```
In [1]: import pandas
        mydataset = {
         'cars': ["BMW", "Volvo", "Ford"],
          'passings': [3, 7, 2]
        myvar = pandas.DataFrame(mydataset)
        nnin+/muunn)
           cars passings
            BMW
                       7
        1 Volvo
        2 Ford
                        2
In [3]: import pandas as pd
        mydataset = {
         'cars': ["Jagvuer", "Audi", "Swift"],
          'passings': [6, 5, 4]
        }
        myvar = pd.DataFrame(mydataset)
        nnin+(muuan)
             cars passings
        0 Jagvuer 6
        1
             Audi
        2
             Swift
                         4
In [4]: import pandas as pd
        a = [6, 7, 4]
        myvar = pd.Series(a)
        nnint/muuan)
        0 6
            7
        1
            4
        dtype: int64
In [5]: import pandas as pd
        nnint(nd vancian )
        1.3.4
In [6]: [mint/mucan[6])
        6
In [2]: ## create labels
        import pandas as pd
```

```
a = [7, 9, 7]
        myvar = pd.Series(a, index = ["M", "C", "A"])
        nnint(muuan)
             7
        C
             9
             7
        Α
        dtype: int64
In [3]: ## Data frames
        import pandas as pd
        data = {
          "calories": [420, 380, 390],
          "duration": [50, 40, 45]
        #Load data into a DataFrame object:
        df = pd.DataFrame(data)
        nnin+/dfl
           calories duration
                420
                            50
        1
                380
                            40
        2
                390
                            45
In [6]: ## Locate Row
        nnin+/df loc[2]\
                  390
        calories
        duration
        Name: 2, dtype: int64
In [7]: ## use a list of indexes
        nnin+/df loc[[0 1]])
           calories duration
                420
        0
                            50
        1
                380
                            40
In [9]: ## Name indexes
        import pandas as pd
        data = {
          "calories": [420, 380, 390],
          "duration": [50, 40, 45]
        df = pd.DataFrame(data, index = ["day1", "day2", "day3"])
        nnin+/dfl
              calories duration
        day1
                   420
        day2
                   380
                               40
                   390
                               45
        day3
```

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```
In [10]: ## Locate name indexes
         ## Refer to the name indexing:
         nnin+(df loc["day2"])
         calories
                    380
         duration
                     40
         Name: day2, dtype: int64
In [11]: ## load a file in a data frame
         import pandas as pd
         df = pd.read_csv('data.csv')
         nnin+(df)
                name price
                Book
         0
                         25
                Coke
                         50
         1
         2
                Cake
                         74
         3
               Pizza
                        150
         4
              Burger
                        95
         5 Sandwich
                         80
         6
               Watch
                      5000
         7
              Mobile 25000
In [12]: ## Read csv files
         import pandas as pd
         df = pd.read_csv('data.csv')
         nnint(df to ctning())
                name price
         0
                Book
                         25
         1
                Coke
                         50
         2
                Cake
                         74
         3
               Pizza
                        150
         4
              Burger
                         95
         5
           Sandwich
                         80
         6
               Watch
                       5000
              Mobile 25000
In [24]: |## Data frame(exporting from excel)
         import pandas as pd
         df = pd.read_csv('C:\\Users\CSE22004\Documents\VU21CSEN0101010\Excel 1.csv')
         nnin+(df)
            S.NO
                       veg price
               1
                    panner
                              120
         1
               2 Mushrrom
                              150
         2
               3
                 cabbage
                              60
         3
                    potato
                               50
In [20]: ## Max rows
```

```
import pandas as pd
         ggigt (nd antions display may nows)
In [15]: ## max number of rows to display the entire data frame:
         import pandas as pd
         pd.options.display.max_rows = 9999
         df = pd.read_csv('data.csv')
         nnin+/dfl
                 name price
         0
                Book
                          25
         1
                Coke
                          50
         2
                Cake
                          74
         3
               Pizza
                         150
         4
              Burger
                          95
         5
            Sandwich
                          80
         6
               Watch
                        5000
         7
              Mobile 25000
In [33]: # series in pandas as float value
         import pandas as nsk
         c=[1,7.5,8.6,4]
         z=nsk.Series(c)
         nnin+/-1
         0
              1.0
         1
              7.5
         2
              8.6
         3
              4.0
         dtype: float64
In [35]: # series in pandas as int value
         import pandas as nsk
         c=[1,7,6]
         z=nsk.Series(c)
         nnin+/-1
              1
              7
         1
         2
              6
         dtype: int64
 In [6]: ##cleaning the data
         import pandas as pd
         df = pd.read_csv('D:\\gender,age.csv')
         df = df.dropna()
         nnint(now of to stning())
```

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```
s.no name age gender
              1 ihan 17 A
In [16]: ##replace null
         import pandas as pd
         df = pd.read_csv('D:\\gender,age.csv')
         df = df.dropna()
         nnint(df to ctning())
            s.no name
                        age gender
               1 jhon 17.0
         1
               2
                  ani 18.0
                                  f
         2
               3 anki 19.0
                                  f
In [15]: ##remove all rows with null
         import panda as pd
         df = pd.read_csv('D:\\gender.csv')
         df.dropna(inplace = True)
         nnin+(df + a c + ning())
         ModuleNotFoundError
                                                   Traceback (most recent call last)
         ~\AppData\Local\Temp/ipykernel_10756/1641218250.py in <module>
               1 ##remove all rows with null
         ----> 2 import panda as pd
               3 df = pd.read csv('D:\\gender.csv')
               5 df.dropna(inplace = True)
         ~\anaconda3\lib\site-packages\panda\__init__.py in <module>
         ---> 1 from request import PandaRequest
               2 from models import Video, Cloud, Encoding, Profile, Notifications, Pa
         ndaDict
               3 from models import GroupRetriever, SingleRetriever
               4 from models import PandaError
               5 from upload_session import UploadSession
         ModuleNotFoundError: No module named 'request'
In [19]: ##Replace NULL values with the number e:
         import pandas as pd
         df = pd.read_csv('D:\\gender.csv')
         df.fillna("e", inplace = True)
         nnin+(df)
            s.no name age gender
                         17
         0
               1 jhon
                   ani
         1
               2
                         18
                                 f
                                 f
         2
               3 anki
                         19
         3
                  kul
                         20
```

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```
In [20]: ##Calculate the MEAN, and replace any empty values with it:
         import pandas as pd
         df = pd.read_csv('D:\\age.csv')
         x = df["age"].mean()
         df["age"].fillna(x, inplace = True)
         nnint(df to ctning())
            s.no name age gender
              1 jhon 19.0
         1
              2 ani 18.0
              3 anki 19.0
         3
              4 kul 20.0
In [21]: ##Calculate the mode, and replace any empty values with it:
         import pandas as pd
         df = pd.read_csv('D:\\age.csv')
         x = df["age"].mode()
         df["age"].fillna(x, inplace = True)
         nnint(df to ctning())
            s.no name
                       age gender
              1 jhon 18.0
         1
              2 ani 18.0
              3 anki 19.0
              4 kul 20.0
In [22]: ##Calculate the median, and replace any empty values with it:
         import pandas as pd
         df = pd.read_csv('D:\\age.csv')
         x = df["age"].median()
         df["age"].fillna(x, inplace = True)
         nnint(df to ctning())
            s.no name age gender
              1 jhon 19.0
                                 f
         1
              2
                 ani 18.0
         2
               3 anki 19.0
         3
               4 kul 20.0
In [24]: ##cleaning wrong data
         import pandas as pd
         df = pd.read_csv('D:\\names.csv')
         for x in df.index:
```

```
if df.loc[x, "age"] > 20:
   df.loc[x, "age"] = 40
nnist, ndf namest nage(\)
     1
        ani
1
     2 anki
              20
2
              40
     3 sri
3
     4 sai
              40
4
    5 ram
             40
```

In [ ]:

```
In [17]: ##cleaning the data
    import pandas as pd
    a=pd.read_csv('D:\\koushithachowdary.csv')
    print(a)
    print("after deleting empty cell")
    new_pd= a.dropna()
    print(new_pd)
    file_name = 'koushitha.xlsx'

# saving the excel
    new_pd.to_excel(file_name)
```

```
tiffins
   s.no
                         veg
                               nonveg
0
      1
            idly mushroom
                              chicken
1
      2
            puri
                         dal
                               mutton
2
      3
         samosa
                       methi
                                  NaN
3
      4
                    chmanthi
           maggi
                               prawns
4
      5
            vada
                     panneer
                                 fish
after deleting empty cell
   s.no tiffins
                        veg
                              nonveg
0
           idly mushroom
                             chicken
      1
1
      2
           puri
                        dal
                              mutton
3
      4
          maggi
                   chmanthi
                              prawns
      5
4
           vada
                    panneer
                                fish
```

```
In [7]: import pandas as pd
df=pd.read_csv('D:\\names exercise 1.csv')
print(df.to_string())
```

```
sno
              name
                     age gender
                                         ph.no
                                                     address
0
       1
               ani
                      18
                               f
                                    9441282225
                                                 srikakulam
1
       2
              anki
                      21
                               f
                                    9875546756
                                                       vizag
2
       3
                      13
              jhon
                                    8756787657
                                                       nepal
                               m
3
       4
                      23
                                    6453745465
                                                      guntur
              mami
                               m
4
       5
                      17
                               f
                                                     ponduru
             mouni
                                    5456576767
5
       6
               sai
                      25
                               m
                                    7678566578
                                                  hyderadad
       7
6
                                   78645689878
                                                   srilanka
            suresh
                      24
                               m
7
       8
                      29
                                                      london
            rakesh
                                  78657587689
8
       9
             bhanu
                      20
                                  98793678664
                                                       delhi
                               m
9
      10
           dhanush
                      23
                                  84665954879
                                                      gunpur
                               m
                                  38745864567
                                                     kolkata
10
      11
              siri
                      40
                               f
                               f
11
      12
           bhavana
                      19
                                  87675767859
                                                      bombai
                               f
      13
             likki
                      18
                                  97896756878
                                                       dubai
12
13
      14
           manasas
                      19
                               f
                                  98577654877
                                                        agra
14
      15
                      21
                               f
            sharmi
                                  98789856789
                                                        puri
15
      16
             jessy
                      26
                               m
                                  74567457679
                                                        pune
16
      17
              abhi
                      48
                               m
                                  85748678078
                                                       vizag
17
      18
               anu
                      36
                               f
                                  87856509098
                                                       nepal
18
      19
               kia
                      25
                                  77980577890
                                                    mani[pur
            koushi
                               f
19
      20
                      29
                                                     ongoole
                                  76786547900
                               f
20
      21
           deepika
                                                     nellore
                      30
                                  76465587968
      22
                               f
21
            harshi
                      31
                                  56634698709
                                                       paris
22
      23
                      27
                               f
                                  78765696809
                                                     chennai
              mega
23
      24
             shami
                      22
                               f
                                  76987685670
                                                     kurnool
      25
                               f
24
           keerthi
                      70
                                  78565987909
                                                       aruku
```

```
In [9]: import pandas as pd
df=pd.read_csv('D:\\names exercise 1.csv')
de=df.drop_duplicates(subset="gender")
print(de)
```

```
address
                age gender
    sno
          name
                                   ph.no
0
      1
           ani
                 18
                           f
                              9441282225
                                           srikakulam
2
      3
          jhon
                 13
                              8756787657
                          m
                                                 nepal
```

```
In [12]: import pandas as pd
    df=pd.read_csv('D:\\names exercise 1.csv')
    de=df.drop_duplicates(subset="address",keep="first")
    print(de)
```

```
sno
              name
                     age gender
                                         ph.no
                                                    address
0
                      18
                               f
                                   9441282225
       1
               ani
                                                 srikakulam
1
       2
                      21
                               f
              anki
                                   9875546756
                                                      vizag
2
       3
              jhon
                      13
                                   8756787657
                                                      nepal
                               m
3
       4
                      23
                                   6453745465
                                                     guntur
              mami
                               m
       5
4
                               f
             mouni
                      17
                                   5456576767
                                                    ponduru
5
       6
                      25
                                                  hyderadad
               sai
                               m
                                   7678566578
6
       7
                                                   srilanka
            suresh
                      24
                                  78645689878
7
       8
            rakesh
                      29
                                  78657587689
                                                     london
                               m
8
       9
             bhanu
                      20
                                  98793678664
                                                      delhi
                               m
                                  84665954879
9
      10
           dhanush
                      23
                               m
                                                     gunpur
                               f
10
      11
              siri
                      40
                                  38745864567
                                                    kolkata
                               f
           bhavana
                      19
                                  87675767859
                                                     bombai
11
      12
12
      13
             likki
                      18
                               f
                                  97896756878
                                                      dubai
13
      14
                      19
                               f
           manasas
                                  98577654877
                                                        agra
                               f
14
      15
            sharmi
                      21
                                  98789856789
                                                        puri
15
      16
             jessy
                      26
                                  74567457679
                                                        pune
                                                   mani[pur
18
      19
               kia
                      25
                                  77980577890
19
      20
            koushi
                      29
                               f
                                  76786547900
                                                    ongoole
                               f
20
           deepika
                      30
                                  76465587968
                                                    nellore
      21
                               f
21
      22
            harshi
                      31
                                  56634698709
                                                       paris
22
      23
                      27
                               f
                                  78765696809
                                                    chennai
              mega
23
      24
                      22
                               f
                                  76987685670
                                                    kurnool
             shami
24
      25
           keerthi
                      70
                                  78565987909
                                                       aruku
```

```
In [13]: import pandas as pd
    df=pd.read_csv('D:\\names exercise 1.csv')
    de=df.drop_duplicates(inplace=True)
    print(de)
```

None

```
In [14]: import pandas as pd
    df=pd.read_csv('D:\\names exercise 1.csv')
    de=df.drop_duplicates(subset="name")
    print(de)
```

```
sno
              name
                     age gender
                                         ph.no
                                                     address
0
                      18
                               f
       1
                                    9441282225
                                                 srikakulam
               ani
1
       2
                      21
                               f
              anki
                                    9875546756
                                                       vizag
2
       3
              jhon
                      13
                                    8756787657
                                                       nepal
                               m
3
       4
                      23
                                    6453745465
                                                      guntur
              mami
                               m
       5
4
                               f
             mouni
                      17
                                    5456576767
                                                     ponduru
5
       6
                      25
                                                  hyderadad
               sai
                               m
                                    7678566578
6
       7
                      24
                                  78645689878
                                                    srilanka
            suresh
7
       8
            rakesh
                      29
                                   78657587689
                                                      london
                               m
8
       9
             bhanu
                      20
                                  98793678664
                                                       delhi
                               m
9
      10
           dhanush
                      23
                               m
                                  84665954879
                                                      gunpur
                               f
10
      11
              siri
                      40
                                   38745864567
                                                     kolkata
                               f
      12
                      19
                                  87675767859
                                                      bombai
11
           bhavana
12
      13
             likki
                      18
                               f
                                  97896756878
                                                       dubai
13
      14
                      19
                               f
           manasas
                                  98577654877
                                                        agra
                               f
14
      15
            sharmi
                      21
                                  98789856789
                                                        puri
15
      16
             jessy
                      26
                               m
                                  74567457679
                                                        pune
16
      17
              abhi
                      48
                                  85748678078
                                                       vizag
                               m
17
      18
                               f
                                  87856509098
                                                       nepal
               anu
                      36
      19
                      25
                                                    mani[pur
18
               kia
                                  77980577890
19
      20
            koushi
                      29
                               f
                                  76786547900
                                                     ongoole
20
                               f
      21
           deepika
                      30
                                  76465587968
                                                     nellore
21
      22
            harshi
                      31
                               f
                                  56634698709
                                                       paris
22
      23
              mega
                      27
                               f
                                   78765696809
                                                     chennai
                               f
23
      24
                      22
                                  76987685670
                                                     kurnool
             shami
      25
                               f
24
           keerthi
                      70
                                  78565987909
                                                       aruku
```

```
In [12]: import pandas as pd
    df=pd.read_csv('D:\\passport1.csv')
    df.aggregate({"Age":['min','max']})
    print(df.to_string())
```

|   | S.no | Name       | Age | Gender | Number      | Address   | passport |
|---|------|------------|-----|--------|-------------|-----------|----------|
| 0 | 1    | allu arjun | 38  | male   | 8500761113  | hyderabad | Υ        |
| 1 | 2    | prabhas    | 35  | male   | 1234567890  | hyderabad | N        |
| 2 | 3    | mahesh     | 42  | male   | 8547452895  | hyderabad | Υ        |
| 3 | 4    | ram charan | 35  | male   | 84785620445 | hyderabad | N        |
| 4 | 5    | yash       | 38  | male   | 8745947567  | karnataka | Υ        |
| 5 | 6    | allu arjun | 38  | male   | 8500761113  | hyderabad | N        |
| 6 | 7    | prabhas    | 35  | male   | 1234567890  | hyderabad | Υ        |
| 7 | 8    | mahesh     | 42  | male   | 8547452895  | hyderabad | Υ        |
| 8 | 9    | ram charan | 35  | male   | 84785620445 | hyderabad | N        |
| 9 | 10   | yash       | 38  | male   | 8745947567  | karnataka | Υ        |

```
In [13]: import pandas as pd
         df=pd.read_csv('D:\\passport1.csv')
         df.aggregate({"Name":['min','max']})
         print(df.to_string())
             S.no
                         Name
                               Age Gender
                                                 Number
                                                            Address passport
         0
                1
                   allu arjun
                                 38
                                      male
                                             8500761113
                                                         hyderabad
         1
                2
                                35
                                      male
                                             1234567890
                                                         hyderabad
                      prabhas
                                                                           Ν
         2
                                             8547452895
                3
                       mahesh
                                42
                                      male
                                                         hyderabad
                                                                           Υ
         3
                4
                   ram charan
                                35
                                      male
                                            84785620445
                                                         hyderabad
                                                                           Ν
                5
         4
                         yash
                                38
                                      male
                                             8745947567
                                                          karnataka
                                                                           Υ
         5
                6
                   allu arjun
                                38
                                      male
                                             8500761113
                                                         hyderabad
         6
                7
                      prabhas
                                35
                                      male
                                             1234567890
                                                         hyderabad
                                                                           Υ
         7
                8
                                42
                                      male
                                             8547452895
                                                                           Υ
                       mahesh
                                                         hyderabad
         8
                9
                   ram charan
                                35
                                      male
                                            84785620445
                                                         hyderabad
                                                                           Ν
         9
               10
                                38
                                      male
                                             8745947567
                                                         karnataka
                         yash
In [14]:
         import pandas as pd
         df=pd.read_csv('D:\\passport1.csv')
         print(df.aggregate({"Age":['min','max']}))
               Age
         min
                35
                42
         max
In [15]: import pandas as pd
         df=pd.read_csv('D:\\passport1.csv')
         print(df.aggregate({"Name":['min','max']}))
                     Name
         min
               allu arjun
         max
                     yash
In [16]:
         import pandas as pd
         df=pd.read_csv('D:\\passport1.csv')
         print(df.aggregate({"Age":['sum']}))
               Age
         sum 376
In [17]:
         import pandas as pd
         df=pd.read_csv('D:\\passport1.csv')
         print(df.aggregate({"Age":['mean']}))
                 Age
         mean 37.6
```

```
In [19]: import pandas as pd
          df=pd.read csv('D:\\passport1.csv')
          print(df.aggregate({"Age":['mean']}))
          print(df.aggregate({"S.no":['max']}))
                 Age
          mean 37.6
               S.no
                 10
          max
          import pandas as pd
In [36]:
          a=df.groupby(by="Address")
          a.first()
Out[36]:
                     S.no
                             Name Age Gender
                                                   Number passport
             Address
           hyderabad
                                                8500761113
                                                                 Υ
                          allu arjun
                                    38
                                          male
                                               8745947567
                                                                 Υ
           karnataka
                        5
                              yash
                                    38
                                          male
In [39]:
          import pandas as pd
          a=df.groupby(by=['Address','Name'])
          a.first()
Out[39]:
                                S.no Age Gender
                                                      Number passport
             Address
                          Name
                                                                    Υ
           hyderabad
                       allu arjun
                                   1
                                       38
                                             male
                                                   8500761113
                        mahesh
                                   3
                                       42
                                             male
                                                   8547452895
                                                                    Υ
                        prabhas
                                   2
                                       35
                                                   1234567890
                                             male
                                                                    Ν
                     ram charan
                                   4
                                       35
                                                  84785620445
                                                                    Ν
                                             male
           karnataka
                                   5
                                       38
                                                   8745947567
                                                                    Υ
                          yash
                                             male
In [41]:
          import pandas as pd
          a=df.groupby(by=['Address','Name'])
          print(type(a))
          print(pd.DataFrame(a))
          <class 'pandas.core.groupby.generic.DataFrameGroupBy'>
                                                                                            1
             (hyderabad, allu arjun)
                                            S.no
                                                        Name Age Gender
                                                                                Number
          1
                  (hyderabad, mahesh)
                                            S.no
                                                    Name Age Gender
                                                                            Number
                                                                             Number
          2
                 (hyderabad, prabhas)
                                                     Name Age Gender
                                            S.no
                                                                                        Ad...
          3
             (hyderabad, ram charan)
                                            S.no
                                                        Name Age Gender
                                                                                 Number
                    (karnataka, yash)
                                            S.no
                                                        Age Gender
                                                                          Number
                                                                                     Addre...
                                                  Name
 In [ ]:
```