SOME BASIC COMMANDS

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Some Basic Commands

1. **pima**:-

   After loading *faraway* package in R , we can check for a built in data set inside the package *faraway*. This dataset is called *pima*.

   ```
   >pima
   ```

   Using this command we can see the pima dataset .Here is a brief part of how the data set actually looks like :

   ```
   > pima
      pregnant glucose diastolic triceps insulin  bmi diabetes age test
   1         6     148        72      35       0 33.6    0.627  50    1
   2         1      85        66      29       0 26.6    0.351  31    0
   3         8     183        64       0       0 23.3    0.672  32    1
   4         1      89        66      23      94 28.1    0.167  21    0
   5         0     137        40      35     168 43.1    2.288  33    1
   6         5     116        74       0       0 25.6    0.201  30    0
   7         3      78        50      32      88 31.0    0.248  26    1
   8        10     115         0       0       0 35.3    0.134  29    0
   9         2     197        70      45     543 30.5    0.158  53    1
   10        8     125        96       0       0  0.0    0.232  54    1
   11        4     110        92       0       0 37.6    0.191  30    0
   12       10     168        74       0       0 38.0    0.537  34    1
   13       10     139        80       0       0 27.1    1.441  57    0
   14        1     189        60      23     846 30.1    0.398  59    1
   15        5     166        72      19     175 25.8    0.587  51    1
   16        7     100         0       0       0 30.0    0.484  32    1
   17        0     118        84      47     230 45.8    0.551  31    1
   18        7     107        74       0       0 29.6    0.254  31    1
   19        1     103        30      38      83 43.3    0.183  33    0
   20        1     115        70      30      96 34.6    0.529  32    1
   21        3     126        88      41     235 39.3    0.704  27    0
   22        8      99        84       0       0 35.4    0.388  50    0
   23        7     196        90       0       0 39.8    0.451  41    1
   24        9     119        80      35       0 29.0    0.263  29    1
   25       11     143        94      33     146 36.6    0.254  51    1
   26       10     125        70      26     115 31.1    0.205  41    1
   27        7     147        76       0       0 39.4    0.257  43    1
   28        1      97        66      15     140 23.2    0.487  22    0
   29       13     145        82      19     110 22.2    0.245  57    0
   30        5     117        92       0       0 34.1    0.337  38    0
   31        5     109        75      26       0 36.0    0.546  60    0
   32        3     158        76      36     245 31.6    0.851  28    1
   33        3      88        58      11      54 24.8    0.267  22    0
   34        6      92        92       0       0 19.9    0.188  28    0
   35       10     122        78      31       0 27.6    0.512  45    0
   36        4     103        60      33     192 24.0    0.966  33    0
   37       11     138        76       0       0 33.2    0.420  35    0
   38        9     102        76      37       0 32.9    0.665  46    1
   39        2      90        68      42       0 38.2    0.503  27    1
   40        4     111        72      47     207 37.1    1.390  56    1
   41        3     180        64      25      70 34.0    0.271  26    0
   42        7     133        84       0       0 40.2    0.696  37    0
   43        7     106        92      18       0 22.7    0.235  48    0
   44        9     171       110      24     240 45.4    0.721  54    1
   45        7     159        64       0       0 27.4    0.294  40    0
   46        0     180        66      39       0 42.0    1.893  25    1
   47        1     146        56       0       0 29.7    0.564  29    0
   48        2      71        70      27       0 28.0    0.586  22    0
   49        7     103        66      32       0 39.1    0.344  31    1
   50        7     105         0       0       0  0.0    0.305  24    0
   ```
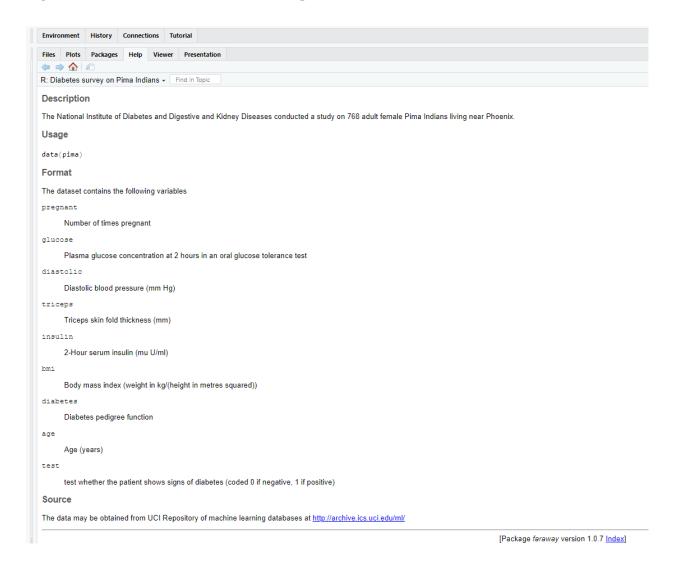
2. **dim()**:-

   It gives dimension of the array , vector , matrix or data set .

In our case , pima is a data set .So, dim command gives number of rows and columns of our data set .

```
> dim(pima)
[1] 768    9
```

Hence , our data set has 768 data points and for each data point , it corresponds to 9 variables.

3. **names()**:-

It gives names of the variable of the data set . In case of pima it gives :

```
> names(pima)
[1] "pregnant"  "glucose"   "diastolic" "triceps"   "insulin"
[6] "bmi"       "diabetes"  "age"       "test"
```

Hence , it gives names of the 9 variables of our pima data set .

4. **head()**:-

It gives names of first few data points of our data set.

Its command is :

```
> head(pima)
  pregnant glucose diastolic triceps insulin  bmi diabetes age test
1        6     148        72      35       0 33.6    0.627  50    1
2        1      85        66      29       0 26.6    0.351  31    0
3        8     183        64       0       0 23.3    0.672  32    1
4        1      89        66      23      94 28.1    0.167  21    0
5        0     137        40      35     168 43.1    2.288  33    1
6        5     116        74       0       0 25.6    0.201  30    0
> |
```

5. **help**:- If we want to know about the code/command we are using in R , we can check it using '?' followed by the name of the command .

```
>?pima
```

It gives all information about our data set pima .

6. **summary()**:-

It gives the summary of our data set . It gives 5-point summary of all the variables in our data set.

5 point summary of our data set includes : median , mean , 1st quartile , 3rd quartile , maximum and minimum.

```
>
> summary(pima)
    pregnant          glucose        diastolic         triceps          insulin            bmi           diabetes            age
 Min.   : 0.000   Min.   :  0.0   Min.   :  0.00   Min.   : 0.00   Min.   :  0.0   Min.   : 0.00   Min.   :0.0780   Min.   :21.00
 1st Qu.: 1.000   1st Qu.: 99.0   1st Qu.: 62.00   1st Qu.: 0.00   1st Qu.:  0.0   1st Qu.:27.30   1st Qu.:0.2437   1st Qu.:24.00
 Median : 3.000   Median :117.0   Median : 72.00   Median :23.00   Median : 30.5   Median :32.00   Median :0.3725   Median :29.00
 Mean   : 3.845   Mean   :120.9   Mean   : 69.11   Mean   :20.54   Mean   : 79.8   Mean   :31.99   Mean   :0.4719   Mean   :33.24
 3rd Qu.: 6.000   3rd Qu.:140.2   3rd Qu.: 80.00   3rd Qu.:32.00   3rd Qu.:127.2   3rd Qu.:36.60   3rd Qu.:0.6262   3rd Qu.:41.00
 Max.   :17.000   Max.   :199.0   Max.   :122.00   Max.   :99.00   Max.   :846.0   Max.   :67.10   Max.   :2.4200   Max.   :81.00
      test
 Min.   :0.000
 1st Qu.:0.000
 Median :0.000
 Mean   :0.349
 3rd Qu.:1.000
 Max.   :1.000
>
```

7. **attach()**:-

When we call a local variable of a data set , we cannot call it by its name .

```
> head(pregnant) #command
Error in head(pregnant) : object 'pregnant' not found
> head(pima$pregnant) #command
[1] 6 1 8 1 0 5
```

Here , we see not being a local variable , we cannot call pregnant variable without calling pima . And we are using '$' to call pregnant variable of the pima data set .

Using attach command , it helps to make the local variables of pima data set global .So , we can directly use any variable of our data set without calling the data set itself .

```
>
> attach(pima)
The following object is masked _by_ .GlobalEnv:

    age

The following object is masked from package:faraway:

    diabetes

> pregnant
  [1]  6  1  8  1  0  5  3 10  2  8  4 10 10  1  5  7  0  7  1  1  3  8  7  9 11 10  7  1 13  5  5  3  3  6 10  4 11  9  2  4  3  7
 [43]  7  9  7  0  1  2  7  7  1  1  5  8  7  1  7  0  0  0  2  8  5  2  7  5  0  2  1  4  2  5 13  4  1  1  7  5  0  2  3  2  7  0
 [85]  5  2 13  2 15  1  1  4  7  4  2  6  2  1  6  1  1  1  0  1  2  1  1  4  3  0  3  8  1  4  7  4  5  5  4  0  6  2  5  0  1
[127]  3  1  1  0  4  9  3  8  2  2  0  0  0  5  3  5  2 10  4  0  9  2  5  2  1  4  9  1  8  7  2  1  2 17  4  7  0  2  0  6  3  4
[169]  4  3  6  6  2  1  2  8  6  0  5  5  6  0  1  5  4  7  8  1  8  5  3  9  7 11  8  5  1  3  4  4  0  1  0  2  6  5  8  5  1  7
[211]  2  0  7  0  9 12  5  6  5  5  0  2  7  7  1  1  0  3  4  0  4  6  1  4  3  4  7  0  9  0  1  4  3  6  2  9 10  0  9  1  9  2
[253]  2  0 12  1  3  2  1 11  3  3  4  3  4  5  0  2  0  2 10  2  3  1 13  2  7  0  5  2  0 10  7  7  2  7  5  1  4  5  0  0  2  1
[295]  0  6  2  0 14  8  0  2  5  5  3  2 10  0  0  2  6  0  2  3  7  2  3  3  3  6  4  3  0 13  2  1  1 10  2  6  8  2  1 12  1  0
[337]  0  5  9  7  1  1  1  5  8  8  1  3  3  5  4  4  3  1  3  9  1 13 12  1  5  5  5  4  4  5  6  0  3  1  3  0  0  2  2 12  0  1
[379]  4  0  1  0  1  1  1  5  8  5  3  1  5  1  4  4  2  3  0  3  3  4  6  5  9  5  2  4  0  8  1  6  1  1  1  0  3  1  4  1  3
[421]  1  2  0  2  8  4  0  1  0  1  2  3  1  2  1  0 12  5  1  6  0  2  4  8  4  0  1  0  0  0  1  2  0  2  2 14  1  5 10  9  9  1
[463]  8  5 10  0  0  0  8  6  1  0  0  7  4  0  2  7  8  4  3  0  4  0  0  0  1  0  4  8  2  2  4  4  3  6  5  2  7  6  2  3  6  7
[505]  3 10  0  1  2  8 12  0  9  2  3  3  9  7 13  6  2  3  6  9  3  3  1  3  0  0  2  0  1  6  1  4  0  0  0  3  8  3 10  4  1  8
[547]  5  4  1  4  1  3  6  1  1  7  1  8 11 11  6  0  1  6  0  2  1  6  4  0  3  2  3  2  1  1  6  2 10  2  0  6 12  8  8  1  8  6
[589]  3  0 11  2  3  2  6  0  0  1  1  1  1  6  1  7  4  1  1  1  0  1  3  3  7  6 11  3  6  2  9  0  2  2  6  0  2  4  0  0  5  4
[631]  7  0  2  1 10 13  5  2  7  1  0  4  6  4  3  2  1  0 11  0  1  1  5  2  1  2  2  1 11  3 10  1  8  9  6  1  4 10  6  9  6  1
[673] 10  3  8  6  9  0  3  2  2  0  0  4  5  2  3  1  1  1  8 13  2  7  2  7  3  0  4  4  2  6  1  2  4  6 10  2  9  2  3  5 10  0
[715]  3  7  3 10  1  5  4  1  1  5  1  4  1  0  2  2  3  8  2  2  2  4  0  8  2  1 11  3  1  9 13 12  1  1  3  6  4  1  3  0  8  1
[757]  7  0  1  6  2  9  9 10  2  5  1  1
> diabetes
  [1] 0.627 0.351 0.672 0.167 2.288 0.201 0.248 0.134 0.158 0.232 0.191 0.537 1.441 0.398 0.587 0.484 0.551 0.254 0.183 0.529 0.704
 [22] 0.388 0.451 0.263 0.254 0.205 0.257 0.487 0.245 0.337 0.546 0.851 0.267 0.188 0.512 0.966 0.420 0.665 0.503 1.390 0.271 0.696
 [43] 0.235 0.721 0.294 1.893 0.564 0.586 0.344 0.305 0.491 0.526 0.342 0.467 0.718 0.248 0.254 0.962 1.781 0.173 0.304 0.270 0.587
 [64] 0.699 0.258 0.203 0.855 0.845 0.334 0.189 0.867 0.411 0.583 0.231 0.396 0.140 0.391 0.370 0.270 0.307 0.140 0.102 0.767 0.237
 [85] 0.227 0.698 0.178 0.324 0.153 0.165 0.258 0.443 0.261 0.277 0.761 0.255 0.130 0.323 0.356 0.325 1.222 0.179 0.262 0.283 0.930
[106] 0.801 0.207 0.287 0.336 0.247 0.199 0.543 0.192 0.391 0.588 0.539 0.220 0.654 0.443 0.223 0.759 0.260 0.404 0.186 0.278 0.496
[127] 0.452 0.261 0.403 0.741 0.361 1.114 0.356 0.457 0.647 0.088 0.597 0.532 0.703 0.159 0.268 0.286 0.318 0.272 0.237 0.572 0.096
[148] 1.400 0.218 0.085 0.399 0.432 1.189 0.687 0.137 0.337 0.637 0.833 0.229 0.817 0.294 0.204 0.167 0.368 0.743 0.722 0.256 0.709
[169] 0.471 0.495 0.180 0.542 0.773 0.678 0.370 0.719 0.382 0.319 0.190 0.956 0.084 0.725 0.299 0.268 0.244 0.745 0.615 1.321 0.640
[190] 0.361 0.142 0.374 0.383 0.578 0.136 0.395 0.187 0.678 0.905 0.150 0.874 0.236 0.787 0.235 0.324 0.407 0.605 0.151 0.289 0.355
[211] 0.290 0.375 0.164 0.431 0.260 0.742 0.514 0.464 1.224 0.261 1.072 0.805 0.209 0.687 0.666 0.101 0.198 0.652 2.329 0.089 0.645
[232] 0.238 0.583 0.394 0.293 0.479 0.586 0.686 0.831 0.582 0.192 0.446 0.402 1.318 0.329 1.213 0.258 0.427 0.282 0.143 0.380 0.284
[253] 0.249 0.238 0.926 0.543 0.557 0.092 0.655 1.353 0.299 0.761 0.612 0.200 0.226 0.997 0.933 1.101 0.078 0.240 1.136 0.128 0.254
[274] 0.422 0.251 0.677 0.296 0.454 0.744 0.881 0.334 0.280 0.262 0.165 0.259 0.647 0.619 0.808 0.340 0.263 0.434 0.757 1.224 0.613
[295] 0.254 0.692 0.337 0.520 0.412 0.840 0.839 0.422 0.156 0.209 0.207 0.215 0.326 0.143 1.391 0.875 0.313 0.605 0.433 0.626 1.127
[316] 0.315 0.284 0.345 0.150 0.129 0.527 0.197 0.254 0.731 0.148 0.123 0.692 0.200 0.127 0.122 1.476 0.166 0.282 0.137 0.260 0.259
[337] 0.932 0.343 0.893 0.331 0.472 0.673 0.389 0.290 0.485 0.349 0.654 0.187 0.279 0.346 0.237 0.252 0.243 0.580 0.559 0.302 0.962
[358] 0.569 0.378 0.875 0.583 0.207 0.305 0.520 0.385 0.499 0.368 0.252 0.306 0.234 2.137 1.731 0.545 0.225 0.816 0.528 0.299 0.509
[379] 0.238 1.021 0.821 0.236 0.947 1.268 0.221 0.205 0.660 0.239 0.452 0.949 0.444 0.340 0.389 0.463 0.803 1.600 0.944 0.196 0.389
[400] 0.241 0.161 0.151 0.286 0.280 0.135 0.520 0.376 0.336 1.191 0.702 0.674 0.528 1.076 0.256 0.534 0.258 1.095 0.554 0.624 0.219
[421] 0.507 0.561 0.496 0.421 0.516 0.264 0.256 0.328 0.284 0.233 0.108 0.551 0.527 0.167 1.138 0.205 0.244 0.434 0.147 0.727 0.435
[442] 0.497 0.230 0.955 0.380 2.420 0.658 0.330 0.510 0.285 0.415 0.542 0.381 0.832 0.498 0.212 0.687 0.364 1.001 0.460 0.733 0.416
[463] 0.705 0.258 1.022 0.452 0.269 0.600 0.183 0.571 0.607 0.170 0.259 0.210 0.126 0.231 0.711 0.466 0.162 0.419 0.344 0.197 0.306
[484] 0.233 0.630 0.365 0.536 1.159 0.294 0.551 0.629 0.292 0.145 1.144 0.174 0.304 0.292 0.547 0.163 0.839 0.313 0.267 0.727 0.738
[505] 0.238 0.263 0.314 0.692 0.968 0.409 0.297 0.207 0.200 0.525 0.154 0.268 0.771 0.304 0.180 0.582 0.187 0.305 0.189 0.652 0.151
```

8. **detach()**:-

Now after using attach command in R, our local variables have become global . But say now we want to change our global variables back to local variable (*Say , we want to have another global variable with the same name so we like to change the old global variable back to its local form*).

So , we use detach command to do the same .

```
>
> attach(pima)
The following object is masked _by_ .GlobalEnv:

    age

The following object is masked from package:faraway:

    diabetes

> head(pregnant)
[1] 6 1 8 1 0 5
> detach(pima)
> head(pregnant)
Error in head(pregnant) : object 'pregnant' not found
>
```

Now , after using detach command if we want pregnant variable again we can use it by
'pima$pregnant' .