

## Ques 06 : How do I sort pandas Dataframe or Series?

pandas allows us to sort a Dataframe by one of its columns (known as a "Series"), and also allows us to sort a **Series** alone.

```
In [2]: # IMDB - Internet Movie Database (Dataset)
import pandas as pd
movie_ratings_ds = pd.read_csv('http://bit.ly/imdbratings')
movie_ratings_ds.head(4)
```

```
Out[2]:
```

	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...

```
In [3]: # We can sort the dataframe by any column
# This don't sort the actual data. It just shows us in sorted order
# Ascending Order

movie_ratings_ds.sort_values('duration').head()
```

```
Out[3]:
```

	star_rating	title	content_rating	genre	duration	actors_list
389	8.0	Freaks	UNRATED	Drama	64	[u'Wallace Ford', u'Leila Hyams', u'Olga Bacla...
338	8.0	Battleship Potemkin	UNRATED	History	66	[u'Aleksandr Antonov', u'Vladimir Barsky', u'G...
258	8.1	The Cabinet of Dr. Caligari	UNRATED	Crime	67	[u'Werner Krauss', u'Conrad Veidt', u'Friedric...
293	8.1	Duck Soup	PASSED	Comedy	68	[u'Groucho Marx', u'Harpo Marx', u'Chico Marx']
88	8.4	The Kid	NOT RATED	Comedy	68	[u'Charles Chaplin', u'Edna Purviance', u'Jack...

```
In [4]: # Changing the actual order of the rows in dataframe we need to use "inplace=True"
# Descending order

# sort_values ( by, axis=0, ascending=True, inplace=False, kind='quicksort', na_position='last')
movie_ratings_ds.sort_values('duration', ascending=False).head()
```

```
Out[4]:
```

	star_rating	title	content_rating	genre	duration	actors_list
476	7.8	Hamlet	PG-13	Drama	242	[u'Kenneth Branagh', u'Julie Christie', u'Dere...
157	8.2	Gone with the Wind	G	Drama	238	[u'Clark Gable', u'Vivien Leigh', u'Thomas Mit...
78	8.4	Once Upon a Time in America	R	Crime	229	[u'Robert De Niro', u'James Woods', u'Elizabet...
142	8.3	Lagaan: Once Upon a Time in India	PG	Adventure	224	[u'Aamir Khan', u'Gracy Singh', u'Rachel Shell...
445	7.9	The Ten Commandments	APPROVED	Adventure	220	[u'Charlton Heston', u'Yul Brynner', u'Anne Ba...

```
In [5]: # See the sorted value of a column
# Sort the series

movie_ratings_ds.title.sort_values().head()
```

```
Out[5]: 542    (500) Days of Summer
5         12 Angry Men
201       12 Years a Slave
698         127 Hours
110    2001: A Space Odyssey
Name: title, dtype: object
```

```
In [6]: # Sort by multiple columns
movie_ratings_ds.sort_values(['star_rating', 'duration'], ascending=False).head(10)
```

Out[6]:

	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...
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...
6	8.9	The Good, the Bad and the Ugly	NOT RATED	Western	161	[u'Clint Eastwood', u'Eli Wallach', u'Lee Van ...
4	8.9	Pulp Fiction	R	Crime	154	[u'John Travolta', u'Uma Thurman', u'Samuel L....
9	8.9	Fight Club	R	Drama	139	[u'Brad Pitt', u'Edward Norton', u'Helena Bonh...
5	8.9	12 Angry Men	NOT RATED	Drama	96	[u'Henry Fonda', u'Lee J. Cobb', u'Martin Bals...

```
In [7]: movie_ratings_ds.head()
```

Out[7]:

	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....