**import** numpy **as** np

In [2]:

**import** pandas **as** pd

In [3]:

**import** matplotlib.pyplot **as** pp

In [4]:

data **=** pd**.**read\_csv(r"C:\Users\user\Desktop\7\_uber.csv")

In [7]:

df**=**pd**.**DataFrame(data)

df1**=**df**.**loc[[0,1,2,3,4,5,6,7,8,9,10]]

print(df1)

Unnamed: 0 key fare\_amount \

0 24238194 2015-05-07 19:52:06.0000003 7.5

1 27835199 2009-07-17 20:04:56.0000002 7.7

2 44984355 2009-08-24 21:45:00.00000061 12.9

3 25894730 2009-06-26 08:22:21.0000001 5.3

4 17610152 2014-08-28 17:47:00.000000188 16.0

5 44470845 2011-02-12 02:27:09.0000006 4.9

6 48725865 2014-10-12 07:04:00.0000002 24.5

7 44195482 2012-12-11 13:52:00.00000029 2.5

8 15822268 2012-02-17 09:32:00.00000043 9.7

9 50611056 2012-03-29 19:06:00.000000273 12.5

10 2205147 2015-05-22 17:32:27.0000004 6.5

pickup\_datetime pickup\_longitude pickup\_latitude \

0 2015-05-07 19:52:06 UTC -73.999817 40.738354

1 2009-07-17 20:04:56 UTC -73.994355 40.728225

2 2009-08-24 21:45:00 UTC -74.005043 40.740770

3 2009-06-26 08:22:21 UTC -73.976124 40.790844

4 2014-08-28 17:47:00 UTC -73.925023 40.744085

5 2011-02-12 02:27:09 UTC -73.969019 40.755910

6 2014-10-12 07:04:00 UTC -73.961447 40.693965

7 2012-12-11 13:52:00 UTC 0.000000 0.000000

8 2012-02-17 09:32:00 UTC -73.975187 40.745767

9 2012-03-29 19:06:00 UTC -74.001065 40.741787

10 2015-05-22 17:32:27 UTC -73.974388 40.746952

dropoff\_longitude dropoff\_latitude passenger\_count

0 -73.999512 40.723217 1

1 -73.994710 40.750325 1

2 -73.962565 40.772647 1

3 -73.965316 40.803349 3

4 -73.973082 40.761247 5

5 -73.969019 40.755910 1

6 -73.871195 40.774297 5

7 0.000000 0.000000 1

8 -74.002720 40.743537 1

9 -73.963040 40.775012 1

10 -73.988586 40.729805 1

In [10]:

x**=**df1**.**mean()

print(x)

Unnamed: 0 3.150848e+07

fare\_amount 1.000000e+01

pickup\_longitude -6.725286e+01

pickup\_latitude 3.703879e+01

dropoff\_longitude -6.724452e+01

dropoff\_latitude 3.705358e+01

passenger\_count 1.909091e+00

dtype: float64

In [11]:

y**=**df1**.**median()

print(y)

Unnamed: 0 2.783520e+07

fare\_amount 7.700000e+00

pickup\_longitude -7.397519e+01

pickup\_latitude 4.074179e+01

dropoff\_longitude -7.396902e+01

dropoff\_latitude 4.075591e+01

passenger\_count 1.000000e+00

dtype: float64

In [12]:

z**=**df1**.**mode()

print(z)

Unnamed: 0 key fare\_amount \

0 2205147 2009-06-26 08:22:21.0000001 2.5

1 15822268 2009-07-17 20:04:56.0000002 4.9

2 17610152 2009-08-24 21:45:00.00000061 5.3

3 24238194 2011-02-12 02:27:09.0000006 6.5

4 25894730 2012-02-17 09:32:00.00000043 7.5

5 27835199 2012-03-29 19:06:00.000000273 7.7

6 44195482 2012-12-11 13:52:00.00000029 9.7

7 44470845 2014-08-28 17:47:00.000000188 12.5

8 44984355 2014-10-12 07:04:00.0000002 12.9

9 48725865 2015-05-07 19:52:06.0000003 16.0

10 50611056 2015-05-22 17:32:27.0000004 24.5

pickup\_datetime pickup\_longitude pickup\_latitude \

0 2009-06-26 08:22:21 UTC -74.005043 0.000000

1 2009-07-17 20:04:56 UTC -74.001065 40.693965

2 2009-08-24 21:45:00 UTC -73.999817 40.728225

3 2011-02-12 02:27:09 UTC -73.994355 40.738354

4 2012-02-17 09:32:00 UTC -73.976124 40.740770

5 2012-03-29 19:06:00 UTC -73.975187 40.741787

6 2012-12-11 13:52:00 UTC -73.974388 40.744085

7 2014-08-28 17:47:00 UTC -73.969019 40.745767

8 2014-10-12 07:04:00 UTC -73.961447 40.746952

9 2015-05-07 19:52:06 UTC -73.925023 40.755910

10 2015-05-22 17:32:27 UTC 0.000000 40.790844

dropoff\_longitude dropoff\_latitude passenger\_count

0 -74.002720 0.000000 1.0

1 -73.999512 40.723217 NaN

2 -73.994710 40.729805 NaN

3 -73.988586 40.743537 NaN

4 -73.973082 40.750325 NaN

5 -73.969019 40.755910 NaN

6 -73.965316 40.761247 NaN

7 -73.963040 40.772647 NaN

8 -73.962565 40.774297 NaN

9 -73.871195 40.775012 NaN

10 0.000000 40.803349 NaN

In [13]:

a**=**df1**.**sum()

print(a)

Unnamed: 0 346593293

key 2015-05-07 19:52:06.00000032009-07-17 20:04:56...

fare\_amount 110.0

pickup\_datetime 2015-05-07 19:52:06 UTC2009-07-17 20:04:56 UTC...

pickup\_longitude -739.781468

pickup\_latitude 407.426659

dropoff\_longitude -739.689745

dropoff\_latitude 407.589346

passenger\_count 21

dtype: object

In [15]:

b**=**df1**.**cumsum()

print(b)

Unnamed: 0 key \

0 24238194 2015-05-07 19:52:06.0000003

1 52073393 2015-05-07 19:52:06.00000032009-07-17 20:04:56...

2 97057748 2015-05-07 19:52:06.00000032009-07-17 20:04:56...

3 122952478 2015-05-07 19:52:06.00000032009-07-17 20:04:56...

4 140562630 2015-05-07 19:52:06.00000032009-07-17 20:04:56...

5 185033475 2015-05-07 19:52:06.00000032009-07-17 20:04:56...

6 233759340 2015-05-07 19:52:06.00000032009-07-17 20:04:56...

7 277954822 2015-05-07 19:52:06.00000032009-07-17 20:04:56...

8 293777090 2015-05-07 19:52:06.00000032009-07-17 20:04:56...

9 344388146 2015-05-07 19:52:06.00000032009-07-17 20:04:56...

10 346593293 2015-05-07 19:52:06.00000032009-07-17 20:04:56...

fare\_amount pickup\_datetime \

0 7.5 2015-05-07 19:52:06 UTC

1 15.2 2015-05-07 19:52:06 UTC2009-07-17 20:04:56 UTC

2 28.1 2015-05-07 19:52:06 UTC2009-07-17 20:04:56 UTC...

3 33.4 2015-05-07 19:52:06 UTC2009-07-17 20:04:56 UTC...

4 49.4 2015-05-07 19:52:06 UTC2009-07-17 20:04:56 UTC...

5 54.3 2015-05-07 19:52:06 UTC2009-07-17 20:04:56 UTC...

6 78.8 2015-05-07 19:52:06 UTC2009-07-17 20:04:56 UTC...

7 81.3 2015-05-07 19:52:06 UTC2009-07-17 20:04:56 UTC...

8 91.0 2015-05-07 19:52:06 UTC2009-07-17 20:04:56 UTC...

9 103.5 2015-05-07 19:52:06 UTC2009-07-17 20:04:56 UTC...

10 110.0 2015-05-07 19:52:06 UTC2009-07-17 20:04:56 UTC...

pickup\_longitude pickup\_latitude dropoff\_longitude dropoff\_latitude \

0 -73.999817 40.738354 -73.999512 40.723217

1 -147.994172 81.466579 -147.994222 81.473542

2 -221.999215 122.207349 -221.956787 122.246189

3 -295.975339 162.998193 -295.922103 163.049538

4 -369.900362 203.742278 -369.895185 203.810785

5 -443.869381 244.498188 -443.864204 244.566695

6 -517.830828 285.192153 -517.735399 285.340992

7 -517.830828 285.192153 -517.735399 285.340992

8 -591.806015 325.937920 -591.738119 326.084529

9 -665.807080 366.679707 -665.701159 366.859541

10 -739.781468 407.426659 -739.689745 407.589346

passenger\_count

0 1

1 2

2 3

3 6

4 11

5 12

6 17

7 18

8 19

9 20

10 21

In [16]:

c**=**df1**.**count()

print(c)

Unnamed: 0 11

key 11

fare\_amount 11

pickup\_datetime 11

pickup\_longitude 11

pickup\_latitude 11

dropoff\_longitude 11

dropoff\_latitude 11

passenger\_count 11

dtype: int64

In [18]:

d**=**df1**.**min()

print(d)

Unnamed: 0 2205147

key 2009-06-26 08:22:21.0000001

fare\_amount 2.5

pickup\_datetime 2009-06-26 08:22:21 UTC

pickup\_longitude -74.005043

pickup\_latitude 0.0

dropoff\_longitude -74.00272

dropoff\_latitude 0.0

passenger\_count 1

dtype: object

In [19]:

e**=**df1**.**max()

print(e)

Unnamed: 0 50611056

key 2015-05-22 17:32:27.0000004

fare\_amount 24.5

pickup\_datetime 2015-05-22 17:32:27 UTC

pickup\_longitude 0.0

pickup\_latitude 40.790844

dropoff\_longitude 0.0

dropoff\_latitude 40.803349

passenger\_count 5

dtype: object

**dataset 2**

In [27]:

data1 **=** pd**.**read\_csv(r"C:\Users\user\Desktop\8\_BreastCancerPrediction.csv")

In [28]:

df2**=**pd**.**DataFrame(data1)

df3**=**df2**.**loc[[0,1,2,3,4,5,6,7,8,9,10]]

print(df3)

id diagnosis radius\_mean texture\_mean perimeter\_mean area\_mean \

0 842302 M 17.99 10.38 122.80 1001.0

1 842517 M 20.57 17.77 132.90 1326.0

2 84300903 M 19.69 21.25 130.00 1203.0

3 84348301 M 11.42 20.38 77.58 386.1

4 84358402 M 20.29 14.34 135.10 1297.0

5 843786 M 12.45 15.70 82.57 477.1

6 844359 M 18.25 19.98 119.60 1040.0

7 84458202 M 13.71 20.83 90.20 577.9

8 844981 M 13.00 21.82 87.50 519.8

9 84501001 M 12.46 24.04 83.97 475.9

10 845636 M 16.02 23.24 102.70 797.8

smoothness\_mean compactness\_mean concavity\_mean concave points\_mean \

0 0.11840 0.27760 0.30010 0.14710

1 0.08474 0.07864 0.08690 0.07017

2 0.10960 0.15990 0.19740 0.12790

3 0.14250 0.28390 0.24140 0.10520

4 0.10030 0.13280 0.19800 0.10430

5 0.12780 0.17000 0.15780 0.08089

6 0.09463 0.10900 0.11270 0.07400

7 0.11890 0.16450 0.09366 0.05985

8 0.12730 0.19320 0.18590 0.09353

9 0.11860 0.23960 0.22730 0.08543

10 0.08206 0.06669 0.03299 0.03323

... texture\_worst perimeter\_worst area\_worst smoothness\_worst \

0 ... 17.33 184.60 2019.0 0.1622

1 ... 23.41 158.80 1956.0 0.1238

2 ... 25.53 152.50 1709.0 0.1444

3 ... 26.50 98.87 567.7 0.2098

4 ... 16.67 152.20 1575.0 0.1374

5 ... 23.75 103.40 741.6 0.1791

6 ... 27.66 153.20 1606.0 0.1442

7 ... 28.14 110.60 897.0 0.1654

8 ... 30.73 106.20 739.3 0.1703

9 ... 40.68 97.65 711.4 0.1853

10 ... 33.88 123.80 1150.0 0.1181

compactness\_worst concavity\_worst concave points\_worst symmetry\_worst \

0 0.6656 0.7119 0.26540 0.4601

1 0.1866 0.2416 0.18600 0.2750

2 0.4245 0.4504 0.24300 0.3613

3 0.8663 0.6869 0.25750 0.6638

4 0.2050 0.4000 0.16250 0.2364

5 0.5249 0.5355 0.17410 0.3985

6 0.2576 0.3784 0.19320 0.3063

7 0.3682 0.2678 0.15560 0.3196

8 0.5401 0.5390 0.20600 0.4378

9 1.0580 1.1050 0.22100 0.4366

10 0.1551 0.1459 0.09975 0.2948

fractal\_dimension\_worst Unnamed: 32

0 0.11890 NaN

1 0.08902 NaN

2 0.08758 NaN

3 0.17300 NaN

4 0.07678 NaN

5 0.12440 NaN

6 0.08368 NaN

7 0.11510 NaN

8 0.10720 NaN

9 0.20750 NaN

10 0.08452 NaN

[11 rows x 33 columns]

In [29]:

x**=**df3**.**mean()

print(x)

id 3.882094e+07

radius\_mean 1.598636e+01

texture\_mean 1.906636e+01

perimeter\_mean 1.059018e+02

area\_mean 8.274182e+02

smoothness\_mean 1.113482e-01

compactness\_mean 1.705300e-01

concavity\_mean 1.667409e-01

concave points\_mean 8.923636e-02

symmetry\_mean 2.062818e-01

fractal\_dimension\_mean 7.027182e-02

radius\_se 5.440909e-01

texture\_se 1.017436e+00

perimeter\_se 3.783545e+00

area\_se 6.036455e+01

smoothness\_se 6.901091e-03

compactness\_se 3.594445e-02

concavity\_se 3.929545e-02

concave points\_se 1.434373e-02

symmetry\_se 2.252091e-02

fractal\_dimension\_se 5.287545e-03

radius\_worst 1.968818e+01

texture\_worst 2.675273e+01

perimeter\_worst 1.310745e+02

area\_worst 1.242909e+03

smoothness\_worst 1.581818e-01

compactness\_worst 4.774455e-01

concavity\_worst 4.965818e-01

concave points\_worst 1.967318e-01

symmetry\_worst 3.809273e-01

fractal\_dimension\_worst 1.152436e-01

Unnamed: 32 NaN

dtype: float64

In [31]:

y**=**df3**.**median()

print(y)

id 845636.000000

radius\_mean 16.020000

texture\_mean 20.380000

perimeter\_mean 102.700000

area\_mean 797.800000

smoothness\_mean 0.118400

compactness\_mean 0.164500

concavity\_mean 0.185900

concave points\_mean 0.085430

symmetry\_mean 0.206900

fractal\_dimension\_mean 0.073890

radius\_se 0.495600

texture\_se 0.905300

perimeter\_se 3.398000

area\_se 50.960000

smoothness\_se 0.006399

compactness\_se 0.033450

concavity\_se 0.036720

concave points\_se 0.014320

symmetry\_se 0.017890

fractal\_dimension\_se 0.005082

radius\_worst 19.190000

texture\_worst 26.500000

perimeter\_worst 123.800000

area\_worst 1150.000000

smoothness\_worst 0.162200

compactness\_worst 0.424500

concavity\_worst 0.450400

concave points\_worst 0.193200

symmetry\_worst 0.361300

fractal\_dimension\_worst 0.107200

Unnamed: 32 NaN

dtype: float64

In [32]:

z**=**df3**.**mode()

print(z)

id diagnosis radius\_mean texture\_mean perimeter\_mean area\_mean \

0 842302 M 11.42 10.38 77.58 386.1

1 842517 NaN 12.45 14.34 82.57 475.9

2 843786 NaN 12.46 15.70 83.97 477.1

3 844359 NaN 13.00 17.77 87.50 519.8

4 844981 NaN 13.71 19.98 90.20 577.9

5 845636 NaN 16.02 20.38 102.70 797.8

6 84300903 NaN 17.99 20.83 119.60 1001.0

7 84348301 NaN 18.25 21.25 122.80 1040.0

8 84358402 NaN 19.69 21.82 130.00 1203.0

9 84458202 NaN 20.29 23.24 132.90 1297.0

10 84501001 NaN 20.57 24.04 135.10 1326.0

smoothness\_mean compactness\_mean concavity\_mean concave points\_mean \

0 0.08206 0.06669 0.03299 0.03323

1 0.08474 0.07864 0.08690 0.05985

2 0.09463 0.10900 0.09366 0.07017

3 0.10030 0.13280 0.11270 0.07400

4 0.10960 0.15990 0.15780 0.08089

5 0.11840 0.16450 0.18590 0.08543

6 0.11860 0.17000 0.19740 0.09353

7 0.11890 0.19320 0.19800 0.10430

8 0.12730 0.23960 0.22730 0.10520

9 0.12780 0.27760 0.24140 0.12790

10 0.14250 0.28390 0.30010 0.14710

... texture\_worst perimeter\_worst area\_worst smoothness\_worst \

0 ... 16.67 97.65 567.7 0.1181

1 ... 17.33 98.87 711.4 0.1238

2 ... 23.41 103.40 739.3 0.1374

3 ... 23.75 106.20 741.6 0.1442

4 ... 25.53 110.60 897.0 0.1444

5 ... 26.50 123.80 1150.0 0.1622

6 ... 27.66 152.20 1575.0 0.1654

7 ... 28.14 152.50 1606.0 0.1703

8 ... 30.73 153.20 1709.0 0.1791

9 ... 33.88 158.80 1956.0 0.1853

10 ... 40.68 184.60 2019.0 0.2098

compactness\_worst concavity\_worst concave points\_worst symmetry\_worst \

0 0.1551 0.1459 0.09975 0.2364

1 0.1866 0.2416 0.15560 0.2750

2 0.2050 0.2678 0.16250 0.2948

3 0.2576 0.3784 0.17410 0.3063

4 0.3682 0.4000 0.18600 0.3196

5 0.4245 0.4504 0.19320 0.3613

6 0.5249 0.5355 0.20600 0.3985

7 0.5401 0.5390 0.22100 0.4366

8 0.6656 0.6869 0.24300 0.4378

9 0.8663 0.7119 0.25750 0.4601

10 1.0580 1.1050 0.26540 0.6638

fractal\_dimension\_worst Unnamed: 32

0 0.07678 NaN

1 0.08368 NaN

2 0.08452 NaN

3 0.08758 NaN

4 0.08902 NaN

5 0.10720 NaN

6 0.11510 NaN

7 0.11890 NaN

8 0.12440 NaN

9 0.17300 NaN

10 0.20750 NaN

[11 rows x 33 columns]

In [34]:

a**=**df3**.**describe()

print(a)

id radius\_mean texture\_mean perimeter\_mean area\_mean \

count 1.100000e+01 11.000000 11.000000 11.000000 11.000000

mean 3.882094e+07 15.986364 19.066364 105.901818 827.418182

std 4.363230e+07 3.496865 4.135000 22.490612 358.369836

min 8.423020e+05 11.420000 10.380000 77.580000 386.100000

25% 8.440725e+05 12.730000 16.735000 85.735000 498.450000

50% 8.456360e+05 16.020000 20.380000 102.700000 797.800000

75% 8.435335e+07 18.970000 21.535000 126.400000 1121.500000

max 8.450100e+07 20.570000 24.040000 135.100000 1326.000000

smoothness\_mean compactness\_mean concavity\_mean concave points\_mean \

count 11.000000 11.000000 11.000000 11.000000

mean 0.111348 0.170530 0.166741 0.089236

std 0.019040 0.073612 0.078686 0.031660

min 0.082060 0.066690 0.032990 0.033230

25% 0.097465 0.120900 0.103180 0.072085

50% 0.118400 0.164500 0.185900 0.085430

75% 0.123100 0.216400 0.212650 0.104750

max 0.142500 0.283900 0.300100 0.147100

symmetry\_mean ... texture\_worst perimeter\_worst area\_worst \

count 11.000000 ... 11.000000 11.000000 11.000000

mean 0.206282 ... 26.752727 131.074545 1242.909091

std 0.031619 ... 6.895880 30.065975 542.383924

min 0.152800 ... 16.670000 97.650000 567.700000

25% 0.181050 ... 23.580000 104.800000 740.450000

50% 0.206900 ... 26.500000 123.800000 1150.000000

75% 0.227300 ... 29.435000 152.850000 1657.500000

max 0.259700 ... 40.680000 184.600000 2019.000000

smoothness\_worst compactness\_worst concavity\_worst \

count 11.000000 11.000000 11.000000

mean 0.158182 0.477445 0.496582

std 0.027674 0.292511 0.268669

min 0.118100 0.155100 0.145900

25% 0.140800 0.231300 0.323100

50% 0.162200 0.424500 0.450400

75% 0.174700 0.602850 0.612950

max 0.209800 1.058000 1.105000

concave points\_worst symmetry\_worst fractal\_dimension\_worst \

count 11.000000 11.000000 11.000000

mean 0.196732 0.380927 0.115244

std 0.049125 0.119235 0.041087

min 0.099750 0.236400 0.076780

25% 0.168300 0.300550 0.086050

50% 0.193200 0.361300 0.107200

75% 0.232000 0.437200 0.121650

max 0.265400 0.663800 0.207500

Unnamed: 32

count 0.0

mean NaN

std NaN

min NaN

25% NaN

50% NaN

75% NaN

max NaN

[8 rows x 32 columns]

In [35]:

b**=**df3**.**sum()

print(b)

id 427030390

diagnosis MMMMMMMMMMM

radius\_mean 175.85

texture\_mean 209.73

perimeter\_mean 1164.92

area\_mean 9101.6

smoothness\_mean 1.22483

compactness\_mean 1.87583

concavity\_mean 1.83415

concave points\_mean 0.9816

symmetry\_mean 2.2691

fractal\_dimension\_mean 0.77299

radius\_se 5.985

texture\_se 11.1918

perimeter\_se 41.619

area\_se 664.01

smoothness\_se 0.075912

compactness\_se 0.395389

concavity\_se 0.43225

concave points\_se 0.157781

symmetry\_se 0.24773

fractal\_dimension\_se 0.058163

radius\_worst 216.57

texture\_worst 294.28

perimeter\_worst 1441.82

area\_worst 13672.0

smoothness\_worst 1.74

compactness\_worst 5.2519

concavity\_worst 5.4624

concave points\_worst 2.16405

symmetry\_worst 4.1902

fractal\_dimension\_worst 1.26768

Unnamed: 32 0.0

dtype: object

In [36]:

c**=**df3**.**sum()

print(c)

id 427030390

diagnosis MMMMMMMMMMM

radius\_mean 175.85

texture\_mean 209.73

perimeter\_mean 1164.92

area\_mean 9101.6

smoothness\_mean 1.22483

compactness\_mean 1.87583

concavity\_mean 1.83415

concave points\_mean 0.9816

symmetry\_mean 2.2691

fractal\_dimension\_mean 0.77299

radius\_se 5.985

texture\_se 11.1918

perimeter\_se 41.619

area\_se 664.01

smoothness\_se 0.075912

compactness\_se 0.395389

concavity\_se 0.43225

concave points\_se 0.157781

symmetry\_se 0.24773

fractal\_dimension\_se 0.058163

radius\_worst 216.57

texture\_worst 294.28

perimeter\_worst 1441.82

area\_worst 13672.0

smoothness\_worst 1.74

compactness\_worst 5.2519

concavity\_worst 5.4624

concave points\_worst 2.16405

symmetry\_worst 4.1902

fractal\_dimension\_worst 1.26768

Unnamed: 32 0.0

dtype: object

In [37]:

d**=**df3**.**cumsum()

print(d)

id diagnosis radius\_mean texture\_mean perimeter\_mean \

0 842302 M 17.99 10.38 122.80

1 1684819 MM 38.56 28.15 255.70

2 85985722 MMM 58.25 49.40 385.70

3 170334023 MMMM 69.67 69.78 463.28

4 254692425 MMMMM 89.96 84.12 598.38

5 255536211 MMMMMM 102.41 99.82 680.95

6 256380570 MMMMMMM 120.66 119.80 800.55

7 340838772 MMMMMMMM 134.37 140.63 890.75

8 341683753 MMMMMMMMM 147.37 162.45 978.25

9 426184754 MMMMMMMMMM 159.83 186.49 1062.22

10 427030390 MMMMMMMMMMM 175.85 209.73 1164.92

area\_mean smoothness\_mean compactness\_mean concavity\_mean \

0 1001.0 0.11840 0.27760 0.30010

1 2327.0 0.20314 0.35624 0.38700

2 3530.0 0.31274 0.51614 0.58440

3 3916.1 0.45524 0.80004 0.82580

4 5213.1 0.55554 0.93284 1.02380

5 5690.2 0.68334 1.10284 1.18160

6 6730.2 0.77797 1.21184 1.29430

7 7308.1 0.89687 1.37634 1.38796

8 7827.9 1.02417 1.56954 1.57386

9 8303.8 1.14277 1.80914 1.80116

10 9101.6 1.22483 1.87583 1.83415

concave points\_mean ... texture\_worst perimeter\_worst area\_worst \

0 0.14710 ... 17.33 184.60 2019.0

1 0.21727 ... 40.74 343.40 3975.0

2 0.34517 ... 66.27 495.90 5684.0

3 0.45037 ... 92.77 594.77 6251.7

4 0.55467 ... 109.44 746.97 7826.7

5 0.63556 ... 133.19 850.37 8568.3

6 0.70956 ... 160.85 1003.57 10174.3

7 0.76941 ... 188.99 1114.17 11071.3

8 0.86294 ... 219.72 1220.37 11810.6

9 0.94837 ... 260.40 1318.02 12522.0

10 0.98160 ... 294.28 1441.82 13672.0

smoothness\_worst compactness\_worst concavity\_worst \

0 0.1622 0.6656 0.7119

1 0.2860 0.8522 0.9535

2 0.4304 1.2767 1.4039

3 0.6402 2.1430 2.0908

4 0.7776 2.3480 2.4908

5 0.9567 2.8729 3.0263

6 1.1009 3.1305 3.4047

7 1.2663 3.4987 3.6725

8 1.4366 4.0388 4.2115

9 1.6219 5.0968 5.3165

10 1.7400 5.2519 5.4624

concave points\_worst symmetry\_worst fractal\_dimension\_worst Unnamed: 32

0 0.26540 0.4601 0.11890 NaN

1 0.45140 0.7351 0.20792 NaN

2 0.69440 1.0964 0.29550 NaN

3 0.95190 1.7602 0.46850 NaN

4 1.11440 1.9966 0.54528 NaN

5 1.28850 2.3951 0.66968 NaN

6 1.48170 2.7014 0.75336 NaN

7 1.63730 3.0210 0.86846 NaN

8 1.84330 3.4588 0.97566 NaN

9 2.06430 3.8954 1.18316 NaN

10 2.16405 4.1902 1.26768 NaN

[11 rows x 33 columns]

In [38]:

e**=**df3**.**count()

print(e)

id 11

diagnosis 11

radius\_mean 11

texture\_mean 11

perimeter\_mean 11

area\_mean 11

smoothness\_mean 11

compactness\_mean 11

concavity\_mean 11

concave points\_mean 11

symmetry\_mean 11

fractal\_dimension\_mean 11

radius\_se 11

texture\_se 11

perimeter\_se 11

area\_se 11

smoothness\_se 11

compactness\_se 11

concavity\_se 11

concave points\_se 11

symmetry\_se 11

fractal\_dimension\_se 11

radius\_worst 11

texture\_worst 11

perimeter\_worst 11

area\_worst 11

smoothness\_worst 11

compactness\_worst 11

concavity\_worst 11

concave points\_worst 11

symmetry\_worst 11

fractal\_dimension\_worst 11

Unnamed: 32 0

dtype: int64

In [39]:

f**=**df3**.**min()

print(f)

id 842302

diagnosis M

radius\_mean 11.42

texture\_mean 10.38

perimeter\_mean 77.58

area\_mean 386.1

smoothness\_mean 0.08206

compactness\_mean 0.06669

concavity\_mean 0.03299

concave points\_mean 0.03323

symmetry\_mean 0.1528

fractal\_dimension\_mean 0.05667

radius\_se 0.2976

texture\_se 0.7339

perimeter\_se 2.039

area\_se 23.94

smoothness\_se 0.004029

compactness\_se 0.009269

concavity\_se 0.01101

concave points\_se 0.007591

symmetry\_se 0.01369

fractal\_dimension\_se 0.002179

radius\_worst 14.91

texture\_worst 16.67

perimeter\_worst 97.65

area\_worst 567.7

smoothness\_worst 0.1181

compactness\_worst 0.1551

concavity\_worst 0.1459

concave points\_worst 0.09975

symmetry\_worst 0.2364

fractal\_dimension\_worst 0.07678

Unnamed: 32 NaN

dtype: object

In [40]:

g**=**df3**.**max()

print(g)

id 84501001

diagnosis M

radius\_mean 20.57

texture\_mean 24.04

perimeter\_mean 135.1

area\_mean 1326.0

smoothness\_mean 0.1425

compactness\_mean 0.2839

concavity\_mean 0.3001

concave points\_mean 0.1471

symmetry\_mean 0.2597

fractal\_dimension\_mean 0.09744

radius\_se 1.095

texture\_se 1.599

perimeter\_se 8.589

area\_se 153.4

smoothness\_se 0.01149

compactness\_se 0.07458

concavity\_se 0.07743

concave points\_se 0.02058

symmetry\_se 0.05963

fractal\_dimension\_se 0.01008

radius\_worst 25.38

texture\_worst 40.68

perimeter\_worst 184.6

area\_worst 2019.0

smoothness\_worst 0.2098

compactness\_worst 1.058

concavity\_worst 1.105

concave points\_worst 0.2654

symmetry\_worst 0.6638

fractal\_dimension\_worst 0.2075

Unnamed: 32 NaN

dtype: object

**dataset 3**

In [50]:

data2 **=** pd**.**read\_csv(r"C:\Users\user\Desktop\6\_Salesworkload1.csv")

In [51]:

df**=**pd**.**DataFrame(data2)

df5**=**df**.**loc[[0,1,2,3,4,5,6,7,8,9,10]]

print(df5)

MonthYear Time index Country StoreID City Dept\_ID \

0 10.2016 1.0 United Kingdom 88253.0 London (I) 1.0

1 10.2016 1.0 United Kingdom 88253.0 London (I) 2.0

2 10.2016 1.0 United Kingdom 88253.0 London (I) 3.0

3 10.2016 1.0 United Kingdom 88253.0 London (I) 4.0

4 10.2016 1.0 United Kingdom 88253.0 London (I) 5.0

5 10.2016 1.0 United Kingdom 88253.0 London (I) 6.0

6 10.2016 1.0 United Kingdom 88253.0 London (I) 13.0

7 10.2016 1.0 United Kingdom 88253.0 London (I) 7.0

8 10.2016 1.0 United Kingdom 88253.0 London (I) 8.0

9 10.2016 1.0 United Kingdom 88253.0 London (I) 9.0

10 10.2016 1.0 United Kingdom 88253.0 London (I) 14.0

Dept. Name HoursOwn HoursLease Sales units Turnover \

0 Dry 3184.764 0.0 398560.0 1226244.0

1 Frozen 1582.941 0.0 82725.0 387810.0

2 other 47.205 0.0 438400.0 654657.0

3 Fish 1623.852 0.0 309425.0 499434.0

4 Fruits & Vegetables 1759.173 0.0 165515.0 329397.0

5 Meat 8270.316 0.0 1713310.0 5617137.0

6 Food 16468.251 0.0 3107935.0 8714679.0

7 Clothing 4698.471 0.0 213680.0 1615341.0

8 Household 1183.272 0.0 54915.0 290400.0

9 Hardware 2029.815 0.0 59260.0 450015.0

10 Non Food 7911.558 0.0 327855.0 2355756.0

Customer Area (m2) Opening hours

0 NaN 953.04 Type A

1 NaN 720.48 Type A

2 NaN 966.72 Type A

3 NaN 1053.36 Type A

4 NaN 1053.36 Type A

5 NaN 11735.16 Type A

6 NaN 19865.64 Type A

7 NaN 8513.52 Type A

8 NaN 4842.72 Type A

9 NaN 5608.8 Type A

10 NaN 19238.64 Type A

In [52]:

print(df5**.**mean())

Time index 1.000000e+00

StoreID 8.825300e+04

Dept\_ID 6.545455e+00

HoursLease 0.000000e+00

Sales units 6.246891e+05

Turnover 2.012806e+06

Customer NaN

dtype: float64

In [53]:

print(df5**.**median())

MonthYear 10.2016

Time index 1.0000

StoreID 88253.0000

Dept\_ID 6.0000

HoursOwn 2029.8150

HoursLease 0.0000

Sales units 309425.0000

Turnover 654657.0000

Customer NaN

Area (m2) 4842.7200

dtype: float64

In [54]:

print(df5**.**mode())

MonthYear Time index Country StoreID City Dept\_ID \

0 10.2016 1.0 United Kingdom 88253.0 London (I) 1.0

1 NaN NaN NaN NaN NaN 2.0

2 NaN NaN NaN NaN NaN 3.0

3 NaN NaN NaN NaN NaN 4.0

4 NaN NaN NaN NaN NaN 5.0

5 NaN NaN NaN NaN NaN 6.0

6 NaN NaN NaN NaN NaN 7.0

7 NaN NaN NaN NaN NaN 8.0

8 NaN NaN NaN NaN NaN 9.0

9 NaN NaN NaN NaN NaN 13.0

10 NaN NaN NaN NaN NaN 14.0

Dept. Name HoursOwn HoursLease Sales units Turnover \

0 Clothing 1183.272 0.0 54915.0 290400.0

1 Dry 1582.941 NaN 59260.0 329397.0

2 Fish 1623.852 NaN 82725.0 387810.0

3 Food 16468.251 NaN 165515.0 450015.0

4 Frozen 1759.173 NaN 213680.0 499434.0

5 Fruits & Vegetables 2029.815 NaN 309425.0 654657.0

6 Hardware 3184.764 NaN 327855.0 1226244.0

7 Household 4698.471 NaN 398560.0 1615341.0

8 Meat 47.205 NaN 438400.0 2355756.0

9 Non Food 7911.558 NaN 1713310.0 5617137.0

10 other 8270.316 NaN 3107935.0 8714679.0

Customer Area (m2) Opening hours

0 NaN 1053.36 Type A

1 NaN NaN NaN

2 NaN NaN NaN

3 NaN NaN NaN

4 NaN NaN NaN

5 NaN NaN NaN

6 NaN NaN NaN

7 NaN NaN NaN

8 NaN NaN NaN

9 NaN NaN NaN

10 NaN NaN NaN

In [55]:

print(df5**.**describe())

Time index StoreID Dept\_ID HoursLease Sales units Turnover \

count 11.0 11.0 11.000000 11.0 1.100000e+01 1.100000e+01

mean 1.0 88253.0 6.545455 0.0 6.246891e+05 2.012806e+06

std 0.0 0.0 4.227615 0.0 9.456634e+05 2.716964e+06

min 1.0 88253.0 1.000000 0.0 5.491500e+04 2.904000e+05

25% 1.0 88253.0 3.500000 0.0 1.241200e+05 4.189125e+05

50% 1.0 88253.0 6.000000 0.0 3.094250e+05 6.546570e+05

75% 1.0 88253.0 8.500000 0.0 4.184800e+05 1.985548e+06

max 1.0 88253.0 14.000000 0.0 3.107935e+06 8.714679e+06

Customer

count 0.0

mean NaN

std NaN

min NaN

25% NaN

50% NaN

75% NaN

max NaN

In [56]:

print(df5**.**sum())

MonthYear 10.201610.201610.201610.201610.201610.201610.2...

Time index 11.0

Country United KingdomUnited KingdomUnited KingdomUnit...

StoreID 970783.0

City London (I)London (I)London (I)London (I)London...

Dept\_ID 72.0

Dept. Name DryFrozenotherFishFruits & VegetablesMeatFoodC...

HoursOwn 3184.7641582.94147.2051623.8521759.1738270.316...

HoursLease 0.0

Sales units 6871580.0

Turnover 22140870.0

Customer 0.0

Area (m2) 953.04720.48966.721053.361053.3611735.1619865....

Opening hours Type AType AType AType AType AType AType AType...

dtype: object

In [57]:

print(df5**.**cumsum())

MonthYear Time index \

0 10.2016 1.0

1 10.201610.2016 2.0

2 10.201610.201610.2016 3.0

3 10.201610.201610.201610.2016 4.0

4 10.201610.201610.201610.201610.2016 5.0

5 10.201610.201610.201610.201610.201610.2016 6.0

6 10.201610.201610.201610.201610.201610.201610.2016 7.0

7 10.201610.201610.201610.201610.201610.201610.2... 8.0

8 10.201610.201610.201610.201610.201610.201610.2... 9.0

9 10.201610.201610.201610.201610.201610.201610.2... 10.0

10 10.201610.201610.201610.201610.201610.201610.2... 11.0

Country StoreID \

0 United Kingdom 88253.0

1 United KingdomUnited Kingdom 176506.0

2 United KingdomUnited KingdomUnited Kingdom 264759.0

3 United KingdomUnited KingdomUnited KingdomUnit... 353012.0

4 United KingdomUnited KingdomUnited KingdomUnit... 441265.0

5 United KingdomUnited KingdomUnited KingdomUnit... 529518.0

6 United KingdomUnited KingdomUnited KingdomUnit... 617771.0

7 United KingdomUnited KingdomUnited KingdomUnit... 706024.0

8 United KingdomUnited KingdomUnited KingdomUnit... 794277.0

9 United KingdomUnited KingdomUnited KingdomUnit... 882530.0

10 United KingdomUnited KingdomUnited KingdomUnit... 970783.0

City Dept\_ID \

0 London (I) 1.0

1 London (I)London (I) 3.0

2 London (I)London (I)London (I) 6.0

3 London (I)London (I)London (I)London (I) 10.0

4 London (I)London (I)London (I)London (I)London... 15.0

5 London (I)London (I)London (I)London (I)London... 21.0

6 London (I)London (I)London (I)London (I)London... 34.0

7 London (I)London (I)London (I)London (I)London... 41.0

8 London (I)London (I)London (I)London (I)London... 49.0

9 London (I)London (I)London (I)London (I)London... 58.0

10 London (I)London (I)London (I)London (I)London... 72.0

Dept. Name \

0 Dry

1 DryFrozen

2 DryFrozenother

3 DryFrozenotherFish

4 DryFrozenotherFishFruits & Vegetables

5 DryFrozenotherFishFruits & VegetablesMeat

6 DryFrozenotherFishFruits & VegetablesMeatFood

7 DryFrozenotherFishFruits & VegetablesMeatFoodC...

8 DryFrozenotherFishFruits & VegetablesMeatFoodC...

9 DryFrozenotherFishFruits & VegetablesMeatFoodC...

10 DryFrozenotherFishFruits & VegetablesMeatFoodC...

HoursOwn HoursLease \

0 3184.764 0.0

1 3184.7641582.941 0.0

2 3184.7641582.94147.205 0.0

3 3184.7641582.94147.2051623.852 0.0

4 3184.7641582.94147.2051623.8521759.173 0.0

5 3184.7641582.94147.2051623.8521759.1738270.316 0.0

6 3184.7641582.94147.2051623.8521759.1738270.316... 0.0

7 3184.7641582.94147.2051623.8521759.1738270.316... 0.0

8 3184.7641582.94147.2051623.8521759.1738270.316... 0.0

9 3184.7641582.94147.2051623.8521759.1738270.316... 0.0

10 3184.7641582.94147.2051623.8521759.1738270.316... 0.0

Sales units Turnover Customer \

0 398560.0 1226244.0 NaN

1 481285.0 1614054.0 NaN

2 919685.0 2268711.0 NaN

3 1229110.0 2768145.0 NaN

4 1394625.0 3097542.0 NaN

5 3107935.0 8714679.0 NaN

6 6215870.0 17429358.0 NaN

7 6429550.0 19044699.0 NaN

8 6484465.0 19335099.0 NaN

9 6543725.0 19785114.0 NaN

10 6871580.0 22140870.0 NaN

Area (m2) \

0 953.04

1 953.04720.48

2 953.04720.48966.72

3 953.04720.48966.721053.36

4 953.04720.48966.721053.361053.36

5 953.04720.48966.721053.361053.3611735.16

6 953.04720.48966.721053.361053.3611735.1619865.64

7 953.04720.48966.721053.361053.3611735.1619865....

8 953.04720.48966.721053.361053.3611735.1619865....

9 953.04720.48966.721053.361053.3611735.1619865....

10 953.04720.48966.721053.361053.3611735.1619865....

Opening hours

0 Type A

1 Type AType A

2 Type AType AType A

3 Type AType AType AType A

4 Type AType AType AType AType A

5 Type AType AType AType AType AType A

6 Type AType AType AType AType AType AType A

7 Type AType AType AType AType AType AType AType A

8 Type AType AType AType AType AType AType AType...

9 Type AType AType AType AType AType AType AType...

10 Type AType AType AType AType AType AType AType...

In [58]:

print(df5**.**min())

MonthYear 10.2016

Time index 1.0

Country United Kingdom

StoreID 88253.0

City London (I)

Dept\_ID 1.0

Dept. Name Clothing

HoursOwn 1183.272

HoursLease 0.0

Sales units 54915.0

Turnover 290400.0

Customer NaN

Area (m2) 1053.36

Opening hours Type A

dtype: object

In [59]:

print(df5**.**max())

MonthYear 10.2016

Time index 1.0

Country United Kingdom

StoreID 88253.0

City London (I)

Dept\_ID 14.0

Dept. Name other

HoursOwn 8270.316

HoursLease 0.0

Sales units 3107935.0

Turnover 8714679.0

Customer NaN

Area (m2) 966.72

Opening hours Type A

dtype: object

In [60]:

print(df5**.**count())

MonthYear 11

Time index 11

Country 11

StoreID 11

City 11

Dept\_ID 11

Dept. Name 11

HoursOwn 11

HoursLease 11

Sales units 11

Turnover 11

Customer 0

Area (m2) 11

Opening hours 11

dtype: int64

**dataset 4**

In [63]:

data3 **=** pd**.**read\_csv(r"C:\Users\user\Desktop\3\_Fitness-1.csv")

In [65]:

df**=**pd**.**DataFrame(data3)

df6**=**df**.**loc[[0,1,2,3]]

print(df6)

Row Labels Sum of Jan Sum of Feb Sum of Mar Sum of Total Sales

0 A 5.62% 7.73% 6.16% 75

1 B 4.21% 17.27% 19.21% 160

2 C 9.83% 11.60% 5.17% 101

3 D 2.81% 21.91% 7.88% 127

In [66]:

print(df6**.**mean())

Sum of Total Sales 115.75

dtype: float64

In [67]:

print(df6**.**median())

Sum of Total Sales 114.0

dtype: float64

In [68]:

print(df6**.**mode())

Row Labels Sum of Jan Sum of Feb Sum of Mar Sum of Total Sales

0 A 2.81% 11.60% 19.21% 75

1 B 4.21% 17.27% 5.17% 101

2 C 5.62% 21.91% 6.16% 127

3 D 9.83% 7.73% 7.88% 160

In [69]:

print(df6**.**describe())

Sum of Total Sales

count 4.000000

mean 115.750000

std 36.344417

min 75.000000

25% 94.500000

50% 114.000000

75% 135.250000

max 160.000000

In [70]:

print(df6**.**sum())

Row Labels ABCD

Sum of Jan 5.62%4.21%9.83%2.81%

Sum of Feb 7.73%17.27%11.60%21.91%

Sum of Mar 6.16%19.21%5.17%7.88%

Sum of Total Sales 463

dtype: object

In [71]:

print(df6**.**cumsum())

Row Labels Sum of Jan Sum of Feb \

0 A 5.62% 7.73%

1 AB 5.62%4.21% 7.73%17.27%

2 ABC 5.62%4.21%9.83% 7.73%17.27%11.60%

3 ABCD 5.62%4.21%9.83%2.81% 7.73%17.27%11.60%21.91%

Sum of Mar Sum of Total Sales

0 6.16% 75

1 6.16%19.21% 235

2 6.16%19.21%5.17% 336

3 6.16%19.21%5.17%7.88% 463

In [72]:

print(df6**.**count())

Row Labels 4

Sum of Jan 4

Sum of Feb 4

Sum of Mar 4

Sum of Total Sales 4

dtype: int64

In [73]:

print(df6**.**min())

Row Labels A

Sum of Jan 2.81%

Sum of Feb 11.60%

Sum of Mar 19.21%

Sum of Total Sales 75

dtype: object

In [74]:

print(df6**.**max())

Row Labels D

Sum of Jan 9.83%

Sum of Feb 7.73%

Sum of Mar 7.88%

Sum of Total Sales 160

dtype: object

**dataset 5**

In [80]:

data1 **=** pd**.**read\_csv(r"C:\Users\user\Desktop\4\_drug200.csv")

In [81]:

df**=**pd**.**DataFrame(data1)

df7**=**df**.**loc[[0,1,2,3,4,5,6,7,8,9,10]]

print(df7)

Age Sex BP Cholesterol Na\_to\_K Drug

0 23 F HIGH HIGH 25.355 drugY

1 47 M LOW HIGH 13.093 drugC

2 47 M LOW HIGH 10.114 drugC

3 28 F NORMAL HIGH 7.798 drugX

4 61 F LOW HIGH 18.043 drugY

5 22 F NORMAL HIGH 8.607 drugX

6 49 F NORMAL HIGH 16.275 drugY

7 41 M LOW HIGH 11.037 drugC

8 60 M NORMAL HIGH 15.171 drugY

9 43 M LOW NORMAL 19.368 drugY

10 47 F LOW HIGH 11.767 drugC

In [82]:

print(df7**.**mean())

Age 42.545455

Na\_to\_K 14.238909

dtype: float64

In [83]:

print(df7**.**median())

Age 47.000

Na\_to\_K 13.093

dtype: float64

In [84]:

print(df7**.**mode())

Age Sex BP Cholesterol Na\_to\_K Drug

0 47.0 F LOW HIGH 7.798 drugY

1 NaN NaN NaN NaN 8.607 NaN

2 NaN NaN NaN NaN 10.114 NaN

3 NaN NaN NaN NaN 11.037 NaN

4 NaN NaN NaN NaN 11.767 NaN

5 NaN NaN NaN NaN 13.093 NaN

6 NaN NaN NaN NaN 15.171 NaN

7 NaN NaN NaN NaN 16.275 NaN

8 NaN NaN NaN NaN 18.043 NaN

9 NaN NaN NaN NaN 19.368 NaN

10 NaN NaN NaN NaN 25.355 NaN

In [85]:

print(df7**.**describe())

Age Na\_to\_K

count 11.000000 11.000000

mean 42.545455 14.238909

std 13.284304 5.265500

min 22.000000 7.798000

25% 34.500000 10.575500

50% 47.000000 13.093000

75% 48.000000 17.159000

max 61.000000 25.355000

In [86]:

print(df7**.**sum())

Age 468

Sex FMMFFFFMMMF

BP HIGHLOWLOWNORMALLOWNORMALNORMALLOWNORMALLOWLOW

Cholesterol HIGHHIGHHIGHHIGHHIGHHIGHHIGHHIGHHIGHNORMALHIGH

Na\_to\_K 156.628

Drug drugYdrugCdrugCdrugXdrugYdrugXdrugYdrugCdrugYd...

dtype: object

In [87]:

print(df7**.**cumsum())

Age Sex BP \

0 23 F HIGH

1 70 FM HIGHLOW

2 117 FMM HIGHLOWLOW

3 145 FMMF HIGHLOWLOWNORMAL

4 206 FMMFF HIGHLOWLOWNORMALLOW

5 228 FMMFFF HIGHLOWLOWNORMALLOWNORMAL

6 277 FMMFFFF HIGHLOWLOWNORMALLOWNORMALNORMAL

7 318 FMMFFFFM HIGHLOWLOWNORMALLOWNORMALNORMALLOW

8 378 FMMFFFFMM HIGHLOWLOWNORMALLOWNORMALNORMALLOWNORMAL

9 421 FMMFFFFMMM HIGHLOWLOWNORMALLOWNORMALNORMALLOWNORMALLOW

10 468 FMMFFFFMMMF HIGHLOWLOWNORMALLOWNORMALNORMALLOWNORMALLOWLOW

Cholesterol Na\_to\_K \

0 HIGH 25.355

1 HIGHHIGH 38.448

2 HIGHHIGHHIGH 48.562

3 HIGHHIGHHIGHHIGH 56.360

4 HIGHHIGHHIGHHIGHHIGH 74.403

5 HIGHHIGHHIGHHIGHHIGHHIGH 83.010

6 HIGHHIGHHIGHHIGHHIGHHIGHHIGH 99.285

7 HIGHHIGHHIGHHIGHHIGHHIGHHIGHHIGH 110.322

8 HIGHHIGHHIGHHIGHHIGHHIGHHIGHHIGHHIGH 125.493

9 HIGHHIGHHIGHHIGHHIGHHIGHHIGHHIGHHIGHNORMAL 144.861

10 HIGHHIGHHIGHHIGHHIGHHIGHHIGHHIGHHIGHNORMALHIGH 156.628

Drug

0 drugY

1 drugYdrugC

2 drugYdrugCdrugC

3 drugYdrugCdrugCdrugX

4 drugYdrugCdrugCdrugXdrugY

5 drugYdrugCdrugCdrugXdrugYdrugX

6 drugYdrugCdrugCdrugXdrugYdrugXdrugY

7 drugYdrugCdrugCdrugXdrugYdrugXdrugYdrugC

8 drugYdrugCdrugCdrugXdrugYdrugXdrugYdrugCdrugY

9 drugYdrugCdrugCdrugXdrugYdrugXdrugYdrugCdrugYd...

10 drugYdrugCdrugCdrugXdrugYdrugXdrugYdrugCdrugYd...

In [88]:

print(df7**.**count())

Age 11

Sex 11

BP 11

Cholesterol 11

Na\_to\_K 11

Drug 11

dtype: int64

In [89]:

print(df7**.**min())

Age 22

Sex F

BP HIGH

Cholesterol HIGH

Na\_to\_K 7.798

Drug drugC

dtype: object

In [90]:

print(df7**.**max())

Age 61

Sex M

BP NORMAL

Cholesterol NORMAL

Na\_to\_K 25.355

Drug drugY

dtype: object