String Methods

November 17, 2016

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In [1]: import pandas as pd

In [2]: orders = pd.read_table('http://bit.ly/chiporders')

In [3]: orders.head()

Out[3]:    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

In [5]: # String method on pandas series
        orders.item_name.str.upper().head() # change item name to uppercase and p l

Out[5]: 0              CHIPS AND FRESH TOMATO SALSA
        1                                      IZZE
        2                          NANTUCKET NECTAR
        3     CHIPS AND TOMATILLO-GREEN CHILI SALSA
        4                              CHICKEN BOWL
        Name: item_name, dtype: object

In [6]: orders.item_name.str.contains('Chicken').head() # check presence 'Chicken'-

Out[6]: 0     False
        1     False
        2     False
        3     False
        4      True
        Name: item_name, dtype: bool
```

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In [8]: orders[orders.item_name.str.contains('Chicken')] # get list
        # look up "string handling"

Out[8]:         order_id  quantity            item_name  \
        4              2         2          Chicken Bowl
        5              3         1          Chicken Bowl
        11             6         1   Chicken Crispy Tacos
        12             6         1     Chicken Soft Tacos
        13             7         1          Chicken Bowl
        16             8         1       Chicken Burrito
        17             9         1       Chicken Burrito
        19            10         1          Chicken Bowl
        23            12         1       Chicken Burrito
        26            13         1          Chicken Bowl
        29            15         1       Chicken Burrito
        35            18         1     Chicken Soft Tacos
        36            18         1     Chicken Soft Tacos
        42            20         1          Chicken Bowl
        44            20         1     Chicken Salad Bowl
        45            21         1       Chicken Burrito
        52            24         1       Chicken Burrito
        63            28         1       Chicken Burrito
        68            30         1       Chicken Burrito
        73            33         1       Chicken Burrito
        75            34         1     Chicken Soft Tacos
        76            34         1          Chicken Bowl
        78            34         1          Chicken Bowl
        79            35         1     Chicken Soft Tacos
        82            36         1       Chicken Burrito
        83            37         1       Chicken Burrito
        98            43         1       Chicken Burrito
        99            44         1          Chicken Bowl
        110           49         1          Chicken Bowl
        114           50         1       Chicken Burrito
        ...          ...       ...                   ...
        4537        1804         1          Chicken Bowl
        4540        1805         1          Chicken Bowl
        4543        1806         1       Chicken Burrito
        4550        1809         1     Chicken Soft Tacos
        4553        1810         1          Chicken Bowl
        4555        1811         1          Chicken Bowl
        4556        1811         1       Chicken Burrito
        4558        1812         1       Chicken Burrito
        4559        1812         1       Chicken Burrito
        4561        1813         2     Chicken Salad Bowl
        4564        1815         1          Chicken Bowl
        4566        1816         1       Chicken Burrito
        4569        1817         1       Chicken Burrito
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4574      1819       1          Chicken Bowl
4576      1820       1          Chicken Bowl
4580      1822       1      Chicken Salad Bowl
4581      1822       1          Chicken Bowl
4583      1823       1          Chicken Bowl
4586      1824       1          Chicken Bowl
4587      1824       1          Chicken Bowl
4589      1825       1          Chicken Bowl
4590      1825       1          Chicken Bowl
4591      1825       1          Chicken Bowl
4595      1826       1          Chicken Bowl
4599      1827       1          Chicken Bowl
4604      1828       1          Chicken Bowl
4615      1832       1       Chicken Soft Tacos
4619      1834       1      Chicken Salad Bowl
4620      1834       1      Chicken Salad Bowl
4621      1834       1      Chicken Salad Bowl

                                  choice_description item_price
4      [Tomatillo-Red Chili Salsa (Hot), [Black Beans...     $16.98
5      [Fresh Tomato Salsa (Mild), [Rice, Cheese, Sou...     $10.98
11     [Roasted Chili Corn Salsa, [Fajita Vegetables,...      $8.75
12     [Roasted Chili Corn Salsa, [Rice, Black Beans,...      $8.75
13     [Fresh Tomato Salsa, [Fajita Vegetables, Rice,...     $11.25
16     [Tomatillo-Green Chili Salsa (Medium), [Pinto ...      $8.49
17     [Fresh Tomato Salsa (Mild), [Black Beans, Rice...      $8.49
19     [Tomatillo Red Chili Salsa, [Fajita Vegetables...      $8.75
23     [[Tomatillo-Green Chili Salsa (Medium), Tomati...     $10.98
26     [Roasted Chili Corn Salsa (Medium), [Pinto Bea...      $8.49
29     [Tomatillo-Green Chili Salsa (Medium), [Pinto ...      $8.49
35                   [Roasted Chili Corn Salsa, Rice]      $8.75
36         [Roasted Chili Corn Salsa, [Cheese, Lettuce]]      $8.75
42     [Roasted Chili Corn Salsa, [Rice, Black Beans,...     $11.25
44     [Fresh Tomato Salsa, [Fajita Vegetables, Pinto...      $8.75
45     [Tomatillo-Red Chili Salsa (Hot), [Black Beans...     $10.98
52     [Roasted Chili Corn Salsa (Medium), [Black Bea...     $10.98
63     [Fresh Tomato Salsa, [Rice, Black Beans, Cheese]]      $8.75
68     [Tomatillo-Red Chili Salsa (Hot), [Black Beans...     $10.98
73     [Tomatillo Red Chili Salsa, [Rice, Black Beans...      $8.75
75     [Tomatillo Red Chili Salsa, [Rice, Cheese, Sou...      $8.75
76     [Fresh Tomato Salsa, [Rice, Black Beans, Pinto...      $8.75
78     [Fresh Tomato Salsa, [Rice, Black Beans, Chees...      $8.75
79     [Roasted Chili Corn Salsa, [Rice, Cheese, Lett...     $11.25
82     [Fresh Tomato Salsa, [Rice, Black Beans, Chees...      $8.75
83     [Tomatillo Green Chili Salsa, [Rice, Black Bea...      $8.75
98     [Tomatillo Red Chili Salsa, [Rice, Black Beans...      $8.75
99     [Tomatillo Red Chili Salsa, [Rice, Fajita Vege...      $8.75
110    [Tomatillo Red Chili Salsa, [Rice, Black Beans...      $8.75
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114   [Tomatillo-Green Chili Salsa (Medium), [Pinto ...      $8.49
...                                                  ...       ...
4537  [Fresh Tomato Salsa, [Rice, Black Beans, Chees...      $8.75
4540  [Tomatillo Green Chili Salsa, [Fajita Vegetabl...     $11.25
4543    [Fresh Tomato Salsa, [Fajita Vegetables, Rice]]      $8.75
4550  [Fresh Tomato Salsa, [Fajita Vegetables, Chees...      $8.75
4553  [Roasted Chili Corn Salsa, [Black Beans, Sour ...     $11.25
4555  [Roasted Chili Corn Salsa, [Fajita Vegetables,...      $8.75
4556  [Tomatillo Green Chili Salsa, [Fajita Vegetabl...     $11.25
4558  [Fresh Tomato Salsa, [Rice, Black Beans, Chees...      $8.75
4559  [Tomatillo Red Chili Salsa, [Rice, Cheese, Gua...     $11.25
4561  [Fresh Tomato Salsa, [Fajita Vegetables, Pinto...     $17.50
4564  [Fresh Tomato Salsa, [Fajita Vegetables, Rice,...     $11.25
4566  [Roasted Chili Corn Salsa, [Pinto Beans, Chees...      $8.75
4569     [Fresh Tomato Salsa, [Fajita Vegetables, Rice]]     $8.75
4574  [Roasted Chili Corn Salsa, [Rice, Cheese, Lett...      $8.75
4576  [Fresh Tomato Salsa, [Rice, Cheese, Sour Cream...     $11.25
4580  [Fresh Tomato Salsa, [Black Beans, Cheese, Gua...     $11.25
4581  [Tomatillo Red Chili Salsa, [Rice, Black Beans...      $8.75
4583  [Tomatillo Green Chili Salsa, [Rice, Black Bea...      $8.75
4586  [Fresh Tomato Salsa, [Rice, Black Beans, Chees...     $11.25
4587  [Fresh Tomato Salsa, [Rice, Black Beans, Chees...     $11.25
4589  [Fresh Tomato Salsa, [Rice, Black Beans, Sour ...     $11.25
4590  [Roasted Chili Corn Salsa, [Rice, Black Beans,...     $11.25
4591  [Tomatillo Red Chili Salsa, [Rice, Black Beans...      $8.75
4595  [Tomatillo Green Chili Salsa, [Rice, Black Bea...      $8.75
4599       [Roasted Chili Corn Salsa, [Cheese, Lettuce]]     $8.75
4604  [Fresh Tomato Salsa, [Rice, Black Beans, Chees...      $8.75
4615   [Fresh Tomato Salsa, [Rice, Cheese, Sour Cream]]      $8.75
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

[1560 rows x 5 columns]

In [9]: orders.choice_description.str.replace('[', '').str.replace(']', '') # repla

Out[9]: 0                                                      NaN
        1                                               Clementine
        2                                                    Apple
        3                                                      NaN
        4       Tomatillo-Red Chili Salsa (Hot), Black Beans, ...
        5        Fresh Tomato Salsa (Mild), Rice, Cheese, Sour ...
        6                                                      NaN
        7        Tomatillo Red Chili Salsa, Fajita Vegetables, ...
        8        Tomatillo Green Chili Salsa, Pinto Beans, Chee...
        9        Fresh Tomato Salsa, Rice, Black Beans, Pinto B...
        10                                                     NaN
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11      Roasted Chili Corn Salsa, Fajita Vegetables, R...
12      Roasted Chili Corn Salsa, Rice, Black Beans, C...
13      Fresh Tomato Salsa, Fajita Vegetables, Rice, C...
14                                                   NaN
15                                                   NaN
16      Tomatillo-Green Chili Salsa (Medium), Pinto Be...
17      Fresh Tomato Salsa (Mild), Black Beans, Rice, ...
18                                                Sprite
19      Tomatillo Red Chili Salsa, Fajita Vegetables, ...
20                                                   NaN
21      Fresh Tomato Salsa (Mild), Tomatillo-Green Chi...
22                                    Pomegranate Cherry
23      Tomatillo-Green Chili Salsa (Medium), Tomatill...
24                                            Grapefruit
25                                                   NaN
26      Roasted Chili Corn Salsa (Medium), Pinto Beans...
27      Tomatillo-Green Chili Salsa (Medium), Roasted ...
28                                             Dr. Pepper
29      Tomatillo-Green Chili Salsa (Medium), Pinto Be...
                            ...
4592    Tomatillo Red Chili Salsa, Rice, Fajita Vegeta...
4593    Roasted Chili Corn Salsa, Rice, Sour Cream, Ch...
4594    Roasted Chili Corn Salsa, Pinto Beans, Sour Cr...
4595      Tomatillo Green Chili Salsa, Rice, Black Beans
4596                                                 NaN
4597                                              Nestea
4598                                                 NaN
4599        Roasted Chili Corn Salsa, Cheese, Lettuce
4600                                                 NaN
4601                                           Diet Coke
4602                      Tomatillo Green Chili Salsa
4603                      Tomatillo Green Chili Salsa
4604    Fresh Tomato Salsa, Rice, Black Beans, Cheese,...
4605                                                 NaN
4606                                                Coke
4607    Tomatillo Green Chili Salsa, Rice, Cheese, Sou...
4608    Tomatillo Red Chili Salsa, Fajita Vegetables, ...
4609                                              Sprite
4610    Fresh Tomato Salsa, Rice, Sour Cream, Cheese, ...
4611    Tomatillo Green Chili Salsa, Rice, Fajita Vege...
4612    Fresh Tomato Salsa, Fajita Vegetables, Rice, B...
4613                                                 NaN
4614                                                 NaN
4615      Fresh Tomato Salsa, Rice, Cheese, Sour Cream
4616                                                 NaN
4617    Fresh Tomato Salsa, Rice, Black Beans, Sour Cr...
4618    Fresh Tomato Salsa, Rice, Sour Cream, Cheese, ...
4619    Fresh Tomato Salsa, Fajita Vegetables, Pinto B...
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           4620       Fresh Tomato Salsa, Fajita Vegetables, Lettuce
           4621    Fresh Tomato Salsa, Fajita Vegetables, Pinto B...
           Name: choice_description, dtype: object

In [10]: orders.choice_description.str.replace('[\[\]]', '') # using regex

Out[10]: 0                                                    NaN
         1                                             Clementine
         2                                                  Apple
         3                                                    NaN
         4       Tomatillo-Red Chili Salsa (Hot), Black Beans, ...
         5       Fresh Tomato Salsa (Mild), Rice, Cheese, Sour ...
         6                                                    NaN
         7       Tomatillo Red Chili Salsa, Fajita Vegetables, ...
         8       Tomatillo Green Chili Salsa, Pinto Beans, Chee...
         9       Fresh Tomato Salsa, Rice, Black Beans, Pinto B...
         10                                                   NaN
         11      Roasted Chili Corn Salsa, Fajita Vegetables, R...
         12      Roasted Chili Corn Salsa, Rice, Black Beans, C...
         13      Fresh Tomato Salsa, Fajita Vegetables, Rice, C...
         14                                                   NaN
         15                                                   NaN
         16      Tomatillo-Green Chili Salsa (Medium), Pinto Be...
         17      Fresh Tomato Salsa (Mild), Black Beans, Rice, ...
         18                                                 Sprite
         19      Tomatillo Red Chili Salsa, Fajita Vegetables, ...
         20                                                   NaN
         21      Fresh Tomato Salsa (Mild), Tomatillo-Green Chi...
         22                                     Pomegranate Cherry
         23      Tomatillo-Green Chili Salsa (Medium), Tomatill...
         24                                             Grapefruit
         25                                                   NaN
         26      Roasted Chili Corn Salsa (Medium), Pinto Beans...
         27      Tomatillo-Green Chili Salsa (Medium), Roasted ...
         28                                              Dr. Pepper
         29      Tomatillo-Green Chili Salsa (Medium), Pinto Be...
                                      ...
         4592    Tomatillo Red Chili Salsa, Rice, Fajita Vegeta...
         4593    Roasted Chili Corn Salsa, Rice, Sour Cream, Ch...
         4594    Roasted Chili Corn Salsa, Pinto Beans, Sour Cr...
         4595        Tomatillo Green Chili Salsa, Rice, Black Beans
         4596                                                 NaN
         4597                                              Nestea
         4598                                                 NaN
         4599         Roasted Chili Corn Salsa, Cheese, Lettuce
         4600                                                 NaN
         4601                                           Diet Coke
         4602                       Tomatillo Green Chili Salsa
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4603                          Tomatillo Green Chili Salsa
4604    Fresh Tomato Salsa, Rice, Black Beans, Cheese,...
4605                                               NaN
4606                                              Coke
4607    Tomatillo Green Chili Salsa, Rice, Cheese, Sou...
4608    Tomatillo Red Chili Salsa, Fajita Vegetables, ...
4609                                            Sprite
4610    Fresh Tomato Salsa, Rice, Sour Cream, Cheese, ...
4611    Tomatillo Green Chili Salsa, Rice, Fajita Vege...
4612    Fresh Tomato Salsa, Fajita Vegetables, Rice, B...
4613                                               NaN
4614                                               NaN
4615        Fresh Tomato Salsa, Rice, Cheese, Sour Cream
4616                                               NaN
4617    Fresh Tomato Salsa, Rice, Black Beans, Sour Cr...
4618    Fresh Tomato Salsa, Rice, Sour Cream, Cheese, ...
4619    Fresh Tomato Salsa, Fajita Vegetables, Pinto B...
4620       Fresh Tomato Salsa, Fajita Vegetables, Lettuce
4621    Fresh Tomato Salsa, Fajita Vegetables, Pinto B...
Name: choice_description, dtype: object
```

In [ ]: