 4: New England Nig...	2012	NaN	2619.0
31780	31781	Frasier: Season 2: Duke's We Hardly Knew Ye	1994	NaN	1363.0
43386	43387	Adventure Time: Season 1: What Have You Done?	2010	NaN	715.0
20474	20475	Cheers: Season 4: Suspicion	1985	NaN	1470.0
31805	31806	Frasier: Season 10: Door Jam	2002	NaN	1271.0
18832	18833	Scrubs: Season 8: My Happy Place	2009	NaN	1296.0
41589	41590	Dragon: Season 1: Be My Valentine	2004	NaN	724.0
30098	30099	Shameless: Series 5: Episode 2	2008	NaN	2984.0
2884	2885	Mafioso	1962	3.4	6147.0
11122	11123	24: Season 5: 2:00 P.M.-3:00 P.M.	2006	NaN	2645.0
27564	27565	Frasier: Season 4: Odd Man Out	1997	NaN	1347.0
40055	40056	American Guns: Season 1: Hand Cannon Pink Pi...	2011	NaN	2560.0
16662	16663	Life: Season 1: Merit Badge	2007	NaN	2603.0
42437	42438	He-Man and the Masters of the Universe: Season...	2002	NaN	1403.0

In [11]:
```
data.dtypes
```

Out[11]:
```
srno        int64
movie      object
year        int64
rating    float64
time      float64
dtype: object
```

In [12]:
```
data1=data.groupby(['year']).count()
```

In [13]:
```
data1
```

Out[13]:

year	srno	movie	rating	time
1913	3	3	3	3
1914	20	20	5	18
1915	1	1	1	1
1916	1	1	1	1
1918	1	1	1	1
...	...	...	...	...
2010	5107	5107	1102	4671
2011	5511	5511	1346	4992
2012	4339	4339	1130	3978
2013	981	981	345	901
2014	1	1	1	1

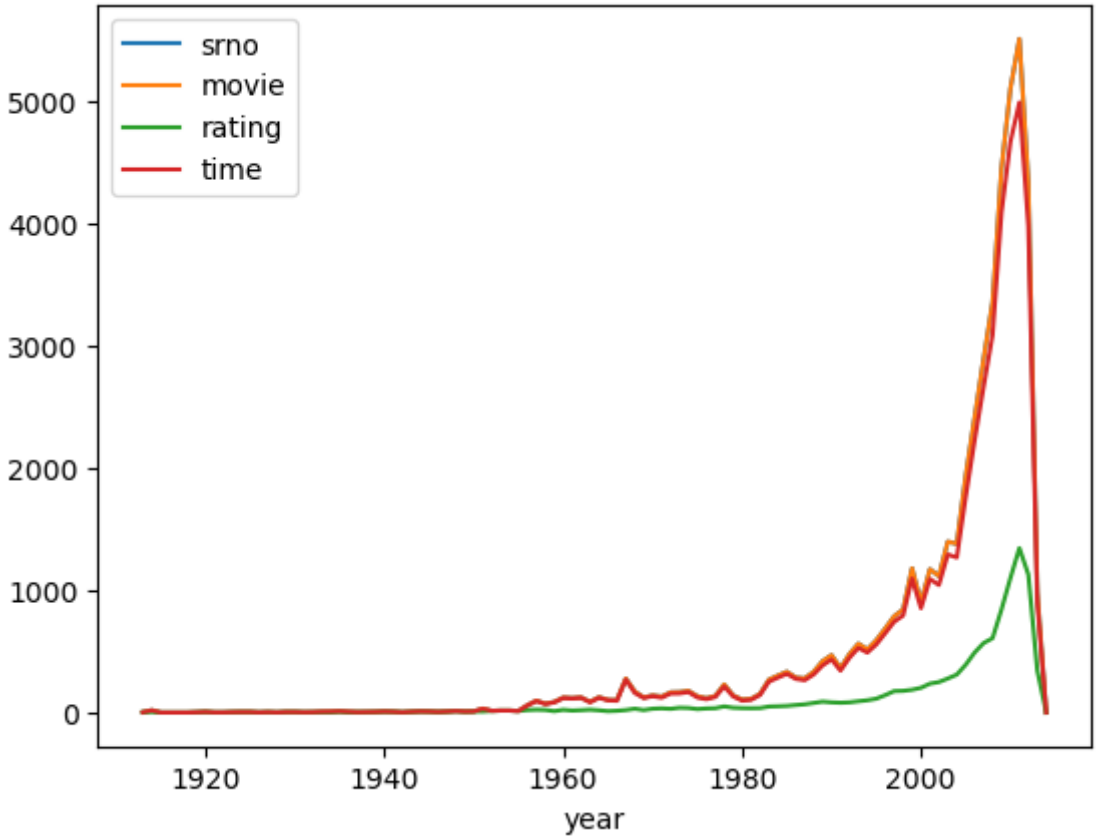
101 rows × 4 columns

plotting the data

In [14]:
```
data1.to_csv('file.csv')
```

In [15]:
```
data1.plot()
```

Out[15]: <Axes: xlabel='year'>



In [ ]: