Pandas_practice

March 21, 2021

```
[3]: import pandas as pd
     import numpy as np
     import seaborn as sns
     import matplotlib.pyplot as plt
```

```
[5]: url = 'https://raw.githubusercontent.com/justmarkham/DAT8/master/data/chipotle.
     ↪tsv'
```

```
[6]: df= pd.read_csv(url,sep ='\t')
```

```
[10]: df.head(5)
```

```
[10]:    order_id  quantity                              item_name  \
      0         1         1          Chips and Fresh Tomato Salsa
      1         1         1                                  Izze
      2         1         1                      Nantucket Nectar
      3         1         1  Chips and Tomatillo-Green Chili Salsa
      4         2         2                           Chicken Bowl

                                   choice_description item_price
      0                                          NaN      $2.39
      1                                 [Clementine]      $3.39
      2                                      [Apple]      $3.39
      3                                          NaN      $2.39
      4  [Tomatillo-Red Chili Salsa (Hot), [Black Beans…    $16.98
```

```
[11]: df.tail(7)
```

```
[11]:       order_id  quantity            item_name  \
      4615      1832         1    Chicken Soft Tacos
      4616      1832         1  Chips and Guacamole
      4617      1833         1         Steak Burrito
      4618      1833         1         Steak Burrito
      4619      1834         1    Chicken Salad Bowl
      4620      1834         1    Chicken Salad Bowl
      4621      1834         1    Chicken Salad Bowl

                                   choice_description item_price
```

```
4615    [Fresh Tomato Salsa, [Rice, Cheese, Sour Cream]]    $8.75
4616                                               NaN    $4.45
4617  [Fresh Tomato Salsa, [Rice, Black Beans, Sour …   $11.75
4618  [Fresh Tomato Salsa, [Rice, Sour Cream, Cheese…   $11.75
4619  [Fresh Tomato Salsa, [Fajita Vegetables, Pinto…   $11.25
4620  [Fresh Tomato Salsa, [Fajita Vegetables, Lettu…    $8.75
4621  [Fresh Tomato Salsa, [Fajita Vegetables, Pinto…    $8.75
```

[17]: `df.columns`

[17]:
```
Index(['order_id', 'quantity', 'item_name', 'choice_description',
       'item_price'],
      dtype='object')
```

[21]: `df.shape`

[21]: `(4622, 5)`

[22]: `df.index`

[22]: `RangeIndex(start=0, stop=4622, step=1)`

[29]:
```
c=df.groupby('item_name')
c=c.sum()
c
```

[29]:

	order_id	quantity
item_name		
6 Pack Soft Drink	52322	55
Barbacoa Bowl	53972	66
Barbacoa Burrito	74718	91
Barbacoa Crispy Tacos	5613	12
Barbacoa Salad Bowl	9708	10
Barbacoa Soft Tacos	18725	25
Bottled Water	175944	211
Bowl	472	4
Burrito	1550	6
Canned Soda	76396	126
Canned Soft Drink	304753	351
Carnitas Bowl	62742	71
Carnitas Burrito	51652	60
Carnitas Crispy Tacos	5868	8
Carnitas Salad	1500	1
Carnitas Salad Bowl	6693	6
Carnitas Soft Tacos	37673	40
Chicken Bowl	713926	761
Chicken Burrito	497303	591
Chicken Crispy Tacos	47382	50

```
Chicken Salad                               10465         9
Chicken Salad Bowl                         117104       123
Chicken Soft Tacos                          98395       120
Chips                                      208004       230
Chips and Fresh Tomato Salsa               100419       130
Chips and Guacamole                        449959       506
Chips and Mild Fresh Tomato Salsa             279         1
Chips and Roasted Chili Corn Salsa          14999        23
Chips and Roasted Chili-Corn Salsa          17462        18
Chips and Tomatillo Green Chili Salsa       41170        45
Chips and Tomatillo Red Chili Salsa         45556        50
Chips and Tomatillo-Green Chili Salsa       21826        33
Chips and Tomatillo-Red Chili Salsa         18344        25
Crispy Tacos                                  434         2
Izze                                        10587        20
Nantucket Nectar                            21814        29
Salad                                        1150         2
Side of Chips                               84769       110
Steak Bowl                                 193752       221
Steak Burrito                              328437       386
Steak Crispy Tacos                          35818        36
Steak Salad                                  2362         4
Steak Salad Bowl                            29590        31
Steak Soft Tacos                            50177        56
Veggie Bowl                                 72270        87
Veggie Burrito                              80962        97
Veggie Crispy Tacos                           668         1
Veggie Salad                                 7265         6
Veggie Salad Bowl                           17303        18
Veggie Soft Tacos                            5520         8
```

```
[32]: c= c.sort_values('quantity',ascending=False)
      c
```

```
[32]:                                order_id  quantity
      item_name
      Chicken Bowl                     713926       761
      Chicken Burrito                  497303       591
      Chips and Guacamole              449959       506
      Steak Burrito                    328437       386
      Canned Soft Drink                304753       351
      Chips                            208004       230
      Steak Bowl                       193752       221
      Bottled Water                    175944       211
      Chips and Fresh Tomato Salsa     100419       130
      Canned Soda                       76396       126
      Chicken Salad Bowl               117104       123
```

```
Chicken Soft Tacos                             98395        120
Side of Chips                                  84769        110
Veggie Burrito                                 80962         97
Barbacoa Burrito                               74718         91
Veggie Bowl                                    72270         87
Carnitas Bowl                                  62742         71
Barbacoa Bowl                                  53972         66
Carnitas Burrito                               51652         60
Steak Soft Tacos                               50177         56
6 Pack Soft Drink                              52322         55
Chips and Tomatillo Red Chili Salsa            45556         50
Chicken Crispy Tacos                           47382         50
Chips and Tomatillo Green Chili Salsa          41170         45
Carnitas Soft Tacos                            37673         40
Steak Crispy Tacos                             35818         36
Chips and Tomatillo-Green Chili Salsa          21826         33
Steak Salad Bowl                               29590         31
Nantucket Nectar                               21814         29
Chips and Tomatillo-Red Chili Salsa            18344         25
Barbacoa Soft Tacos                            18725         25
Chips and Roasted Chili Corn Salsa             14999         23
Izze                                           10587         20
Veggie Salad Bowl                              17303         18
Chips and Roasted Chili-Corn Salsa             17462         18
Barbacoa Crispy Tacos                           5613         12
Barbacoa Salad Bowl                             9708         10
Chicken Salad                                  10465          9
Veggie Soft Tacos                               5520          8
Carnitas Crispy Tacos                           5868          8
Burrito                                         1550          6
Veggie Salad                                    7265          6
Carnitas Salad Bowl                             6693          6
Bowl                                             472          4
Steak Salad                                     2362          4
Salad                                           1150          2
Crispy Tacos                                     434          2
Chips and Mild Fresh Tomato Salsa                279          1
Carnitas Salad                                  1500          1
Veggie Crispy Tacos                              668          1
```

[33]: `c.head(5)`

[33]:
```
                        order_id  quantity
item_name
Chicken Bowl              713926       761
Chicken Burrito           497303       591
Chips and Guacamole       449959       506
```

```
           Steak Burrito          328437          386
           Canned Soft Drink       304753          351
```

[35]:
```python
c=df.groupby('choice_description').sum()
c=c.sort_values('quantity',ascending=False)
c
```

[35]:
```
                                                   order_id  quantity
choice_description
[Diet Coke]                                          123455       159
[Coke]                                               122752       143
[Sprite]                                              80426        89
[Fresh Tomato Salsa, [Rice, Black Beans, Cheese…     43088        49
[Fresh Tomato Salsa, [Rice, Black Beans, Cheese…     36041        42
…                                                       …         …
[Roasted Chili Corn Salsa, [Fajita Vegetables, …       577         1
[Roasted Chili Corn Salsa, [Fajita Vegetables, …       585         1
[Roasted Chili Corn Salsa, [Fajita Vegetables, …       235         1
[Roasted Chili Corn Salsa, [Guacamole, Sour Cre…       987         1
[[Tomatillo-Red Chili Salsa (Hot), Tomatillo-Gr…      1299         1

[1043 rows x 2 columns]
```

[36]:
```python
c.head(5)
```

[36]:
```
                                                   order_id  quantity
choice_description
[Diet Coke]                                          123455       159
[Coke]                                               122752       143
[Sprite]                                              80426        89
[Fresh Tomato Salsa, [Rice, Black Beans, Cheese…     43088        49
[Fresh Tomato Salsa, [Rice, Black Beans, Cheese…     36041        42
```

[45]:
```python
revenue = (df['quantity']*df['item_price']).sum()
revenue
```

[45]: 39237.02

[52]:
```python
revenue = (df['quantity']*df['item_price']).sum()
print('Revenue was : $'+ str(np.round(revenue,2)))
```

```
Revenue was : $39237.0
```

[62]:
```python
filtered =df.drop_duplicates(['item_name','quantity'])
one_prod=filtered[filtered.quantity==1]
price_per_item=one_prod[['item_name','item_price']]
```

[63]:
```python
price_per_item.sort_values(by= 'item_price',ascending= False)
```

```
[63]:                                      item_name   item_price
      606                         Steak Salad Bowl        11.89
      1229                     Barbacoa Salad Bowl        11.89
      1132                     Carnitas Salad Bowl        11.89
      7                              Steak Burrito        11.75
      168                    Barbacoa Crispy Tacos        11.75
      39                            Barbacoa Bowl        11.75
      738                        Veggie Soft Tacos        11.25
      186                        Veggie Salad Bowl        11.25
      62                              Veggie Bowl        11.25
      57                            Veggie Burrito        11.25
      250                            Chicken Salad        10.98
      5                             Chicken Bowl        10.98
      8                          Steak Soft Tacos         9.25
      554                    Carnitas Crispy Tacos         9.25
      237                      Carnitas Soft Tacos         9.25
      56                       Barbacoa Soft Tacos         9.25
      92                        Steak Crispy Tacos         9.25
      664                             Steak Salad         8.99
      54                              Steak Bowl         8.99
      3750                         Carnitas Salad         8.99
      21                          Barbacoa Burrito         8.99
      27                          Carnitas Burrito         8.99
      33                            Carnitas Bowl         8.99
      11                     Chicken Crispy Tacos         8.75
      12                       Chicken Soft Tacos         8.75
      44                        Chicken Salad Bowl         8.75
      1653                     Veggie Crispy Tacos         8.49
      16                           Chicken Burrito         8.49
      1694                            Veggie Salad         8.49
      1414                                  Salad         7.40
      510                                 Burrito         7.40
      520                            Crispy Tacos         7.40
      673                                   Bowl         7.40
      298                       6 Pack Soft Drink         6.49
      10                       Chips and Guacamole         4.45
      1                                     Izze         3.39
      2                         Nantucket Nectar         3.39
      674      Chips and Mild Fresh Tomato Salsa         3.00
      111      Chips and Tomatillo Red Chili Salsa         2.95
      233     Chips and Roasted Chili Corn Salsa         2.95
      38     Chips and Tomatillo Green Chili Salsa         2.95
      3      Chips and Tomatillo-Green Chili Salsa         2.39
      300      Chips and Tomatillo-Red Chili Salsa         2.39
      191      Chips and Roasted Chili-Corn Salsa         2.39
      0               Chips and Fresh Tomato Salsa         2.39
      40                                   Chips         2.15
```

```
6                         Side of Chips      1.69
263                  Canned Soft Drink      1.25
28                         Canned Soda      1.09
34                       Bottled Water      1.09
```

[64]: `price_per_item.sort_values(by= 'item_price',ascending= False).head(2)`

[64]:
```
              item_name  item_price
606     Steak Salad Bowl       11.89
1229  Barbacoa Salad Bowl       11.89
```

[65]: `df[df.item_name == 'Veggie Salad Bowl']`

[65]:
```
      order_id  quantity            item_name  \
186         83         1  Veggie Salad Bowl
295        128         1  Veggie Salad Bowl
455        195         1  Veggie Salad Bowl
496        207         1  Veggie Salad Bowl
960        394         1  Veggie Salad Bowl
1316       536         1  Veggie Salad Bowl
1884       760         1  Veggie Salad Bowl
2156       869         1  Veggie Salad Bowl
2223       896         1  Veggie Salad Bowl
2269       913         1  Veggie Salad Bowl
2683      1066         1  Veggie Salad Bowl
3223      1289         1  Veggie Salad Bowl
3293      1321         1  Veggie Salad Bowl
4109      1646         1  Veggie Salad Bowl
4201      1677         1  Veggie Salad Bowl
4261      1700         1  Veggie Salad Bowl
4541      1805         1  Veggie Salad Bowl
4573      1818         1  Veggie Salad Bowl

                           choice_description  item_price
186   [Fresh Tomato Salsa, [Fajita Vegetables, Rice,…       11.25
295   [Fresh Tomato Salsa, [Fajita Vegetables, Lettu…       11.25
455   [Fresh Tomato Salsa, [Fajita Vegetables, Rice,…       11.25
496   [Fresh Tomato Salsa, [Rice, Lettuce, Guacamole…       11.25
960   [Fresh Tomato Salsa, [Fajita Vegetables, Lettu…        8.75
1316  [Fresh Tomato Salsa, [Fajita Vegetables, Rice,…        8.75
1884  [Fresh Tomato Salsa, [Fajita Vegetables, Rice,…       11.25
2156  [Tomatillo Red Chili Salsa, [Fajita Vegetables…       11.25
2223      [Roasted Chili Corn Salsa, Fajita Vegetables]        8.75
2269  [Fresh Tomato Salsa, [Fajita Vegetables, Rice,…        8.75
2683  [Roasted Chili Corn Salsa, [Fajita Vegetables,…        8.75
3223  [Tomatillo Red Chili Salsa, [Fajita Vegetables…       11.25
3293  [Fresh Tomato Salsa, [Rice, Black Beans, Chees…        8.75
```

```
4109  [Tomatillo Red Chili Salsa, [Fajita Vegetables…      11.25
4201  [Fresh Tomato Salsa, [Fajita Vegetables, Black…      11.25
4261  [Fresh Tomato Salsa, [Fajita Vegetables, Rice,…      11.25
4541  [Tomatillo Green Chili Salsa, [Fajita Vegetabl…       8.75
4573  [Fresh Tomato Salsa, [Fajita Vegetables, Pinto…       8.75
```

[ ]: