

PRACTICAL NO. 3

```
R Console

> a<-read.csv("C:/Users/91950/Desktop/college pracical/RPra3.csv")
> a
  Pregnancies Glucose BloodPressure SkinThickness Insulin  BMI
1           6     148           72           35         0 33.6
2           1      85           66           29         0 26.6
3           8     183           64            0         0 23.3
4           1      89           66           23        94 28.1
5           0     137           40           35       168 43.1
6           5     116           74            0         0 25.6
7           3      78           50           32        88 31.0
8          10     115            0            0         0 35.3
9           2     197           70           45       543 30.5
10          8     125           96            0         0  0.0
11          4     110           92            0         0 37.6
12         10     168           74            0         0 38.0
13         10     139           80            0         0 27.1
14          1     189           60           23       846 30.1
15          5     166           72           19       175 25.8
16          7     100            0            0         0 30.0
17          0     118           84           47       230 45.8
18          7     107           74            0         0 29.6
19          1     103           30           38        83 43.3
20          1     115           70           30         96 34.6
21          3     126           88           41       235 39.3

758          0.258 52         1
759          0.197 26         0
760          0.278 66         1
761          0.766 22         0
762          0.403 43         1
763          0.142 33         0
764          0.171 63         0
765          0.340 27         0
766          0.245 30         0
767          0.349 47         1
768          0.315 23         0
> mean(a$Glucose)
[1] 120.8945
> mean(a$BloodPressure)
[1] 69.10547
> mean(a$BMI)
[1] 31.99258
> median(a$Insulin)
[1] 30.5
> median(a$Pregnancies)
[1] 3
> median(a$SkinThickness)
[1] 23
> range(a$Glucose)
[1]  0 199
```

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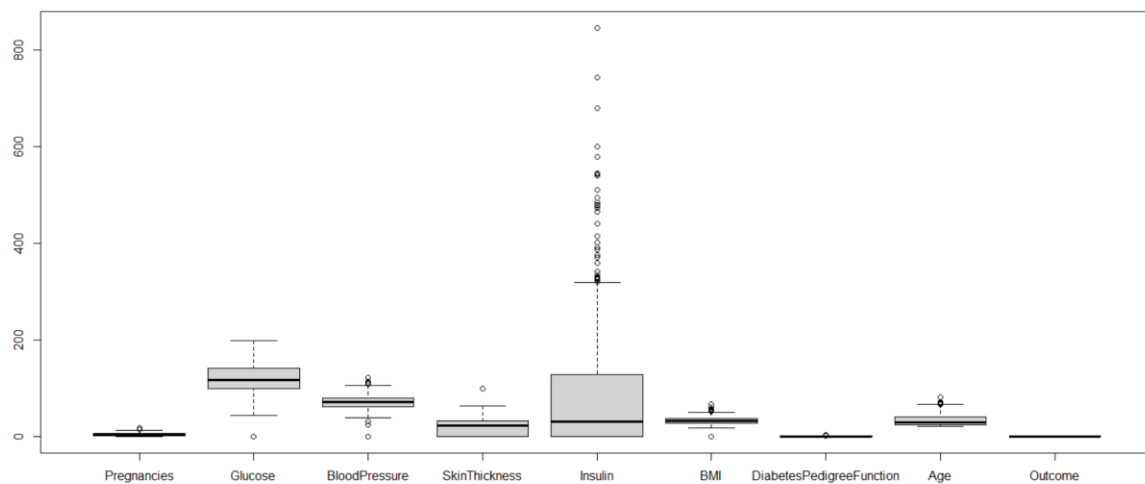
> range(a$BMI)
[1] 0.0 67.1
> quantile(a$Diabetes)
 0%    25%   50%   75%  100%
0.07800 0.24375 0.37250 0.62625 2.42000
> quantile(a$Age)
 0%  25%  50%  75% 100%
 21   24   29   41  81
> min(a)
[1] 0
> min(a$Diabetes)
[1] 0.078
> max(a)
[1] 846
> max(a$Insulin)
[1] 846
> IQR(a$Pregnancies)
[1] 5
> IQR(a$SkinThickness)
[1] 32
> var(a$BloodPressure)
[1] 374.6473
> sd(a$BloodPressure)
[1] 19.35581
> str(a)
'data.frame': 768 obs. of 9 variables:
 $ Pregnancies      : int  6 1 8 1 0 5 3 10 2 8 ...
 $ Glucose          : int  148 85 183 89 137 116 78 115 197 125 ...
 $ BloodPressure    : int  72 66 64 66 40 74 50 0 70 96 ...
 $ SkinThickness    : int  35 29 0 23 35 0 32 0 45 0 ...
 $ Insulin          : int  0 0 0 94 168 0 88 0 543 0 ...
 $ BMI              : num  33.6 26.6 23.3 28.1 43.1 25.6 31 35.3 30.5 0 ...
 $ DiabetesPedigreeFunction: num  0.627 0.351 0.672 0.167 2.288 ...
 $ Age              : int  50 31 32 21 33 30 26 29 53 54 ...
 $ Outcome          : int  1 0 1 0 1 0 1 0 1 1 ...
> sum(a)
[1] 276660.7
> data.frame(a$Glucose,a$Insulin)
  a.Glucose a.Insulin
1         148         0
2          85         0
3         183         0
4          89         94
5         137        168
6         116         0
7          78        88
8         115         0
9         197        543
10        125         0

```

```

768          93          0
> summary(a)
  Pregnancies      Glucose    BloodPressure    SkinThickness
Min.   : 0.000   Min.   : 0.0   Min.   : 0.00   Min.   : 0.00
1st Qu.: 1.000   1st Qu.: 99.0   1st Qu.: 62.00   1st Qu.: 0.00
Median : 3.000   Median :117.0   Median : 72.00   Median :23.00
Mean   : 3.845   Mean   :120.9   Mean   : 69.11   Mean   :20.54
3rd Qu.: 6.000   3rd Qu.:140.2   3rd Qu.: 80.00   3rd Qu.:32.00
Max.   :17.000   Max.   :199.0   Max.   :122.00   Max.   :99.00
  Insulin        BMI    DiabetesPedigreeFunction    Age
Min.   : 0.0   Min.   : 0.00   Min.   :0.0780   Min.   :21.00
1st Qu.: 0.0   1st Qu.:27.30   1st Qu.:0.2437   1st Qu.:24.00
Median : 30.5   Median :32.00   Median :0.3725   Median :29.00
Mean   : 79.8   Mean   :31.99   Mean   :0.4719   Mean   :33.24
3rd Qu.:127.2   3rd Qu.:36.60   3rd Qu.:0.6262   3rd Qu.:41.00
Max.   :846.0   Max.   :67.10   Max.   :2.4200   Max.   :81.00
  Outcome
Min.   :0.000
1st Qu.:0.000
Median :0.000
Mean   :0.349
3rd Qu.:1.000
Max.   :1.000
> boxplot(a)

```



Select file

Look in: college pracical

Name

Date modified

Average.sas

23-12-2022 20:12

DS_Practical5

04-12-2022 14:47

DS_Practical7

08-01-2023 15:05

DS_Practical8

08-01-2023 15:20

DS_Practical9

11-01-2023 18:43

DS_Practical10

11-01-2023 18:56

DS_practical1

08-11-2022 21:30

File name: RPra3.csv

Open

Files of type: All files (*.*)

Cancel

```

> boxplot(a)
> dim(a)
[1] 768  9
> names(a)
[1] "Pregnancies"      "Glucose"
[3] "BloodPressure"    "SkinThickness"
[5] "Insulin"          "BMI"
[7] "DiabetesPedigreeFunction" "Age"
[9] "Outcome"
> read.table(file.choose())

```

```

750      0.178  50
751      1.182  22
752      0.261  28
753      0.223  25
754      0.222  26
755      0.443  45
756      1.057  37
757      0.391  39
758      0.258  52
759      0.197  26
760      0.278  66
761      0.766  22
762      0.403  43
763      0.142  33
764      0.171  63
765      0.340  27
766      0.245  30
767      0.349  47
768      0.315  23
> edit(a)

```

R Data Editor

	Pregnancies	Glucose	BloodPressure	SkinThickness	Insulin	BMI
1	6	148	72	35	0	33.6
2	1	85	66	29	0	26.6
3	8	183	64	0	0	23.3
4	1	89	66	23	94	28.1
5	0	137	40	35	168	43.1
6	5	116	74	0	0	25.6
7	3	78	50	32	88	31
8	10	115	0	0	0	35.3
9	2	197	70	45	543	30.5
10	8	125	96	0	0	0
11	4	110	92	0	0	37.6
12	10	168	74	0	0	38
13	10	139	80	0	0	27.1
14	1	189	60	23	846	30.1