## Pandas Top Commands

June 4, 2024

## 1 Pandas Top Commands

Creating New , Renaiming & Dropping Columns

Apply Methods sort index, sort value

```
[38]: import pandas as pd
[39]: df = pd.DataFrame({'Name':['Harry','Piter','Mark','Butller','Smith','Sam'],
                     'Age': [20,25,26,27,28,27],
                   'University': ['BHU','DU','LPU','SPPU','BHU','LPU']})
[40]:
       df
[40]:
                  Age University
            Name
      0
           Harry
                   20
                              BHU
      1
           Piter
                    25
                               DU
      2
            Mark
                    26
                              LPU
      3
                             SPPU
        Butller
                    27
      4
           Smith
                    28
                              BHU
      5
             Sam
                    27
                              LPU
[85]: df.to_csv('studets.csv', index = False) # To save Table as csv File
[86]: pd.read_csv('studets.csv')
                                     # Read save csv file
[86]:
            Name UNIVESITY
                                 CITY
                                       MARKS
      0
                              Varansi
                                        8.80
           Harry
                        BHU
      1
                                Delhi
           Piter
                         DU
                                        9.60
      2
                        LPU
                               Punjab
            Mark
                                       12.00
      3
        Butller
                       SPPU
                                Delhi
                                        8.04
           Smith
                             Varanasi
      4
                        BHU
                                        9.00
      5
             Sam
                        LPU
                               Punjab 13.20
[43]: # Creating New Column
      df['City'] = ['Varansi', 'Delhi', 'Punjab', 'Delhi', 'Varanasi', 'Punjab']
```

```
[44]: df
[44]:
            Name
                  Age University
                                        City
      0
           Harry
                    20
                              BHU
                                     Varansi
      1
                    25
                               DU
                                       Delhi
           Piter
      2
            Mark
                    26
                              LPU
                                      Punjab
      3
         Butller
                    27
                             SPPU
                                       Delhi
      4
           Smith
                    28
                              BHU
                                   Varanasi
      5
             Sam
                    27
                              LPU
                                      Punjab
[45]: # Renaming Column
      df.columns = ['Name','AGE','UNIVESITY','CITY']
[46]: df
[46]:
            Name AGE UNIVESITY
                                       CITY
      0
           Harry
                   20
                             BHU
                                   Varansi
           Piter
                                      Delhi
      1
                   25
                              DU
      2
            Mark
                   26
                             LPU
                                    Punjab
      3
        Butller
                   27
                            SPPU
                                      Delhi
      4
           Smith
                                  Varanasi
                    28
                             BHU
      5
             Sam
                    27
                             LPU
                                     Punjab
[47]: # Dropping Columns
      df.drop(['AGE'] , axis = 1)
                                       # Temporary Droping syntax
[47]:
            Name UNIVESITY
                                 CITY
           Harry
                              Varansi
      0
                        BHU
      1
           Piter
                                Delhi
                         DU
      2
            Mark
                        LPU
                               Punjab
      3
        Butller
                       SPPU
                                Delhi
      4
           Smith
                        BHU
                             Varanasi
      5
             Sam
                        LPU
                               Punjab
[49]: df.drop(['AGE'] , axis = 1 , inplace = True)
                                                        # Permanent Droping Syntax
[50]: df
[50]:
            Name UNIVESITY
                                 CITY
      0
           Harry
                        BHU
                              Varansi
      1
           Piter
                         DU
                                Delhi
      2
            Mark
                        LPU
                               Punjab
      3
        Butller
                       SPPU
                                Delhi
                             Varanasi
      4
           Smith
                        BHU
      5
             Sam
                        LPU
                               Punjab
```

## 1.0.1 Apply Method

```
[52]: # Creating a Marks Column
      df['Marks'] = [220 , 240 , 300 , 201 , 225,330]
[53]: df
[53]:
            Name UNIVESITY
                                CITY Marks
      0
           Harry
                       BHU
                             Varansi
                                         220
      1
           Piter
                        DU
                               Delhi
                                         240
      2
                       LPU
                              Punjab
                                         300
            Mark
                               Delhi
      3
        Butller
                      SPPU
                                         201
           Smith
                            Varanasi
      4
                       BHU
                                         225
      5
             Sam
                       LPU
                              Punjab
                                         330
[55]: df.columns = ['Name', 'UNIVESITY', 'CITY', 'MARKS']
[56]: df
[56]:
            Name UNIVESITY
                                CITY MARKS
                             Varansi
      0
           Harry
                       BHU
                                         220
      1
           Piter
                        DU
                               Delhi
                                         240
      2
            Mark
                       LPU
                              Punjab
                                         300
      3
        Butller
                      SPPU
                               Delhi
                                         201
      4
                                         225
           Smith
                       BHU
                           Varanasi
      5
             Sam
                       LPU
                              Punjab
                                         330
[60]: # Apply Method
      df['MARKS'] = df['MARKS'].apply(lambda x : x/5) # Finding Average of Marks
[61]: df
[61]:
            Name UNIVESITY
                                CITY MARKS
      0
           Harry
                             Varansi
                                        8.80
                       BHU
      1
                               Delhi
           Piter
                        DU
                                        9.60
      2
            Mark
                       LPU
                              Punjab 12.00
      3 Butller
                      SPPU
                               Delhi
                                       8.04
      4
           Smith
                       BHU
                            Varanasi
                                       9.00
                       LPU
      5
             Sam
                              Punjab 13.20
[74]: # Sort index
      df.index = [10,9,8,15,20,22] # Assining Index
[75]: df
[75]:
             Name UNIVESITY
                                 CITY MARKS
      10
                        BHU
                              Varansi
                                         8.80
            Harry
```

```
9.60
      9
           Piter
                        DU
                               Delhi
            Mark
                       LPU
                               Punjab 12.00
      8
                                Delhi
                                       8.04
      15
         Butller
                       SPPU
      20
            Smith
                            Varanasi
                                       9.00
                       BHU
      22
             Sam
                       LPU
                               Punjab 13.20
[76]: df.sort_index()
                        # Default statement :
                                              Ascending = True
[76]:
            Name UNIVESITY
                                CITY MARKS
      8
            Mark
                       LPU
                               Punjab
                                      12.00
      9
           Piter
                                Delhi
                                       9.60
                        DU
                                       8.80
      10
           Harry
                       BHU
                              Varansi
      15
                                Delhi
                                       8.04
         Butller
                      SPPU
      20
            Smith
                       BHU Varanasi
                                      9.00
      22
             Sam
                       LPU
                               Punjab 13.20
[81]: df.sort_index( ascending = False) # Descending order
            Name UNIVESITY
[81]:
                                CITY MARKS
      22
             Sam
                       LPU
                               Punjab 13.20
                                      9.00
      20
            Smith
                       BHU
                            Varanasi
         Butller
                      SPPU
                                Delhi
                                      8.04
      15
                                      8.80
      10
           Harry
                       BHU
                              Varansi
           Piter
                                Delhi
                                       9.60
      9
                        DU
      8
            Mark
                       LPU
                               Punjab 12.00
[82]: # Sort value
      df.sort_values(by = 'MARKS') # Default Statement : Ascending = True
[82]:
            Name UNIVESITY
                                CITY MARKS
                                       8.04
      15 Butller
                      SPPU
                                Delhi
           Harry
                                       8.80
      10
                       BHU
                              Varansi
                           Varanasi 9.00
      20
           Smith
                       BHU
      9
           Piter
                        DU
                               Delhi 9.60
      8
            Mark
                       LPU
                               Punjab 12.00
      22
             Sam
                       LPU
                               Punjab
                                      13.20
[84]: df.sort_values(by = 'MARKS', ascending = False) # For Descending order :
       \hookrightarrowAscendiing = False
[84]:
            Name UNIVESITY
                                CITY MARKS
                               Punjab 13.20
      22
             Sam
                       LPU
      8
            Mark
                       LPU
                               Punjab 12.00
                                      9.60
      9
           Piter
                               Delhi
                        DU
      20
           Smith
                       BHU Varanasi
                                      9.00
                                      8.80
      10
           Harry
                       BHU
                             Varansi
      15 Butller
                                Delhi
                                       8.04
                      SPPU
```

[]:[