Untitled

February 18, 2020

1 Start Python with Ikhtiar Ahmed

```
[1]: import pandas as pd
     df = pd.read_csv("result_sheet.csv")
[2]: df
[2]:
          Roll Name
                       Gender
                                Bangla
                                          Math
                                                 English
                         Male
                                     99
                                                       90
     0
              1
                    Α
                                            90
     1
              2
                   В
                         Male
                                     98
                                            99
                                                       94
     2
              3
                   С
                       Female
                                     97
                                            93
                                                       99
     3
              4
                   Α
                       Female
                                     96
                                            92
                                                       92
                       Female
     4
              5
                   В
                                     95
                                            91
                                                       91
     5
              6
                   C
                         Male
                                            30
                                                       90
                                     94
     6
             7
                       Female
                                            89
                                                       89
                   Α
                                     93
     7
             8
                         Male
                                     92
                                                       88
                                            88
     8
             9
                       Female
                                     91
                                            87
                                                       87
     9
            10
                   Α
                         Male
                                     90
                                            86
                                                       46
     10
                         Male
                                     89
                                                       85
            11
                   В
                                            85
     11
            12
                   C
                         Male
                                     88
                                            84
                                                       84
     12
            13
                   Α
                       Female
                                     87
                                            83
                                                       83
     13
            14
                       Female
                                     96
                                            82
                                                       82
     14
                   С
            15
                         Male
                                     85
                                            81
                                                       81
     15
                         Male
            16
                   Α
                                     84
                                            80
                                                       80
     16
            17
                   В
                         Male
                                     83
                                            79
                                                       79
     17
            18
                   C
                         Male
                                     82
                                            78
                                                       78
     18
            19
                   Α
                         Male
                                     81
                                            77
                                                       77
     19
            20
                   В
                         Male
                                     80
                                            76
                                                       76
[3]:
     df.head(10)
[3]:
         Roll Name
                      Gender
                               Bangla
                                        Math
                                               English
     0
            1
                        Male
                                    99
                                           90
                                                      90
     1
            2
                  В
                        Male
                                    98
                                           99
                                                      94
     2
            3
                  С
                      Female
                                    97
                                           93
                                                      99
     3
            4
                      Female
                                    96
                                           92
                                                      92
```

```
5
            6
                  С
                        Male
                                    94
                                           30
                                                     90
            7
     6
                  Α
                      Female
                                    93
                                           89
                                                     89
     7
            8
                  В
                        Male
                                    92
                                           88
                                                     88
     8
            9
                  С
                      {\tt Female}
                                    91
                                           87
                                                     87
     9
           10
                  Α
                        Male
                                    90
                                           86
                                                     46
[4]: df.tail(10)
[4]:
          Roll Name
                       Gender
                                Bangla
                                         Math
                                                English
                                            85
     10
            11
                   В
                         Male
                                     89
                                                      85
                         Male
                                            84
                                                      84
     11
            12
                   С
                                     88
     12
            13
                       Female
                                     87
                                            83
                                                      83
                   Α
     13
                       Female
                                            82
                                                      82
            14
                   В
                                     96
     14
            15
                   С
                         Male
                                     85
                                            81
                                                      81
                         Male
     15
            16
                   Α
                                     84
                                            80
                                                      80
     16
            17
                         Male
                                     83
                                            79
                                                      79
                   В
     17
                   С
            18
                         Male
                                     82
                                            78
                                                      78
     18
                         Male
                                                      77
            19
                   Α
                                     81
                                            77
     19
            20
                   В
                         Male
                                     80
                                            76
                                                      76
[5]: df.columns
[5]: Index(['Roll', 'Name', 'Gender', 'Bangla', 'Math', 'English'], dtype='object')
[6]:
       df["Roll"]
[6]: 0
              1
              2
     1
     2
              3
     3
              4
     4
              5
     5
              6
     6
             7
     7
             8
     8
             9
     9
            10
     10
            11
     11
            12
     12
            13
     13
            14
     14
            15
     15
            16
     16
            17
     17
            18
     18
            19
     19
            20
```

В

Female

Name: Roll, dtype: int64

```
[7]: df.Gender
[7]: 0
              Male
              Male
     1
     2
            Female
     3
            Female
     4
            Female
     5
              Male
     6
            Female
     7
              Male
     8
            Female
              Male
     9
     10
              Male
     11
              Male
     12
            Female
     13
            Female
     14
              Male
     15
              Male
     16
              Male
     17
              Male
     18
              Male
     19
              Male
     Name: Gender, dtype: object
[9]: df[["Roll","Gender","Name"]]
[9]:
          Roll
               Gender Name
     0
             1
                  Male
                           Α
             2
                  Male
     1
                            В
     2
             3
                Female
                            С
     3
             4
                Female
                            Α
     4
             5
                Female
                            В
     5
             6
                  Male
                            С
     6
                Female
             7
                            Α
     7
                  Male
                            В
             8
     8
             9
                Female
                            С
     9
            10
                  Male
                            Α
     10
                  Male
            11
                            В
     11
            12
                  Male
                            С
     12
                Female
            13
                            Α
     13
            14
                Female
                            В
     14
            15
                  Male
                            С
     15
                  Male
            16
                            Α
     16
            17
                  Male
                            В
     17
            18
                  Male
                            С
```

```
[11]:
        df[df['Gender'] == 'Male'] #filtering
[11]:
           Roll Name Gender Bangla
                                       Math
                                             English
      0
                   Α
                        Male
                                   99
                                          90
              1
      1
              2
                   В
                        Male
                                   98
                                          99
                                                    94
      5
              6
                   С
                        Male
                                   94
                                          30
                                                    90
      7
              8
                        Male
                                   92
                                          88
                                                    88
      9
             10
                        Male
                                   90
                                          86
                                                    46
                   Α
                                          85
                                                    85
      10
             11
                        Male
                                   89
      11
             12
                        Male
                                   88
                                          84
                                                    84
      14
             15
                   С
                        Male
                                   85
                                          81
                                                    81
      15
             16
                   Α
                        Male
                                   84
                                          80
                                                    80
      16
             17
                   В
                        Male
                                   83
                                          79
                                                    79
      17
                        Male
                                   82
                                          78
                                                    78
             18
                   С
                                                    77
      18
             19
                   Α
                        Male
                                   81
                                          77
      19
             20
                        Male
                   В
                                   80
                                          76
                                                    76
        df[df['Gender']=='Female']
[12]:
[12]:
                       Gender
           Roll Name
                               Bangla
                                        Math
                                               English
              3
                    С
                       Female
                                    97
                                           93
      2
                                                     99
      3
              4
                   A Female
                                    96
                                           92
                                                     92
      4
              5
                   B Female
                                    95
                                           91
                                                     91
                   A Female
      6
              7
                                    93
                                           89
                                                     89
              9
                   С
                      Female
                                                     87
      8
                                    91
                                           87
                   A Female
      12
             13
                                    87
                                           83
                                                     83
      13
             14
                      Female
                                    96
                                           82
                                                     82
[13]: df.iloc[0:5]
                      #first 5 row show
[13]:
         Roll Name
                     Gender
                              Bangla
                                       Math
                                             English
             1
                  Α
                        Male
                                   99
                                          90
                                                    90
      0
      1
             2
                  В
                        Male
                                   98
                                          99
                                                    94
      2
             3
                     Female
                                                    99
                                   97
                                          93
      3
             4
                  Α
                     Female
                                   96
                                          92
                                                    92
      4
             5
                  B Female
                                   95
                                          91
                                                    91
[15]:
        for index, row in df.iterrows(): # list of data
               print(index,row["Name"])
     O A
     1 B
     2 C
     3 A
```

Male

Male

Α

В

```
6 A
     7 B
      8 C
      9 A
      10 B
      11 C
      12 A
      13 B
      14 C
      15 A
      16 B
      17 C
      18 A
      19 B
[18]: df["Total"] = df["Bangla"]+ df["Math"]+ df["English"]
[20]: df
[20]:
           Roll Name
                       Gender
                                Bangla
                                         Math English total
                                                                  Total
                         Male
                                     99
                                            90
                                                             279
                                                                     279
      0
              1
                    Α
                                                      90
              2
      1
                         Male
                                            99
                                                                     291
                    В
                                     98
                                                      94
                                                             291
      2
              3
                    С
                       Female
                                     97
                                            93
                                                      99
                                                             289
                                                                     289
      3
                       Female
                                                      92
                                                                     280
              4
                    Α
                                     96
                                            92
                                                             280
      4
              5
                    В
                       Female
                                     95
                                            91
                                                      91
                                                             277
                                                                     277
      5
              6
                    С
                         Male
                                            30
                                                      90
                                                             214
                                                                     214
                                     94
                       Female
                                                                     271
      6
              7
                    Α
                                     93
                                            89
                                                      89
                                                             271
      7
              8
                    В
                         Male
                                     92
                                            88
                                                      88
                                                             268
                                                                     268
              9
                       Female
                                                                     265
      8
                    С
                                     91
                                            87
                                                      87
                                                             265
      9
                         Male
                                                             222
                                                                     222
             10
                    Α
                                     90
                                            86
                                                      46
      10
             11
                    В
                         Male
                                     89
                                            85
                                                      85
                                                             259
                                                                     259
                         Male
      11
             12
                                     88
                                            84
                                                      84
                                                             256
                                                                     256
      12
             13
                       Female
                                     87
                                            83
                                                      83
                                                             253
                                                                     253
                    Α
      13
                       Female
                                            82
                                                      82
                                                             260
                                                                     260
             14
                    В
                                     96
      14
             15
                    C
                         Male
                                     85
                                            81
                                                      81
                                                             247
                                                                     247
      15
                         Male
                                            80
                                                      80
                                                                     244
             16
                    Α
                                     84
                                                             244
      16
             17
                         Male
                                     83
                                            79
                                                      79
                                                             241
                                                                     241
                    В
      17
             18
                         Male
                                            78
                                                      78
                                                             238
                                                                     238
                                     82
                                            77
                                                      77
      18
             19
                    Α
                         Male
                                     81
                                                             235
                                                                     235
      19
             20
                    В
                         Male
                                     80
                                            76
                                                      76
                                                             232
                                                                     232
[23]: | ndf= df.sort_values("Total", ascending = False) # descending order -->_
        \rightarrow ascending = True
```

4 B 5 C

```
[24]: ndf["New Roll"] = ndf.index
[25]: ndf
[25]:
           Roll Name
                         Gender
                                  Bangla
                                            Math
                                                   English
                                                              total
                                                                      Total
                                                                               New Roll
               2
                     В
                           Male
                                       98
                                                         94
       1
                                               99
                                                                 291
                                                                         291
                                                                                        1
                                                                                        2
       2
               3
                     C
                         Female
                                       97
                                              93
                                                         99
                                                                 289
                                                                         289
       3
               4
                     Α
                         Female
                                       96
                                              92
                                                         92
                                                                 280
                                                                         280
                                                                                        3
       0
                                              90
                                                                                        0
               1
                     Α
                           Male
                                       99
                                                         90
                                                                 279
                                                                         279
       4
               5
                     В
                         Female
                                       95
                                              91
                                                         91
                                                                 277
                                                                         277
                                                                                        4
       6
               7
                         Female
                                              89
                                                         89
                                                                                        6
                     Α
                                       93
                                                                 271
                                                                         271
       7
               8
                           Male
                                                         88
                                                                                       7
                     В
                                       92
                                              88
                                                                 268
                                                                         268
       8
               9
                     С
                         Female
                                       91
                                               87
                                                         87
                                                                         265
                                                                                       8
                                                                 265
       13
              14
                     В
                         Female
                                       96
                                               82
                                                         82
                                                                 260
                                                                         260
                                                                                      13
       10
              11
                     В
                           Male
                                       89
                                              85
                                                         85
                                                                 259
                                                                         259
                                                                                      10
                           Male
                                              84
                                                         84
       11
              12
                     С
                                       88
                                                                 256
                                                                         256
                                                                                      11
       12
              13
                     Α
                         Female
                                       87
                                              83
                                                         83
                                                                 253
                                                                         253
                                                                                      12
       14
              15
                     С
                           Male
                                                         81
                                                                 247
                                                                         247
                                                                                      14
                                       85
                                               81
       15
              16
                           Male
                                               80
                                                         80
                                                                 244
                                                                         244
                                                                                      15
                     Α
                                       84
       16
              17
                     В
                           Male
                                       83
                                               79
                                                         79
                                                                 241
                                                                         241
                                                                                      16
       17
              18
                     C
                           Male
                                       82
                                               78
                                                         78
                                                                 238
                                                                         238
                                                                                      17
       18
              19
                     Α
                           Male
                                       81
                                              77
                                                         77
                                                                 235
                                                                         235
                                                                                      18
       19
              20
                     В
                           Male
                                       80
                                               76
                                                         76
                                                                 232
                                                                         232
                                                                                      19
                                                                         222
                                                                                       9
       9
              10
                     Α
                           Male
                                       90
                                              86
                                                         46
                                                                 222
       5
               6
                     C
                           Male
                                               30
                                                         90
                                                                 214
                                                                         214
                                                                                       5
                                       94
[26]:
       del ndf["New Roll"]
       del ndf["total"]
[27]:
[28]: ndf
[28]:
           Roll Name
                         Gender
                                  Bangla
                                            Math
                                                   English
                                                              Total
       1
               2
                     В
                           Male
                                       98
                                              99
                                                         94
                                                                 291
       2
                         Female
               3
                     C
                                       97
                                               93
                                                         99
                                                                 289
       3
               4
                         Female
                                       96
                                              92
                                                         92
                                                                 280
       0
               1
                     Α
                           Male
                                       99
                                              90
                                                         90
                                                                 279
       4
               5
                     В
                         Female
                                       95
                                              91
                                                         91
                                                                 277
               7
                         Female
                                              89
                                                         89
       6
                     Α
                                       93
                                                                 271
       7
               8
                     В
                           Male
                                       92
                                              88
                                                         88
                                                                 268
               9
       8
                     С
                         Female
                                       91
                                              87
                                                         87
                                                                 265
                         Female
       13
                     В
                                       96
                                              82
                                                         82
                                                                 260
              14
       10
                     В
                           Male
                                       89
                                               85
                                                         85
                                                                 259
              11
       11
              12
                     C
                           Male
                                       88
                                               84
                                                         84
                                                                 256
       12
              13
                         Female
                                       87
                                               83
                                                         83
                                                                 253
                     Α
       14
              15
                     С
                           Male
                                       85
                                               81
                                                         81
                                                                 247
       15
              16
                     Α
                           Male
                                       84
                                               80
                                                         80
                                                                 244
```

```
Male
                                      83
                                             79
                                                       79
                                                              241
      16
             17
                    В
      17
             18
                    С
                          Male
                                      82
                                             78
                                                       78
                                                              238
      18
                          Male
                                             77
                                                       77
                                                              235
             19
                    Α
                                      81
      19
                                                       76
             20
                    В
                          Male
                                      80
                                             76
                                                              232
      9
             10
                    Α
                          Male
                                      90
                                             86
                                                       46
                                                              222
      5
              6
                    С
                          Male
                                      94
                                             30
                                                       90
                                                              214
        ndf["New Roll"] = range(1,21)
[29]:
[30]: ndf
                                                 English
[30]:
           Roll Name
                        Gender
                                Bangla
                                          Math
                                                           Total
                                                                    New Roll
               2
                    В
                          Male
                                      98
                                                       94
                                                              291
      1
                                             99
                                                                            1
                                                                            2
      2
               3
                    С
                        Female
                                      97
                                             93
                                                       99
                                                              289
      3
               4
                    Α
                        Female
                                      96
                                             92
                                                       92
                                                              280
                                                                            3
      0
                                             90
                                                                            4
               1
                    Α
                          Male
                                      99
                                                       90
                                                              279
      4
               5
                        Female
                                             91
                                                              277
                                                                            5
                    В
                                      95
                                                       91
      6
               7
                    Α
                        Female
                                      93
                                             89
                                                       89
                                                              271
                                                                            6
      7
                                                                            7
               8
                    В
                          Male
                                      92
                                             88
                                                       88
                                                              268
      8
              9
                    С
                        Female
                                             87
                                                       87
                                                              265
                                                                            8
                                      91
      13
             14
                    В
                        Female
                                      96
                                             82
                                                       82
                                                              260
                                                                            9
      10
             11
                    В
                          Male
                                      89
                                             85
                                                       85
                                                              259
                                                                           10
      11
             12
                    С
                          Male
                                      88
                                             84
                                                       84
                                                              256
                                                                           11
      12
             13
                       Female
                                      87
                                             83
                                                       83
                                                              253
                                                                           12
                    Α
                    С
      14
             15
                          Male
                                      85
                                             81
                                                       81
                                                              247
                                                                           13
      15
                          Male
                                             80
                                                       80
                                                              244
                                                                           14
             16
                    Α
                                      84
      16
             17
                          Male
                                      83
                                             79
                                                       79
                                                              241
                                                                           15
                    В
      17
             18
                    C
                          Male
                                      82
                                             78
                                                       78
                                                              238
                                                                           16
      18
             19
                    Α
                          Male
                                      81
                                             77
                                                       77
                                                              235
                                                                           17
      19
             20
                          Male
                                      80
                                             76
                                                       76
                                                              232
                                                                           18
                    В
      9
             10
                    Α
                          Male
                                      90
                                             86
                                                       46
                                                              222
                                                                           19
      5
              6
                    С
                          Male
                                      94
                                             30
                                                       90
                                                              214
                                                                           20
[31]: ndf.to_csv("new_result_2020.csv")
 []:
```