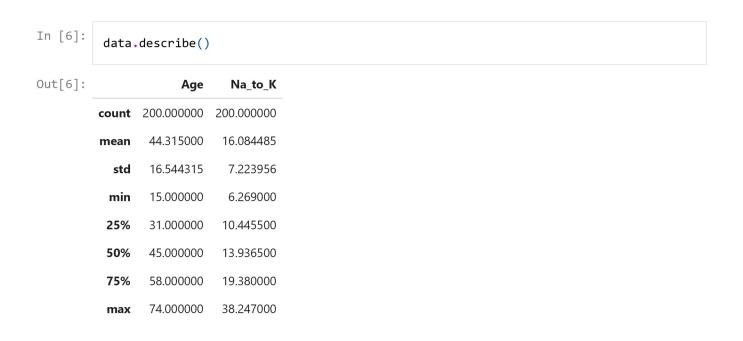
```
In [1]:
          import pandas as pd
          import numpy as np
In [2]:
          data = pd.read_csv("drug.csv")
          data
Out[2]:
                             BP
                                 Cholesterol Na_to_K
                                                     Drug
              Age Sex
           0
               23
                     F
                           HIGH
                                       HIGH
                                              25.355 drugY
           1
               47
                    M
                            LOW
                                       HIGH
                                              13.093 drugC
           2
               47
                            LOW
                                      HIGH
                                              10.114 drugC
                    M
                       NORMAL
           3
               28
                     F
                                      HIGH
                                               7.798 drugX
                     F
           4
               61
                            LOW
                                       HIGH
                                               18.043 drugY
                                               11.567 drugC
         195
               56
                     F
                            LOW
                                       HIGH
         196
               16
                            LOW
                                      HIGH
                                               12.006 drugC
                    M
         197
               52
                    M NORMAL
                                       HIGH
                                               9.894 drugX
         198
               23
                        NORMAL
                                   NORMAL
                                               14.020 drugX
                    M
         199
               40
                     F
                            LOW
                                   NORMAL
                                              11.349 drugX
        200 rows × 6 columns
```

a) Find mean, median, mode and describe

```
In [3]:
          data.mean()
                    44.315000
Out[3]: Age
         Na to K
                    16.084485
         dtype: float64
In [4]:
          data.median()
                    45.0000
Out[4]:
        Age
         Na_to_K
                    13.9365
         dtype: float64
In [5]:
          data.mode()
                            Cholesterol Na_to_K
Out[5]:
            Age
                 Sex
                                                 Drug
            47.0
                   M
                      HIGH
                                  HIGH
                                         12.006 drugY
         1 NaN NaN
                       NaN
                                  NaN
                                         18.295
                                                 NaN
```

1 of 3 26-07-2023, 15:06



Find sum(), cumsum(), count, min and max values

```
In [7]:
       data.sum()
                                                         8863
Out[7]: Age
                   FMMFFFFMMMFFMFFFMMMFMMFFFMFFMFMMMMMFMFFMMFF...
                   HIGHLOWLOWNORMALLOWNORMALLOWNORMALLOWLOW...
       Cholesterol
                   HIGHHIGHHIGHHIGHHIGHHIGHHIGHNORMALHIGH...
       Na_to_K
                                                      3216.897
       Drug
                   drugYdrugCdrugXdrugYdrugXdrugYdrugCdrugYd...
       dtype: object
In [8]:
       data.cumsum()
Out[8]:
                                                           Sex
           Age
                                                            F
        0
            23
            70
         1
                                                           FM
         2
           117
                                                          FMM
        3
           145
                                                         FMMF
           206
                                                        FMMFF
       195
          8732
               196
          8748 FMMFFFFMMMFFMFFMMMFMMMFFFMFFMFMMMMMFMFFMMFF... HIGHLOWLOWNORMALL
       197
          8800
               FMMFFFFMMMFFMFFFMMMFMMMFFFMFMMMMMMFMFFMMFF... HIGHLOWLOWNORMALL
       198 8823 FMMFFFFMMMFFMFFMMMFMMMFFFMFMMMFMMMMMFMFFMMFF... HIGHLOWLOWNORMALL
```

2 of 3 26-07-2023, 15:06

Age Sex

199 8863 FMMFFFFMMMFFMFFMMMFMMFFFMFMMFMMFMMMMFFFMMFF... HIGHLOWLOWNORMALL(

```
In [9]:
          data.count()
                          200
 Out[9]: Age
          Sex
                         200
                         200
          Cholesterol
                         200
         Na_to_K
                         200
         Drug
                          200
          dtype: int64
In [10]:
          data.max()
                              74
Out[10]: Age
          Sex
                              Μ
                         NORMAL
          Cholesterol
                         NORMAL
         Na_to_K
                         38.247
         Drug
                          drugY
          dtype: object
In [11]:
          data.min()
                             15
Out[11]: Age
                              F
          Sex
                          HIGH
          Cholesterol
                          HIGH
         Na_to_K
                         6.269
         Drug
                         drugA
          dtype: object
```

Find covariance and correlation (spearman and pearsons

3 of 3 26-07-2023, 15:06