

```
In [1]: d={"Name":["Ankit","Arun","Anjali"],"Age":[19,20,21],"Roll no.":[1,2,3]} #defining dictionaries  
d
```

```
Out[1]: {'Name': ['Ankit', 'Arun', 'Anjali'],  
        'Age': [19, 20, 21],  
        'Roll no.': [1, 2, 3]}
```

```
In [4]: type(d)
```

```
Out[4]: dict
```

```
In [5]: d.keys()
```

```
Out[5]: dict_keys(['Name', 'Age', 'Roll no.'])
```

```
In [6]: d.values()
```

```
Out[6]: dict_values(['Ankit', 'Arun', 'Anjali'], [19, 20, 21], [1, 2, 3])
```

```
In [9]: d["Name"]
```

```
Out[9]: ['Ankit', 'Arun', 'Anjali']
```

```
In [11]: d["Roll no."]
```

```
Out[11]: [1, 2, 3]
```

```
In [12]: #pandas(Python Data Analysis Library) is used for data analysis  
#pd is shortform to specify pandas if not so everytime you have to write pandas.something()  
import pandas as pd
```

```
In [14]: a=[11,12,13,14]  
a
```

```
Out[14]: [11, 12, 13, 14]
```

```
In [15]: type(a)
```

```
Out[15]: list
```

```
In [18]: s=pd.Series(a,index=["a","b","c","d"]) #gives index to all list elements
```

```
In [19]: s
```

```
Out[19]: a    11  
        b    12  
        c    13  
        d    14  
        dtype: int64
```

```
In [20]: s.ndim
```

```
Out[20]: 1
```

```
In [21]: s.index #shows the index
```

```
Out[21]: Index(['a', 'b', 'c', 'd'], dtype='object')
```

```
In [22]: s.values #shows the values
```

```
Out[22]: array([11, 12, 13, 14], dtype=int64)
```

```
In [23]: x=s.values  
        type(x)
```

```
Out[23]: numpy.ndarray
```

```
In [24]: type(s) #shows series
```

```
Out[24]: pandas.core.series.Series
```

```
In [25]: d
```

```
Out[25]: {'Name': ['Ankit', 'Arun', 'Anjali'],  
          'Age': [19, 20, 21],  
          'Roll no.': [1, 2, 3]}
```

```
In [27]: df=pd.DataFrame(d) #making dataframe from dictionary  
print(type(d))  
print(df)
```

```
<class 'dict'>  
      Name  Age  Roll no.  
0   Ankit   19         1  
1   Arun   20         2  
2  Anjali   21         3
```

```
In [28]: type(df) #dataFrame
```

```
Out[28]: pandas.core.frame.DataFrame
```

```
In [29]: df #shows same as above in print(df)
```

```
Out[29]:
```

	Name	Age	Roll no.
0	Ankit	19	1
1	Arun	20	2
2	Anjali	21	3

```
In [30]: df.shape
```

```
Out[30]: (3, 3)
```

```
In [33]: df.columns
```

```
Out[33]: Index(['Name', 'Age', 'Roll no.'], dtype='object')
```

```
In [34]: df.index #shows the range of dataframe
```

```
Out[34]: RangeIndex(start=0, stop=3, step=1)
```

```
In [36]: df["Roll no."] #is used to print particulars
```

```
Out[36]: 0    1  
         1    2  
         2    3  
         Name: Roll no., dtype: int64
```

```
In [37]: #It's time for data analysis by importing the file in python  
import pandas as pd
```

```
In [40]: mydata=pd.read_csv(r"E:\BOOKS pdf\EXTRA STUFFS\Internships\DataSets-master\imdrating.csv")
```

```
In [41]: mydata #after importing csv file from harddisk
```

Out[41]:

Unnamed: 0	star_rating	title	content_rating	genre	duration	actors_list	
0	0	9.3	The Shawshank Redemption	R	Crime	142	[u'Tim Robbins', u'Morgan Freeman', u'Bob Gunt...
1	1	9.2	The Godfather	R	Crime	175	[u'Marlon Brando', u'Al Pacino', u'James Caan']
2	2	9.1	The Godfather: Part II	R	Crime	200	[u'Al Pacino', u'Robert De Niro', u'Robert Duv...
3	3	9.0	The Dark Knight	PG-13	Action	152	[u'Christian Bale', u'Heath Ledger', u'Aaron E...
4	4	8.9	Pulp Fiction	R	Crime	154	[u'John Travolta', u'Uma Thurman', u'Samuel L....
5	5	8.9	12 Angry Men	NOT RATED	Drama	96	[u'Henry Fonda', u'Lee J. Cobb', u'Martin Bals...
6	6	8.9	The Good, the Bad and the Ugly	NOT RATED	Western	161	[u'Clint Eastwood', u'Eli Wallach', u'Lee Van ...
7	7	8.9	The Lord of the Rings: The Return of the King	PG-13	Adventure	201	[u'Elijah Wood', u'Viggo Mortensen', u'Ian McK...
8	8	8.9	Schindler's List	R	Biography	195	[u'Liam Neeson', u'Ralph Fiennes', u'Ben Kings...
9	9	8.9	Fight Club	R	Drama	139	[u'Brad Pitt', u'Edward Norton', u'Helena Bonh...
10	10	8.8	The Lord of the Rings: The Fellowship of the Ring	PG-13	Adventure	178	[u'Elijah Wood', u'Ian McKellen', u'Orlando Bl...
11	11	8.8	Inception	PG-13	Action	148	[u'Leonardo DiCaprio', u'Joseph Gordon-Levitt'...
12	12	8.8	Star Wars: Episode V - The Empire Strikes Back	PG	Action	124	[u'Mark Hamill', u'Harrison Ford', u'Carrie Fi...
13	13	8.8	Forrest Gump	PG-13	Drama	142	[u'Tom Hanks', u'Robin Wright', u'Gary Sinise']
14	14	8.8	The Lord of the Rings: The Two Towers	PG-13	Adventure	179	[u'Elijah Wood', u'Ian McKellen', u'Viggo Mort...
15	15	8.7	Interstellar	PG-13	Adventure	169	[u'Matthew McConaughey', u'Anne Hathaway', u'J...
16	16	8.7	One Flew Over the Cuckoo's Nest	R	Drama	133	[u'Jack Nicholson', u'Louise Fletcher', u'Mich...
17	17	8.7	Seven Samurai	UNRATED	Drama	207	[u'Toshir\xf4 Mifune', u'Takashi Shimura', u'K...
18	18	8.7	Goodfellas	R	Biography	146	[u'Robert De Niro', u'Ray Liotta', u'Joe Pesci']
19	19	8.7	Star Wars	PG	Action	121	[u'Mark Hamill', u'Harrison Ford', u'Carrie Fi...
20	20	8.7	The Matrix	R	Action	136	[u'Keanu Reeves', u'Laurence Fishburne', u'Car...
21	21	8.7	City of God	R	Crime	130	[u'Alexandre Rodrigues', u'Matheus Nachtergae...
22	22	8.7	It's a Wonderful Life	APPROVED	Drama	130	[u'James Stewart', u'Donna Reed', u'Lionel Bar...
23	23	8.7	The Usual Suspects	R	Crime	106	[u'Kevin Spacey', u'Gabriel Byrne', u'Chazz Pa...
24	24	8.7	Se7en	R	Drama	127	[u'Morgan Freeman', u'Brad Pitt', u'Kevin Spac...

Unnamed: 0		star_rating	title	content_rating	genre	duration	actors_list
25	25	8.6	Life Is Beautiful	PG-13	Comedy	116	[u'Roberto Benigni', u'Nicoletta Braschi', u'G...
26	26	8.6	Once Upon a Time in the West	PG-13	Western	175	[u'Henry Fonda', u'Charles Bronson', u'Claudia...
27	27	8.6	The Silence of the Lambs	R	Drama	118	[u'Jodie Foster', u'Anthony Hopkins', u'Lawren...
28	28	8.6	Leon: The Professional	R	Crime	110	[u'Jean Reno', u'Gary Oldman', u'Natalie Portm...
29	29	8.6	City Lights	PASSED	Comedy	87	[u'Charles Chaplin', u'Virginia Cherrill', u'F...
...
949	949	7.4	Home Alone	PG	Comedy	103	[u'Macaulay Culkin', u'Joe Pesci', u'Daniel St...
950	950	7.4	Bound	R	Crime	108	[u'Jennifer Tilly', u'Gina Gershon', u'Joe Pan...
951	951	7.4	Sleepy Hollow	R	Drama	105	[u'Johnny Depp', u'Christina Ricci', u'Miranda...
952	952	7.4	Pirate Radio	R	Comedy	117	[u'Philip Seymour Hoffman', u'Bill Nighy', u'N...
953	953	7.4	The NeverEnding Story	PG	Adventure	102	[u'Noah Hathaway', u'Barret Oliver', u'Tami St...
954	954	7.4	X-Men	PG-13	Action	104	[u'Patrick Stewart', u'Hugh Jackman', u'Ian Mc...
955	955	7.4	Zero Dark Thirty	R	Drama	157	[u'Jessica Chastain', u'Joel Edgerton', u'Chri...
956	956	7.4	Manhattan Murder Mystery	PG	Comedy	104	[u'Woody Allen', u'Diane Keaton', u'Jerry Adler]
957	957	7.4	National Lampoon's Vacation	R	Comedy	98	[u'Chevy Chase', u"Beverly D'Angelo", u'Imogen...
958	958	7.4	My Sister's Keeper	PG-13	Drama	109	[u'Cameron Diaz', u'Abigail Breslin', u'Alec B...
959	959	7.4	Deconstructing Harry	R	Comedy	96	[u'Woody Allen', u'Judy Davis', u'Julia Louis-...
960	960	7.4	The Way Way Back	PG-13	Comedy	103	[u'Steve Carell', u'Toni Collette', u'Allison ...
961	961	7.4	Capote	R	Biography	114	[u'Philip Seymour Hoffman', u'Clifton Collins ...
962	962	7.4	Driving Miss Daisy	PG	Comedy	99	[u'Morgan Freeman', u'Jessica Tandy', u'Dan Ay...
963	963	7.4	La Femme Nikita	R	Action	118	[u'Anne Parillaud', u'Marc Duret', u'Patrick F...
964	964	7.4	Lincoln	PG-13	Biography	150	[u'Daniel Day-Lewis', u'Sally Field', u'David ...
965	965	7.4	Limitless	PG-13	Mystery	105	[u'Bradley Cooper', u'Anna Friel', u'Abbie Cor...
966	966	7.4	The Simpsons Movie	PG-13	Animation	87	[u'Dan Castellaneta', u'Julie Kavner', u'Nancy...
967	967	7.4	The Rock	R	Action	136	[u'Sean Connery', u'Nicolas Cage', u'Ed Harris]
968	968	7.4	The English Patient	R	Drama	162	[u'Ralph Fiennes', u'Juliette Binoche', u'Will...
969	969	7.4	Law Abiding Citizen	R	Crime	109	[u'Gerard Butler', u'Jamie Foxx', u'Leslie Bibb]

	Unnamed: 0	star_rating	title	content_rating	genre	duration	actors_list
970	970	7.4	Wonder Boys	R	Drama	107	[u'Michael Douglas', u'Tobey Maguire', u'Franc...
971	971	7.4	Death at a Funeral	R	Comedy	90	[u'Matthew Macfadyen', u'Peter Dinklage', u'Ew...
972	972	7.4	Blue Valentine	NC-17	Drama	112	[u'Ryan Gosling', u'Michelle Williams', u'John...
973	973	7.4	The Cider House Rules	PG-13	Drama	126	[u'Tobey Maguire', u'Charlize Theron', u'Micha...
974	974	7.4	Tootsie	PG	Comedy	116	[u'Dustin Hoffman', u'Jessica Lange', u'Teri G...
975	975	7.4	Back to the Future Part III	PG	Adventure	118	[u'Michael J. Fox', u'Christopher Lloyd', u'Ma...
976	976	7.4	Master and Commander: The Far Side of the World	PG-13	Action	138	[u'Russell Crowe', u'Paul Bettany', u'Billy Bo...
977	977	7.4	Poltergeist	PG	Horror	114	[u'JoBeth Williams', u"Heather O'Rourke", u'Cr...
978	978	7.4	Wall Street	R	Crime	126	[u'Charlie Sheen', u'Michael Douglas', u'Tamar...

979 rows × 7 columns

```
In [42]: type(mydata)
```

Out[42]: pandas.core.frame.DataFrame

```
In [51]: len(mydata)
```

Out[51]: 979

```
In [43]: mydata.shape
```

Out[43]: (979, 7)

```
In [44]: mydata.head(1) #shows only one data from head
```

Out[44]:

	Unnamed: 0	star_rating	title	content_rating	genre	duration	actors_list
0	0	9.3	The Shawshank Redemption	R	Crime	142	[u'Tim Robbins', u'Morgan Freeman', u'Bob Gunt...

```
In [45]: mydata.head(4) #shows 4 data from head
```

Out[45]:

	Unnamed: 0	star_rating	title	content_rating	genre	duration	actors_list
0	0	9.3	The Shawshank Redemption	R	Crime	142	[u'Tim Robbins', u'Morgan Freeman', u'Bob Gunt...
1	1	9.2	The Godfather	R	Crime	175	[u'Marlon Brando', u'Al Pacino', u'James Caan']
2	2	9.1	The Godfather: Part II	R	Crime	200	[u'Al Pacino', u'Robert De Niro', u'Robert Duv...
3	3	9.0	The Dark Knight	PG-13	Action	152	[u'Christian Bale', u'Heath Ledger', u'Aaron E...

```
In [47]: mydata.size
```

Out[47]: 6853

```
In [48]: mydata.head() #default shows top 5
```

Out[48]:

	Unnamed: 0	star_rating	title	content_rating	genre	duration	actors_list
0	0	9.3	The Shawshank Redemption	R	Crime	142	[u'Tim Robbins', u'Morgan Freeman', u'Bob Gunt...
1	1	9.2	The Godfather	R	Crime	175	[u'Marlon Brando', u'Al Pacino', u'James Caan']
2	2	9.1	The Godfather: Part II	R	Crime	200	[u'Al Pacino', u'Robert De Niro', u'Robert Duv...
3	3	9.0	The Dark Knight	PG-13	Action	152	[u'Christian Bale', u'Heath Ledger', u'Aaron E...
4	4	8.9	Pulp Fiction	R	Crime	154	[u'John Travolta', u'Uma Thurman', u'Samuel L....

```
In [49]: mydata.keys() #shows all keys of dataframe
```

Out[49]: Index(['Unnamed: 0', 'star_rating', 'title', 'content_rating', 'genre', 'duration', 'actors_list'], dtype='object')

```
In [54]: mydata.columns
```

Out[54]: Index(['Unnamed: 0', 'star_rating', 'title', 'content_rating', 'genre', 'duration', 'actors_list'], dtype='object')


```
In [56]: mynewdata=mydata.drop(['Unnamed: 0'],axis=1) #this will drop the Unnamed column axis=1
```

```
In [57]: mynewdata
```

Out[57]:

	star_rating	title	content_rating	genre	duration	actors_list
0	9.3	The Shawshank Redemption	R	Crime	142	[u'Tim Robbins', u'Morgan Freeman', u'Bob Gunt...
1	9.2	The Godfather	R	Crime	175	[u'Marlon Brando', u'Al Pacino', u'James Caan']
2	9.1	The Godfather: Part II	R	Crime	200	[u'Al Pacino', u'Robert De Niro', u'Robert Duv...
3	9.0	The Dark Knight	PG-13	Action	152	[u'Christian Bale', u'Heath Ledger', u'Aaron E...
4	8.9	Pulp Fiction	R	Crime	154	[u'John Travolta', u'Uma Thurman', u'Samuel L....
5	8.9	12 Angry Men	NOT RATED	Drama	96	[u'Henry Fonda', u'Lee J. Cobb', u'Martin Bals...
6	8.9	The Good, the Bad and the Ugly	NOT RATED	Western	161	[u'Clint Eastwood', u'Eli Wallach', u'Lee Van ...
7	8.9	The Lord of the Rings: The Return of the King	PG-13	Adventure	201	[u'Elijah Wood', u'Viggo Mortensen', u'Ian McK...
8	8.9	Schindler's List	R	Biography	195	[u'Liam Neeson', u'Ralph Fiennes', u'Ben Kings...
9	8.9	Fight Club	R	Drama	139	[u'Brad Pitt', u'Edward Norton', u'Helena Bonh...
10	8.8	The Lord of the Rings: The Fellowship of the Ring	PG-13	Adventure	178	[u'Elijah Wood', u'Ian McKellen', u'Orlando Bl...
11	8.8	Inception	PG-13	Action	148	[u'Leonardo DiCaprio', u'Joseph Gordon-Levitt'...
12	8.8	Star Wars: Episode V - The Empire Strikes Back	PG	Action	124	[u'Mark Hamill', u'Harrison Ford', u'Carrie Fi...
13	8.8	Forrest Gump	PG-13	Drama	142	[u'Tom Hanks', u'Robin Wright', u'Gary Sinise']
14	8.8	The Lord of the Rings: The Two Towers	PG-13	Adventure	179	[u'Elijah Wood', u'Ian McKellen', u'Viggo Mort...
15	8.7	Interstellar	PG-13	Adventure	169	[u'Matthew McConaughey', u'Anne Hathaway', u'J...
16	8.7	One Flew Over the Cuckoo's Nest	R	Drama	133	[u'Jack Nicholson', u'Louise Fletcher', u'Mich...
17	8.7	Seven Samurai	UNRATED	Drama	207	[u'Toshir\xf4 Mifune', u'Takashi Shimura', u'K...
18	8.7	Goodfellas	R	Biography	146	[u'Robert De Niro', u'Ray Liotta', u'Joe Pesci']
19	8.7	Star Wars	PG	Action	121	[u'Mark Hamill', u'Harrison Ford', u'Carrie Fi...
20	8.7	The Matrix	R	Action	136	[u'Keanu Reeves', u'Laurence Fishburne', u'Car...
21	8.7	City of God	R	Crime	130	[u'Alexandre Rodrigues', u'Matheus Nachtergae...
22	8.7	It's a Wonderful Life	APPROVED	Drama	130	[u'James Stewart', u'Donna Reed', u'Lionel Bar...
23	8.7	The Usual Suspects	R	Crime	106	[u'Kevin Spacey', u'Gabriel Byrne', u'Chazz Pa...
24	8.7	Se7en	R	Drama	127	[u'Morgan Freeman', u'Brad Pitt', u'Kevin Spac...

star_rating		title	content_rating	genre	duration	actors_list
25	8.6	Life Is Beautiful	PG-13	Comedy	116	[u'Roberto Benigni', u'Nicoletta Braschi', u'G...
26	8.6	Once Upon a Time in the West	PG-13	Western	175	[u'Henry Fonda', u'Charles Bronson', u'Claudia...
27	8.6	The Silence of the Lambs	R	Drama	118	[u'Jodie Foster', u'Anthony Hopkins', u'Lawren...
28	8.6	Leon: The Professional	R	Crime	110	[u'Jean Reno', u'Gary Oldman', u'Natalie Portm...
29	8.6	City Lights	PASSED	Comedy	87	[u'Charles Chaplin', u'Virginia Cherrill', u'F...
...
949	7.4	Home Alone	PG	Comedy	103	[u'Macaulay Culkin', u'Joe Pesci', u'Daniel St...
950	7.4	Bound	R	Crime	108	[u'Jennifer Tilly', u'Gina Gershon', u'Joe Pan...
951	7.4	Sleepy Hollow	R	Drama	105	[u'Johnny Depp', u'Christina Ricci', u'Miranda...
952	7.4	Pirate Radio	R	Comedy	117	[u'Philip Seymour Hoffman', u'Bill Nighy', u'N...
953	7.4	The NeverEnding Story	PG	Adventure	102	[u'Noah Hathaway', u'Barret Oliver', u'Tami St...
954	7.4	X-Men	PG-13	Action	104	[u'Patrick Stewart', u'Hugh Jackman', u'Ian Mc...
955	7.4	Zero Dark Thirty	R	Drama	157	[u'Jessica Chastain', u'Joel Edgerton', u'Chri...
956	7.4	Manhattan Murder Mystery	PG	Comedy	104	[u'Woody Allen', u'Diane Keaton', u'Jerry Adler]
957	7.4	National Lampoon's Vacation	R	Comedy	98	[u'Chevy Chase', u"Beverly D'Angelo", u'Imogen...
958	7.4	My Sister's Keeper	PG-13	Drama	109	[u'Cameron Diaz', u'Abigail Breslin', u'Alec B...
959	7.4	Deconstructing Harry	R	Comedy	96	[u'Woody Allen', u'Judy Davis', u'Julia Louis-...
960	7.4	The Way Way Back	PG-13	Comedy	103	[u'Steve Carell', u'Toni Collette', u'Allison ...
961	7.4	Capote	R	Biography	114	[u'Philip Seymour Hoffman', u'Clifton Collins ...
962	7.4	Driving Miss Daisy	PG	Comedy	99	[u'Morgan Freeman', u'Jessica Tandy', u'Dan Ay...
963	7.4	La Femme Nikita	R	Action	118	[u'Anne Parillaud', u'Marc Duret', u'Patrick F...
964	7.4	Lincoln	PG-13	Biography	150	[u'Daniel Day-Lewis', u'Sally Field', u'David ...
965	7.4	Limitless	PG-13	Mystery	105	[u'Bradley Cooper', u'Anna Friel', u'Abbie Cor...
966	7.4	The Simpsons Movie	PG-13	Animation	87	[u'Dan Castellaneta', u'Julie Kavner', u'Nancy...
967	7.4	The Rock	R	Action	136	[u'Sean Connery', u'Nicolas Cage', u'Ed Harris]
968	7.4	The English Patient	R	Drama	162	[u'Ralph Fiennes', u'Juliette Binoche', u'Will...
969	7.4	Law Abiding Citizen	R	Crime	109	[u'Gerard Butler', u'Jamie Foxx', u'Leslie Bibb]

	star_rating	title	content_rating	genre	duration	actors_list
970	7.4	Wonder Boys	R	Drama	107	[u'Michael Douglas', u'Tobey Maguire', u'Franc...
971	7.4	Death at a Funeral	R	Comedy	90	[u'Matthew Macfadyen', u'Peter Dinklage', u'Ew...
972	7.4	Blue Valentine	NC-17	Drama	112	[u'Ryan Gosling', u'Michelle Williams', u'John...
973	7.4	The Cider House Rules	PG-13	Drama	126	[u'Tobey Maguire', u'Charlize Theron', u'Micha...
974	7.4	Tootsie	PG	Comedy	116	[u'Dustin Hoffman', u'Jessica Lange', u'Teri G...
975	7.4	Back to the Future Part III	PG	Adventure	118	[u'Michael J. Fox', u'Christopher Lloyd', u'Ma...
976	7.4	Master and Commander: The Far Side of the World	PG-13	Action	138	[u'Russell Crowe', u'Paul Bettany', u'Billy Bo...
977	7.4	Poltergeist	PG	Horror	114	[u'JoBeth Williams', u'"Heather O'Rourke"', u'Cr...
978	7.4	Wall Street	R	Crime	126	[u'Charlie Sheen', u'Michael Douglas', u'Tamar...

979 rows × 6 columns

```
In [58]: t=mynewdata["title"] #t is now a series (index+list)
type(t)
```

Out[58]: pandas.core.series.Series

```
In [59]: t
Out[59]: 0          The Shawshank Redemption
1              The Godfather
2          The Godfather: Part II
3              The Dark Knight
4              Pulp Fiction
5              12 Angry Men
6          The Good, the Bad and the Ugly
7      The Lord of the Rings: The Return of the King
8              Schindler's List
9              Fight Club
10     The Lord of the Rings: The Fellowship of the Ring
11              Inception
12     Star Wars: Episode V - The Empire Strikes Back
13              Forrest Gump
14          The Lord of the Rings: The Two Towers
15              Interstellar
16          One Flew Over the Cuckoo's Nest
17              Seven Samurai
18              Goodfellas
19              Star Wars
20              The Matrix
21              City of God
22          It's a Wonderful Life
23          The Usual Suspects
24              Se7en
25              Life Is Beautiful
26     Once Upon a Time in the West
27          The Silence of the Lambs
28          Leon: The Professional
29              City Lights
...
949              Home Alone
950              Bound
951          Sleepy Hollow
952          Pirate Radio
953          The NeverEnding Story
954              X-Men
955          Zero Dark Thirty
956          Manhattan Murder Mystery
957     National Lampoon's Vacation
```

```
958             My Sister's Keeper
959   Deconstructing Harry
960             The Way Way Back
961             Capote
962   Driving Miss Daisy
963             La Femme Nikita
964             Lincoln
965             Limitless
966   The Simpsons Movie
967             The Rock
968   The English Patient
969   Law Abiding Citizen
970             Wonder Boys
971   Death at a Funeral
972             Blue Valentine
973   The Cider House Rules
974             Tootsie
975             Back to the Future Part III
976   Master and Commander: The Far Side of the World
977             Poltergeist
978             Wall Street
```

Name: title, Length: 979, dtype: object


```
In [64]: ta #ta is list
```

```
Out[64]: ['The Shawshank Redemption',  
          'The Godfather',  
          'The Godfather: Part II',  
          'The Dark Knight',  
          'Pulp Fiction',  
          '12 Angry Men',  
          'The Good, the Bad and the Ugly',  
          'The Lord of the Rings: The Return of the King',  
          'Schindler's List',  
          'Fight Club',  
          'The Lord of the Rings: The Fellowship of the Ring',  
          'Inception',  
          'Star Wars: Episode V - The Empire Strikes Back',  
          'Forrest Gump',  
          'The Lord of the Rings: The Two Towers',  
          'Interstellar',  
          'One Flew Over the Cuckoo's Nest',  
          'Seven Samurai',  
          'Goodfellas',  
          'The Godfather: Part I']
```

```
In [65]: t=mynewdata[["title","duration"]]  
         type(t)
```

```
Out[65]: pandas.core.frame.DataFrame
```



```
In [66]: t
```

Out[66]:

	title	duration
0	The Shawshank Redemption	142
1	The Godfather	175
2	The Godfather: Part II	200
3	The Dark Knight	152
4	Pulp Fiction	154
5	12 Angry Men	96
6	The Good, the Bad and the Ugly	161
7	The Lord of the Rings: The Return of the King	201
8	Schindler's List	195
9	Fight Club	139
10	The Lord of the Rings: The Fellowship of the Ring	178
11	Inception	148
12	Star Wars: Episode V - The Empire Strikes Back	124
13	Forrest Gump	142
14	The Lord of the Rings: The Two Towers	179
15	Interstellar	169
16	One Flew Over the Cuckoo's Nest	133
17	Seven Samurai	207
18	Goodfellas	146
19	Star Wars	121
20	The Matrix	136
21	City of God	130
22	It's a Wonderful Life	130
23	The Usual Suspects	106
24	Se7en	127

	title	duration
25	Life Is Beautiful	116
26	Once Upon a Time in the West	175
27	The Silence of the Lambs	118
28	Leon: The Professional	110
29	City Lights	87
...
949	Home Alone	103
950	Bound	108
951	Sleepy Hollow	105
952	Pirate Radio	117
953	The NeverEnding Story	102
954	X-Men	104
955	Zero Dark Thirty	157
956	Manhattan Murder Mystery	104
957	National Lampoon's Vacation	98
958	My Sister's Keeper	109
959	Deconstructing Harry	96
960	The Way Way Back	103
961	Capote	114
962	Driving Miss Daisy	99
963	La Femme Nikita	118
964	Lincoln	150
965	Limitless	105
966	The Simpsons Movie	87
967	The Rock	136
968	The English Patient	162
969	Law Abiding Citizen	109

	title	duration
970	Wonder Boys	107
971	Death at a Funeral	90
972	Blue Valentine	112
973	The Cider House Rules	126
974	Tootsie	116
975	Back to the Future Part III	118
976	Master and Commander: The Far Side of the World	138
977	Poltergeist	114
978	Wall Street	126

979 rows × 2 columns

```
In [67]: mynewdata.head(2) #top 2 elements
```

Out[67]:

	star_rating	title	content_rating	genre	duration	actors_list
0	9.3	The Shawshank Redemption	R	Crime	142	[u'Tim Robbins', u'Morgan Freeman', u'Bob Gunt...
1	9.2	The Godfather	R	Crime	175	[u'Marlon Brando', u'Al Pacino', u'James Caan']

```
In [68]: mynewdata.iloc[0,:] #0th row and columns
```

Out[68]:

```
star_rating      9.3
title            The Shawshank Redemption
content_rating    R
genre            Crime
duration         142
actors_list      [u'Tim Robbins', u'Morgan Freeman', u'Bob Gunt...
Name: 0, dtype: object
```

```
In [69]: mynewdata.index
```

Out[69]: RangeIndex(start=0, stop=979, step=1)

```
In [70]: mynewdata.iloc[0,2:4] #does not take 0-(end values) in columns count
```

Out[70]: content_rating R
genre Crime
Name: 0, dtype: object

```
In [71]: mynewdata.iloc[0:12:2,2:4] #0 to (12-1) stepSize 2 and 2 to (4-1) in columns
```

Out[71]:

	content_rating	genre
0	R	Crime
2	R	Crime
4	R	Crime
6	NOT RATED	Western
8	R	Biography
10	PG-13	Adventure

```
In [72]: mynewdata.loc[0:12:2,["title","genre"]] #loc is used for string location here in columns
```

Out[72]:

	title	genre
0	The Shawshank Redemption	Crime
2	The Godfather: Part II	Crime
4	Pulp Fiction	Crime
6	The Good, the Bad and the Ugly	Western
8	Schindler's List	Biography
10	The Lord of the Rings: The Fellowship of the Ring	Adventure
12	Star Wars: Episode V - The Empire Strikes Back	Action

```
In [73]: mynewdata["genre"]=="Crime" #checks the condition is true or false
```

```
Out[73]: 0      True
         1      True
         2      True
         3     False
         4      True
         5     False
         6     False
         7     False
         8     False
         9     False
        10     False
        11     False
        12     False
        13     False
        14     False
        15     False
        16     False
        17     False
        18     False
        19     False
        20     False
        21      True
        22     False
        23      True
        24     False
        25     False
        26     False
        27     False
        28      True
        29     False
        ...
       949     False
       950      True
       951     False
       952     False
       953     False
       954     False
       955     False
       956     False
       957     False
```

```
958    False
959    False
960    False
961    False
962    False
963    False
964    False
965    False
966    False
967    False
968    False
969     True
970    False
971    False
972    False
973    False
974    False
975    False
976    False
977    False
978     True
Name: genre, Length: 979, dtype: bool
```

```
In [85]: xcrime=mydata[mynewdata["genre"]=="Crime"] #this will prints only those rows where condition is true(genre is Crime)
```

```
In [86]: xcrime.shape
```

```
Out[86]: (124, 7)
```

```
In [87]: xcrime
```

Out[87]:

Unnamed: 0	star_rating	title	content_rating	genre	duration	actors_list
0	0	9.3	The Shawshank Redemption	R	Crime	142 [u'Tim Robbins', u'Morgan Freeman', u'Bob Gunt...
1	1	9.2	The Godfather	R	Crime	175 [u'Marlon Brando', u'Al Pacino', u'James Caan']
2	2	9.1	The Godfather: Part II	R	Crime	200 [u'Al Pacino', u'Robert De Niro', u'Robert Duv...
4	4	8.9	Pulp Fiction	R	Crime	154 [u'John Travolta', u'Uma Thurman', u'Samuel L....
21	21	8.7	City of God	R	Crime	130 [u'Alexandre Rodrigues', u'Matheus Nachtergae...
23	23	8.7	The Usual Suspects	R	Crime	106 [u'Kevin Spacey', u'Gabriel Byrne', u'Chazz Pa...
28	28	8.6	Leon: The Professional	R	Crime	110 [u'Jean Reno', u'Gary Oldman', u'Natalie Portm...
34	34	8.6	American History X	R	Crime	119 [u'Edward Norton', u'Edward Furlong', u'Beverl...
40	40	8.5	The Green Mile	R	Crime	189 [u'Tom Hanks', u'Michael Clarke Duncan', u'Dav...
49	49	8.5	The Departed	R	Crime	151 [u'Leonardo DiCaprio', u'Matt Damon', u'Jack N...
63	63	8.4	M	NOT RATED	Crime	99 [u'Peter Lorre', u'Ellen Widmann', u'Inge Land...
65	65	8.4	Witness for the Prosecution	APPROVED	Crime	116 [u'Tyrone Power', u'Marlene Dietrich', u'Charl...
78	78	8.4	Once Upon a Time in America	R	Crime	229 [u'Robert De Niro', u'James Woods', u'Elizabet...
79	79	8.4	Double Indemnity	PASSED	Crime	107 [u'Fred MacMurray', u'Barbara Stanwyck', u'Edw...
86	86	8.4	A Clockwork Orange	X	Crime	136 [u'Malcolm McDowell', u'Patrick Magee', u'Mich...
90	90	8.4	Reservoir Dogs	R	Crime	99 [u'Harvey Keitel', u'Tim Roth', u'Michael Mads...
92	92	8.4	Taxi Driver	R	Crime	113 [u'Robert De Niro', u'Jodie Foster', u'Cybill ...
98	98	8.4	Rashomon	UNRATED	Crime	88 [u'Toshir\xfd Mifune', u'Machiko Ky\xfd', u'Ma...
112	112	8.3	L.A. Confidential	R	Crime	138 [u'Kevin Spacey', u'Russell Crowe', u'Guy Pear...
115	115	8.3	Scarface	R	Crime	170 [u'Al Pacino', u'Michelle Pfeiffer', u'Steven ...
122	122	8.3	On the Waterfront	NOT RATED	Crime	108 [u'Marlon Brando', u'Karl Malden', u'Lee J. Co...
154	154	8.2	Cool Hand Luke	PG	Crime	126 [u'Paul Newman', u'George Kennedy', u'Strother...
169	169	8.2	The Maltese Falcon	NOT RATED	Crime	100 [u'Humphrey Bogart', u'Mary Astor', u'Gladys G...
171	171	8.2	Dial M for Murder	PG	Crime	105 [u'Ray Milland', u'Grace Kelly', u'Robert Cumm...
175	175	8.2	Touch of Evil	PG-13	Crime	95 [u'Charlton Heston', u'Orson Welles', u'Janet ...

Unnamed: 0	star_rating	title	content_rating	genre	duration	actors_list	
176	176	8.2	Fargo	R	Crime	98	[u'William H. Macy', u'Frances McDormand', u'S...
178	178	8.2	The 400 Blows	NOT RATED	Crime	99	[u'Jean-Pierre L\xe9aud', u'Albert R\xe9my', u...
182	182	8.2	The Battle of Algiers	NOT RATED	Crime	121	[u'Brahim Hadjadj', u'Jean Martin', u'Yacef Sa...
199	199	8.1	No Country for Old Men	R	Crime	122	[u'Tommy Lee Jones', u'Javier Bardem', u'Josh ...
200	200	8.1	Le Samourai	PG	Crime	101	[u'Alain Delon', u'Nathalie Delon', u'Fran\xe7...
...
761	761	7.6	Falling Down	R	Crime	113	[u'Michael Douglas', u'Robert Duvall', u'Barba...
784	784	7.6	Dead Man Walking	R	Crime	122	[u'Susan Sarandon', u'Sean Penn', u'Robert Pro...
786	786	7.6	The Town	R	Crime	125	[u'Ben Affleck', u'Rebecca Hall', u'Jon Hamm']
797	797	7.6	Collateral	R	Crime	120	[u'Tom Cruise', u'Jamie Foxx', u'Jada Pinkett ...
799	799	7.6	Hodejegerne	R	Crime	100	[u'Aksel Hennie', u'Synn\xf8ve Macody Lund', u...
802	802	7.6	Tell No One	UNRATED	Crime	131	[u'Fran\xe7ois Cluzet', u'Marie-Jos\xe9e Croze...
823	823	7.5	Straw Dogs	UNRATED	Crime	113	[u'Dustin Hoffman', u'Susan George', u'Peter V...
826	826	7.5	Sleepers	R	Crime	147	[u'Robert De Niro', u'Kevin Bacon', u'Brad Pitt']
828	828	7.5	Gangs of New York	R	Crime	167	[u'Leonardo DiCaprio', u'Cameron Diaz', u'Dani...
830	830	7.5	Green Street Hooligans	R	Crime	109	[u'Elijah Wood', u'Charlie Hunnam', u'Claire F...
833	833	7.5	The Life of David Gale	R	Crime	130	[u'Kevin Spacey', u'Kate Winslet', u'Laura Lin...
836	836	7.5	Jackie Brown	R	Crime	154	[u'Pam Grier', u'Samuel L. Jackson', u'Robert ...
837	837	7.5	Menace II Society	R	Crime	97	[u'Tyrin Turner', u'Larenz Tate', u'June Kyoto...
841	841	7.5	Perfume: The Story of a Murderer	R	Crime	147	[u'Ben Whishaw', u'Dustin Hoffman', u'Alan Ric...
843	843	7.5	Marathon Man	R	Crime	125	[u'Dustin Hoffman', u'Laurence Olivier', u'Roy...
846	846	7.5	A Simple Plan	R	Crime	121	[u'Bill Paxton', u'Billy Bob Thornton', u'Brid...
855	855	7.5	Maria Full of Grace	R	Crime	101	[u'Catalina Sandino Moreno', u'Guillied Lopez',...
865	865	7.5	A Perfect World	PG-13	Crime	138	[u'Kevin Costner', u'Clint Eastwood', u'Laura ...
873	873	7.5	Felon	R	Crime	104	[u'Stephen Dorff', u'Marisol Nichols', u'Vince...
883	883	7.5	A History of Violence	R	Crime	96	[u'Viggo Mortensen', u'Maria Bello', u'Ed Harr...
893	893	7.5	In the Bedroom	R	Crime	130	[u'Tom Wilkinson', u'Sissy Spacek', u'Nick Sta...

Unnamed: 0	star_rating	title	content_rating	genre	duration	actors_list
907	907	7.5	The Proposition	R	Crime	104 [u'Ray Winstone', u'Guy Pearce', u'Emily Watson']
915	915	7.5	Bad Education	NC-17	Crime	106 [u'Gael Garc\xeda Bernal', u'Fele Mart\xednez'...
920	920	7.5	Witness	R	Crime	112 [u'Harrison Ford', u'Kelly McGillis', u'Lukas ...
924	924	7.5	Les Misérables	PG-13	Crime	134 [u'Liam Neeson', u'Geoffrey Rush', u'Uma Thurm...
927	927	7.5	Brick	R	Crime	110 [u'Joseph Gordon-Levitt', u'Lukas Haas', u'Emi...
931	931	7.4	Mean Streets	R	Crime	112 [u'Robert De Niro', u'Harvey Keitel', u'David ...
950	950	7.4	Bound	R	Crime	108 [u'Jennifer Tilly', u'Gina Gershon', u'Joe Pan...
969	969	7.4	Law Abiding Citizen	R	Crime	109 [u'Gerard Butler', u'Jamie Foxx', u'Leslie Bibb']
978	978	7.4	Wall Street	R	Crime	126 [u'Charlie Sheen', u'Michael Douglas', u'Tamar...

124 rows × 7 columns

```
In [77]: xcrime_142=xcrime[xcrime["duration"]>142] #genre crime duration>142
len(xcrime_142)
```

Out[77]: 23

```
In [88]: xcrime_142
```

Out[88]:

Unnamed: 0	star_rating	title	content_rating	genre	duration	actors_list	
1	1	9.2	The Godfather	R	Crime	175	[u'Marlon Brando', u'Al Pacino', u'James Caan']
2	2	9.1	The Godfather: Part II	R	Crime	200	[u'Al Pacino', u'Robert De Niro', u'Robert Duv...
4	4	8.9	Pulp Fiction	R	Crime	154	[u'John Travolta', u'Uma Thurman', u'Samuel L....
40	40	8.5	The Green Mile	R	Crime	189	[u'Tom Hanks', u'Michael Clarke Duncan', u'Dav...
49	49	8.5	The Departed	R	Crime	151	[u'Leonardo DiCaprio', u'Matt Damon', u'Jack N...
78	78	8.4	Once Upon a Time in America	R	Crime	229	[u'Robert De Niro', u'James Woods', u'Elizabet...
115	115	8.3	Scarface	R	Crime	170	[u'Al Pacino', u'Michelle Pfeiffer', u'Steven ...
257	257	8.1	Anatomy of a Murder	UNRATED	Crime	160	[u'James Stewart', u'Lee Remick', u'Ben Gazzara']
290	290	8.1	Prisoners	R	Crime	153	[u'Hugh Jackman', u'Jake Gyllenhaal', u'Viola ...
300	300	8.0	Dogville	R	Crime	178	[u'Nicole Kidman', u'Paul Bettany', u'Lauren B...
426	426	7.9	A Prophet	R	Crime	155	[u'Tahar Rahim', u'Niels Arestrup', u'Adel Ben...
436	436	7.9	Carlito's Way	R	Crime	144	[u'Al Pacino', u'Sean Penn', u'Penelope Ann Mi...
466	466	7.9	The Girl with the Dragon Tattoo	R	Crime	158	[u'Daniel Craig', u'Rooney Mara', u'Christophe...
482	482	7.8	The Girl with the Dragon Tattoo	R	Crime	152	[u'Michael Nyqvist', u'Noomi Rapace', u'Ewa Fr...
495	495	7.8	The Day of the Jackal	PG	Crime	143	[u'Edward Fox', u'Terence Alexander', u'Michel...
677	677	7.7	Zodiac	R	Crime	157	[u'Jake Gyllenhaal', u'Robert Downey Jr.', u'M...
694	694	7.7	Traffic	R	Crime	147	[u'Michael Douglas', u'Benicio Del Toro', u'Ca...
711	711	7.6	The Godfather: Part III	R	Crime	162	[u'Al Pacino', u'Diane Keaton', u'Andy Garcia']
730	730	7.6	West Side Story	UNRATED	Crime	152	[u'Natalie Wood', u'George Chakiris', u'Richar...
826	826	7.5	Sleepers	R	Crime	147	[u'Robert De Niro', u'Kevin Bacon', u'Brad Pitt']
828	828	7.5	Gangs of New York	R	Crime	167	[u'Leonardo DiCaprio', u'Cameron Diaz', u'Dani...
836	836	7.5	Jackie Brown	R	Crime	154	[u'Pam Grier', u'Samuel L. Jackson', u'Robert ...
841	841	7.5	Perfume: The Story of a Murderer	R	Crime	147	[u'Ben Whishaw', u'Dustin Hoffman', u'Alan Ric...

```
In [89]: p=mynewdata["star_rating"].sum(axis=0)/len(mynewdata) #average rating
```

```
In [92]: p
```

Out[92]: 7.889785495403474

```
In [93]: import numpy as np
```

```
In [94]: mynewdata.describe().T #describe shows the stastical data
```

Out[94]:

	count	mean	std	min	25%	50%	75%	max
star_rating	979.0	7.889785	0.336069	7.4	7.6	7.8	8.1	9.3
duration	979.0	120.979571	26.218010	64.0	102.0	117.0	134.0	242.0

```
In [95]: mynewdata.describe(include=np.number,percentiles=[.01,.02,.50]).T #take percentage according to your ease
```

Out[95]:

	count	mean	std	min	1%	2%	50%	max
star_rating	979.0	7.889785	0.336069	7.4	7.40	7.40	7.8	9.3
duration	979.0	120.979571	26.218010	64.0	77.56	80.56	117.0	242.0

```
In [97]: mynewdata.info()
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 979 entries, 0 to 978
Data columns (total 6 columns):
star_rating      979 non-null float64
title            979 non-null object
content_rating   976 non-null object
genre            979 non-null object
duration         979 non-null int64
actors_list      979 non-null object
dtypes: float64(1), int64(1), object(4)
memory usage: 46.0+ KB
```

In [98]: `mydata.info()` *#more memory consumes Unnamed included*

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 979 entries, 0 to 978
Data columns (total 7 columns):
Unnamed: 0      979 non-null int64
star_rating     979 non-null float64
title           979 non-null object
content_rating  976 non-null object
genre           979 non-null object
duration        979 non-null int64
actors_list     979 non-null object
dtypes: float64(1), int64(2), object(4)
memory usage: 53.6+ KB
```

In [99]: `mynewdata.dtypes`

```
Out[99]: star_rating    float64
title                object
content_rating       object
genre                object
duration             int64
actors_list          object
dtype: object
```

In [100]: `mydata.dtypes`

```
Out[100]: Unnamed: 0      int64
star_rating    float64
title          object
content_rating object
genre          object
duration       int64
actors_list    object
dtype: object
```