

In [28]: `import pandas as pd`

In [29]: `orders=pd.read_table('http://bit.ly/chiporders')`

In [30]: `orders.head()`

Out[30]:

	order_id	quantity	item_name	choice_description	item_price
0	1	1	Chips and Fresh Tomato Salsa	NaN	\$2.39
1	1	1	Izze	[Clementine]	\$3.39
2	1	1	Nantucket Nectar	[Apple]	\$3.39
3	1	1	Chips and Tomatillo-Green Chili Salsa	NaN	\$2.39
4	2	2	Chicken Bowl	[Tomatillo-Red Chili Salsa (Hot), [Black Beans...	\$16.98

In [31]: `pd.read_table('http://bit.ly/movieusers').head()`

Out[31]:

	1 24 M technician 85711
0	2 53 F other 94043
1	3 23 M writer 32067
2	4 24 M technician 43537
3	5 33 F other 15213
4	6 42 M executive 98101

In [32]: `user_cols=['user_id','age','gender','occupation','zip_code']  
users=pd.read_table('http://bit.ly/movieusers',sep='|',header=None,names=user_cols)`

In [33]: `users.head()`

Out[33]:

	user_id	age	gender	occupation	zip_code
0	1	24	M	technician	85711
1	2	53	F	other	94043
2	3	23	M	writer	32067
3	4	24	M	technician	43537
4	5	33	F	other	15213

In [34]: `pd.read_table('http://bit.ly/uforeports').head()`

Out[34]:

	<b>City,Colors Reported,Shape Reported,State,Time</b>
<b>0</b>	Ithaca,,TRIANGLE,NY,6/1/1930 22:00
<b>1</b>	Willingboro,,OTHER,NJ,6/30/1930 20:00
<b>2</b>	Holyoke,,OVAL,CO,2/15/1931 14:00
<b>3</b>	Abilene,,DISK,KS,6/1/1931 13:00
<b>4</b>	New York Worlds Fair,,LIGHT,NY,4/18/1933 19:00

In [35]: `ufo=pd.read_csv('http://bit.ly/uforeports')  
ufo.head()`

Out[35]:

	<b>City</b>	<b>Colors Reported</b>	<b>Shape Reported</b>	<b>State</b>	<b>Time</b>
<b>0</b>	Ithaca	NaN	TRIANGLE	NY	6/1/1930 22:00
<b>1</b>	Willingboro	NaN	OTHER	NJ	6/30/1930 20:00
<b>2</b>	Holyoke	NaN	OVAL	CO	2/15/1931 14:00
<b>3</b>	Abilene	NaN	DISK	KS	6/1/1931 13:00
<b>4</b>	New York Worlds Fair	NaN	LIGHT	NY	4/18/1933 19:00

In [36]: `type(ufo)`

Out[36]: `pandas.core.frame.DataFrame`

In [37]: `ufo.shape`

Out[37]: `(18241, 5)`

```
In [38]: ufo['Location']=ufo.City+', '+ufo.State
ufo.head()
```

```
Out[38]:
```

	City	Colors Reported	Shape Reported	State	Time	Location
0	Ithaca	NaN	TRIANGLE	NY	6/1/1930 22:00	Ithaca, NY
1	Willingboro	NaN	OTHER	NJ	6/30/1930 20:00	Willingboro, NJ
2	Holyoke	NaN	OVAL	CO	2/15/1931 14:00	Holyoke, CO
3	Abilene	NaN	DISK	KS	6/1/1931 13:00	Abilene, KS
4	New York Worlds Fair	NaN	LIGHT	NY	4/18/1933 19:00	New York Worlds Fair, NY

```
In [39]: movies=pd.read_csv('http://bit.ly/imdbratings')
movies.head()
```

```
Out[39]:
```

	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....]

In [40]: `movies.describe()`

Out[40]:

	star_rating	duration
count	979.000000	979.000000
mean	7.889785	120.979571
std	0.336069	26.218010
min	7.400000	64.000000
25%	7.600000	102.000000
50%	7.800000	117.000000
75%	8.100000	134.000000
max	9.300000	242.000000

In [41]: `movies.dtypes`

Out[41]:

```

star_rating    float64
title          object
content_rating  object
genre          object
duration        int64
actors_list    object
dtype: object

```

In [42]: `ufo.columns`

Out[42]: Index(['City', 'Colors Reported', 'Shape Reported', 'State', 'Time',  
'Location'],  
dtype='object')

In [43]: `ufo.rename(columns={'Colors Reported': 'Color_Reported'}, inplace=True)`  
`ufo.head()`

Out[43]:

	City	Color_Reported	Shape Reported	State	Time	Location
0	Ithaca	NaN	TRIANGLE	NY	6/1/1930 22:00	Ithaca, NY
1	Willingboro	NaN	OTHER	NJ	6/30/1930 20:00	Willingboro, NJ
2	Holyoke	NaN	OVAl	CO	2/15/1931 14:00	Holyoke, CO
3	Abilene	NaN	DISK	KS	6/1/1931 13:00	Abilene, KS
4	New York Worlds Fair	NaN	LIGHT	NY	4/18/1933 19:00	New York Worlds Fair, NY

```
In [44]: ufo_cols=['city','color_rep','shape_rep','state','time','location']
ufo.columns=ufo_cols
ufo.head()
```

Out[44]:

	city	color_rep	shape_rep	state	time	location
0	Ithaca	NaN	TRIANGLE	NY	6/1/1930 22:00	Ithaca, NY
1	Willingboro	NaN	OTHER	NJ	6/30/1930 20:00	Willingboro, NJ
2	Holyoke	NaN	OVAL	CO	2/15/1931 14:00	Holyoke, CO
3	Abilene	NaN	DISK	KS	6/1/1931 13:00	Abilene, KS
4	New York Worlds Fair	NaN	LIGHT	NY	4/18/1933 19:00	New York Worlds Fair, NY

```
In [45]: ufo.columns=ufo.columns.str.replace('_', ' ')
ufo.head()
```

Out[45]:

	city	color rep	shape rep	state	time	location
0	Ithaca	NaN	TRIANGLE	NY	6/1/1930 22:00	Ithaca, NY
1	Willingboro	NaN	OTHER	NJ	6/30/1930 20:00	Willingboro, NJ
2	Holyoke	NaN	OVAL	CO	2/15/1931 14:00	Holyoke, CO
3	Abilene	NaN	DISK	KS	6/1/1931 13:00	Abilene, KS
4	New York Worlds Fair	NaN	LIGHT	NY	4/18/1933 19:00	New York Worlds Fair, NY

```
In [46]: ufo.drop('color rep',axis=1,inplace=True)
ufo.head()
```

Out[46]:

	city	shape rep	state	time	location
0	Ithaca	TRIANGLE	NY	6/1/1930 22:00	Ithaca, NY
1	Willingboro	OTHER	NJ	6/30/1930 20:00	Willingboro, NJ
2	Holyoke	OVAL	CO	2/15/1931 14:00	Holyoke, CO
3	Abilene	DISK	KS	6/1/1931 13:00	Abilene, KS
4	New York Worlds Fair	LIGHT	NY	4/18/1933 19:00	New York Worlds Fair, NY

```
In [47]: ufo.drop(['state','time'],axis=1,inplace=True)
ufo.head()
```

Out[47]:

	city	shape rep	location
0	Ithaca	TRIANGLE	Ithaca, NY
1	Willingboro	OTHER	Willingboro, NJ
2	Holyoke	OVAL	Holyoke, CO
3	Abilene	DISK	Abilene, KS
4	New York Worlds Fair	LIGHT	New York Worlds Fair, NY

```
In [48]: ufo.drop([0,1],axis=0,inplace=True)
ufo.head()
```

Out[48]:

	city	shape rep	location
2	Holyoke	OVAL	Holyoke, CO
3	Abilene	DISK	Abilene, KS
4	New York Worlds Fair	LIGHT	New York Worlds Fair, NY
5	Valley City	DISK	Valley City, ND
6	Crater Lake	CIRCLE	Crater Lake, CA

```
In [49]: movies.head()
```

Out[49]:

	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....]

```
In [51]: movies.title.sort_values(ascending=False).head()
```

```
Out[51]: 864          [Rec]
526          Zulu
615    Zombieland
677          Zodiac
955    Zero Dark Thirty
Name: title, dtype: object
```

```
In [53]: movies.sort_values('title').head()
```

```
Out[53]:
```

	star_rating	title	content_rating	genre	duration	actors_list
<b>542</b>	7.8	(500) Days of Summer	PG-13	Comedy	95	[u'Zooey Deschanel', u'Joseph Gordon-Levitt', ...]
<b>5</b>	8.9	12 Angry Men	NOT RATED	Drama	96	[u'Henry Fonda', u'Lee J. Cobb', u'Martin Bals...]
<b>201</b>	8.1	12 Years a Slave	R	Biography	134	[u'Chiwetel Ejiofor', u'Michael Kenneth Willia...]
<b>698</b>	7.6	127 Hours	R	Adventure	94	[u'James Franco', u'Amber Tamblyn', u'Kate Mara']
<b>110</b>	8.3	2001: A Space Odyssey	G	Mystery	160	[u'Keir Dullea', u'Gary Lockwood', u'William S...]

```
In [54]: movies.sort_values(['content_rating', 'duration']).head()
```

```
Out[54]:
```

	star_rating	title	content_rating	genre	duration	actors_list
<b>713</b>	7.6	The Jungle Book	APPROVED	Animation	78	[u'Phil Harris', u'Sebastian Cabot', u'Louis P...
<b>513</b>	7.8	Invasion of the Body Snatchers	APPROVED	Horror	80	[u'Kevin McCarthy', u'Dana Wynter', u'Larry Ga...
<b>272</b>	8.1	The Killing	APPROVED	Crime	85	[u'Sterling Hayden', u'Coleen Gray', u'Vince E...
<b>703</b>	7.6	Dracula	APPROVED	Horror	85	[u'Bela Lugosi', u'Helen Chandler', u'David Ma...
<b>612</b>	7.7	A Hard Day's Night	APPROVED	Comedy	87	[u'John Lennon', u'Paul McCartney', u'George H...

```
In [63]: booleans=[]
for lenght in movies.duration:
    if lenght>=200:
        booleans.append(True)
    else:
        booleans.append(False)
booleans[0:5]
```

```
Out[63]: [False, False, True, False, False]
```

```
In [64]: is_long=pd.Series(booleans)
is_long.head()
```

```
Out[64]: 0    False
1    False
2     True
3    False
4    False
dtype: bool
```



```
In [65]: shortcut_is_long=movies.duration>=200  
         shortcut_is_long.head()
```

```
Out[65]: 0    False  
         1    False  
         2     True  
         3    False  
         4    False  
         Name: duration, dtype: bool
```

```
In [66]: movies[is_long]
```

Out[66]:

	star_rating	title	content_rating	genre	duration	actors_list
<b>2</b>	9.1	The Godfather: Part II	R	Crime	200	[u'Al Pacino', u'Robert De Niro', u'Robert Duv...
<b>7</b>	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...
<b>17</b>	8.7	Seven Samurai	UNRATED	Drama	207	[u'Toshir\u00f4 Mifune', u'Takashi Shimura', u'K...
<b>78</b>	8.4	Once Upon a Time in America	R	Crime	229	[u'Robert De Niro', u'James Woods', u'Elizabet...
<b>85</b>	8.4	Lawrence of Arabia	PG	Adventure	216	[u"Peter O'Toole", u'Alec Guinness', u'Anthony...
<b>142</b>	8.3	Lagaan: Once Upon a Time in India	PG	Adventure	224	[u'Aamir Khan', u'Gracy Singh', u'Rachel Shell...
<b>157</b>	8.2	Gone with the Wind	G	Drama	238	[u'Clark Gable', u'Vivien Leigh', u'Thomas Mit...
<b>204</b>	8.1	Ben-Hur	G	Adventure	212	[u'Charlton Heston', u'Jack Hawkins', u'Stephe...

	star_rating	title	content_rating	genre	duration	actors_list
<b>445</b>	7.9	The Ten Commandments	APPROVED	Adventure	220	[u'Charlton Heston', u'Yul Brynner', u'Anne Ba...
<b>476</b>	7.8	Hamlet	PG-13	Drama	242	[u'Kenneth Branagh', u'Julie Christie', u'Dere...
<b>630</b>	7.7	Malcolm X	PG-13	Biography	202	[u'Denzel Washington', u'Angela Bassett', u'De...
<b>767</b>	7.6	It's a Mad, Mad, Mad, Mad World	APPROVED	Action	205	[u'Spencer Tracy', u'Milton Berle', u'Ethel Me...

```
In [67]: movies[movies.duration>=200]
```

Out[67]:

	star_rating	title	content_rating	genre	duration	actors_list
<b>2</b>	9.1	The Godfather: Part II	R	Crime	200	[u'Al Pacino', u'Robert De Niro', u'Robert Duv...
<b>7</b>	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...
<b>17</b>	8.7	Seven Samurai	UNRATED	Drama	207	[u'Toshir\u00f4 Mifune', u'Takashi Shimura', u'K...
<b>78</b>	8.4	Once Upon a Time in America	R	Crime	229	[u'Robert De Niro', u'James Woods', u'Elizabet...
<b>85</b>	8.4	Lawrence of Arabia	PG	Adventure	216	[u"Peter O'Toole", u'Alec Guinness', u'Anthony...
<b>142</b>	8.3	Lagaan: Once Upon a Time in India	PG	Adventure	224	[u'Aamir Khan', u'Gracy Singh', u'Rachel Shell...
<b>157</b>	8.2	Gone with the Wind	G	Drama	238	[u'Clark Gable', u'Vivien Leigh', u'Thomas Mit...
<b>204</b>	8.1	Ben-Hur	G	Adventure	212	[u'Charlton Heston', u'Jack Hawkins', u'Stephe...

	star_rating	title	content_rating	genre	duration	actors_list
<b>445</b>	7.9	The Ten Commandments	APPROVED	Adventure	220	[u'Charlton Heston', u'Yul Brynner', u'Anne Ba...
<b>476</b>	7.8	Hamlet	PG-13	Drama	242	[u'Kenneth Branagh', u'Julie Christie', u'Dere...
<b>630</b>	7.7	Malcolm X	PG-13	Biography	202	[u'Denzel Washington', u'Angela Bassett', u'De...
<b>767</b>	7.6	It's a Mad, Mad, Mad, Mad World	APPROVED	Action	205	[u'Spencer Tracy', u'Milton Berle', u'Ethel Me...

In [68]: `movies[movies.duration>=200].genre`

```
Out[68]: 2      Crime
7      Adventure
17     Drama
78     Crime
85     Adventure
142    Adventure
157    Drama
204    Adventure
445    Adventure
476    Drama
630    Biography
767    Action
Name: genre, dtype: object
```

```
In [69]: movies.loc[movies.duration>=200,'genre']
```

```
Out[69]: 2          Crime
7          Adventure
17         Drama
78         Crime
85         Adventure
142        Adventure
157        Drama
204        Adventure
445        Adventure
476        Drama
630        Biography
767        Action
Name: genre, dtype: object
```

```
In [73]: movies[(movies.duration>=200) & (movies.genre=='Drama')]
```

```
Out[73]:
```

	star_rating	title	content_rating	genre	duration	actors_list
<b>17</b>	8.7	Seven Samurai	UNRATED	Drama	207	[u'Toshir\xf4 Mifune', u'Takashi Shimura', u'K...
<b>157</b>	8.2	Gone with the Wind	G	Drama	238	[u'Clark Gable', u'Vivien Leigh', u'Thomas Mit...
<b>476</b>	7.8	Hamlet	PG-13	Drama	242	[u'Kenneth Branagh', u'Julie Christie', u'Dere...

```
In [75]: movies[movies.genre.isin(['Crime','Drama'])].head()
```

```
Out[75]:
```

	star_rating	title	content_rating	genre	duration	actors_list
<b>0</b>	9.3	The Shawshank Redemption	R	Crime	142	[u'Tim Robbins', u'Morgan Freeman', u'Bob Gunt...
<b>1</b>	9.2	The Godfather	R	Crime	175	[u'Marlon Brando', u'Al Pacino', u'James Caan']
<b>2</b>	9.1	The Godfather: Part II	R	Crime	200	[u'Al Pacino', u'Robert De Niro', u'Robert Duv...
<b>4</b>	8.9	Pulp Fiction	R	Crime	154	[u'John Travolta', u'Uma Thurman', u'Samuel L....
<b>5</b>	8.9	12 Angry Men	NOT RATED	Drama	96	[u'Henry Fonda', u'Lee J. Cobb', u'Martin Bals...