

Foundations of R Software

Lecture 6

Introduction

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Basic Operations in R

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How to see the contents in the working directory in R

Type '`ls()`' to quit R.

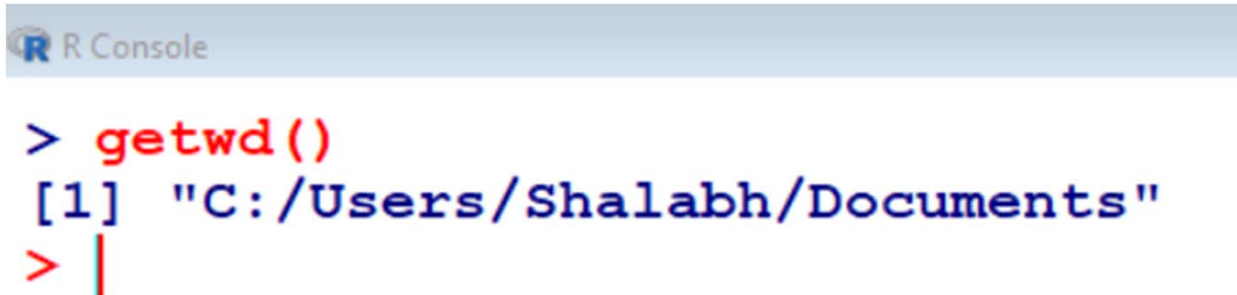
Following are the contents in my computer's directory (not yours)

```
R Console
> ls()
[1] "corboott"           "corr_power_temp"
[3] "corrboot"          "covboot"
[5] "day"                "e"
[7] "fever"              "gender"
[9] "hours"              "mark_hrs"
[11] "marks"              "marks_hours_boot"
[13] "marks_hours_data"  "n"
[15] "N"                  "n1"
[17] "N1"                 "n2"
[19] "N2"                 "n3"
[21] "N3"                 "non_purulent_conjunctivitis"
[23] "oldpar"             "p"
[25] "power"              "power_temp"
[27] "power_temp_data"   "q"
[29] "rashes"             "rollno"
[31] "rotsinc"            "s1"
```

How to see the location of the working directory in R

Use '`getwd()`' to find the current working directory in R.

Following is the current working directory in my computer (not yours).

A screenshot of an R console window. The title bar at the top says "R Console". The console shows the command `> getwd()` being entered, followed by the output `[1] "C:/Users/Shalabh/Documents"`. The prompt `> |` is visible at the bottom.

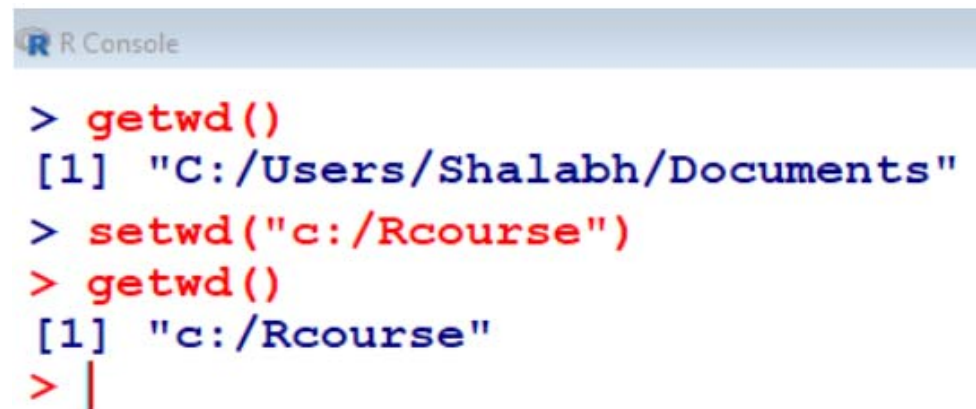
```
> getwd()  
[1] "C:/Users/Shalabh/Documents"  
> |
```

How to set the working directory in R

Use '`setwd()`' to change the working directory in R.

Suppose we want to set 'Rcourse' directory located on c drive. Following is the command to change the working directory .

```
> setwd("c:/Rcourse")  
> getwd()  
[1] "c:/Rcourse"
```



```
R Console  
> getwd()  
[1] "C:/Users/Shalabh/Documents"  
> setwd("c:/Rcourse")  
> getwd()  
[1] "c:/Rcourse"  
> |
```

Be watchful in choosing the path command while working in Unix or Macintosh.

How to interrupt a running computation in R

To interrupt a long-running computation and return to the command prompt without exiting,

Press the Esc key on your keyboard



How to clean the GUI window in R

To clean the contents on the GUI window, press ctrl key and L key simultaneously.



Search the web for information and answers regarding R.

To search the web for information and answers regarding R, use the **RSiteSearch** function to search by keyword or phrase.

This searches the phrase from <http://search.r-project.org>

For example, to know about `mode`, type

RSiteSearch("mode")

Then we get....

R Console

```
> RSiteSearch("mode")  
A search query has been submitted to http://search.r-project.org  
The results page should open in your browser shortly  
> |
```

Search the web for information and answers regarding R.

Search results for **mode** on <https://search.r-project.org/>

Search in: ☐ Manuals ☒ Base Packages ☒ Help Pages | CRAN ☒ Task Views

CRAN Packages ☐ General Info ☒ Help Pages ☐ News ☐ Readme ☒ Vignettes

Sort by: **relevance** Results per Page: **20**

☐ Matching any words ☒ Matching all words
1-20 of about 11,900 matches

Term frequencies: **mode**: 11,997
Search took 0.003726 seconds

- R: Sets the developer mode to help form check_arg calls**
...is pinpointed and the associated help is referred to. Usage `setDreamerr_dev.mode(dev.mode = FALSE)` Arguments `dev.mode` A logical, default is FALSE. Details Since this **mode** ensures a detailed cheking...
/CRAN/refmans/dreamerr/html/setDreamerr_dev.mode.html
cran-help matching: *mode, mode and mode*
- R: Check if the supplied 'mode' is a valid logging mode.**
...**mode** is a valid logging **mode**. Description Check if the supplied **mode** is a valid logging **mode**. Usage `check_log_mode(mode)` Arguments **mode** **mode** how to log. Valid are tree, autotdetect and compound...
/CRAN/refmans/beautier/html/check_log_mode.html
cran-help matching: *mode, mode and mode*
- R: Create a one-mode projection of a two mode graph**
project_to_one_mode {birankr} R Documentation Create a one-**mode** projection of a two **mode** graph Description Create a one-**mode** projection of a two **mode** graph. Converts a rectangular matrix to a square...
/CRAN/refmans/birankr/html/project_to_one_mode.html
cran-help matching: *mode, mode and mode*
- R: Collapse multiple modes into one mode.**
...of lower order where the first **mode** indexes the **modes** indicated in `m`. Usage `collapse_mode(X, m)` Arguments `X` An array whose **modes** we are collapsing. `m` A vector of integers giving the **modes** to collapse...
/CRAN/refmans/tensr/html/collapse_mode.html
cran-help matching: *mode, mode and mode*
- R: Mode Allowing for Multi Modal Mode**
...**Mode** Allowing for Multi Modal **Mode** Description Function calculating the **mode**, allowing for multiple **modes** in case of equal frequencies. Usage `stats_mode_multi(x)` Arguments `x` vector to get **mode**...
/CRAN/refmans/demise/html/stats_mode_multi.html

What the numbers in [] present

```
R Console
> x=1:200
> x
[1] 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
[19] 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36
[37] 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54
[55] 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72
[73] 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90
[91] 91 92 93 94 95 96 97 98 99 100 101 102 103 104 105 106 107 108
[109] 109 110 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126
[127] 127 128 129 130 131 132 133 134 135 136 137 138 139 140 141 142 143 144
[145] 145 146 147 148 149 150 151 152 153 154 155 156 157 158 159 160 161 162
[163] 163 164 165 166 167 168 169 170 171 172 173 174 175 176 177 178 179 180
[181] 181 182 183 184 185 186 187 188 189 190 191 192 193 194 195 196 197 198
[199] 199 200
> |
```

The numbers in the first column inside[] present the position index.

They represent the count of the starting number.

This index depends upon the width of the GUI window.

What the numbers in [] present

```
R Console
> x=1:200
> x
```

[1]	1	2	3	4	5	6	7	8	9	10
[11]	11	12	13	14	15	16	17	18	19	20
[21]	21	22	23	24	25	26	27	28	29	30
[31]	31	32	33	34	35	36	37	38	39	40
[41]	41	42	43	44	45	46	47	48	49	50
[51]	51	52	53	54	55	56	57	58	59	60
[61]	61	62	63	64	65	66	67	68	69	70
[71]	71	72	73	74	75	76	77	78	79	80
[81]	81	82	83	84	85	86	87	88	89	90
[91]	91	92	93	94	95	96	97	98	99	100
[101]	101	102	103	104	105	106	107	108	109	110
[111]	111	112	113	114	115	116	117	118	119	120
[121]	121	122	123	124	125	126	127	128	129	130
[131]	131	132	133	134	135	136	137	138	139	140
[141]	141	142	143	144	145	146	147	148	149	150
[151]	151	152	153	154	155	156	157	158	159	160
[161]	161	162	163	164	165	166	167	168	169	170
[171]	171	172	173	174	175	176	177	178	179	180
[181]	181	182	183	184	185	186	187	188	189	190
[191]	191	192	193	194	195	196	197	198	199	200

```
> |
```

Reloading packages when restarting R

If some packages are loaded through library and we exit from R.

When R is restarted, we need to reload the libraries.

Meaning of e in R

Any number like

5.2345e+7 is 5.2345×10^7

5.2345e-7 is 5.2345×10^{-7}

Cleaning up the Windows

We assign names to variables when analyzing any data.

It is good practice to remove the variable names given to any data frame at the end each session in R.

This way, variables with same names but different properties will not get in each others way in subsequent work.

`rm()` command removes variable names.

For example,

`rm(x, y, z)` removes the variables x, y and z.

Cleaning up the Windows

detach() command detaches objects from the Search Path

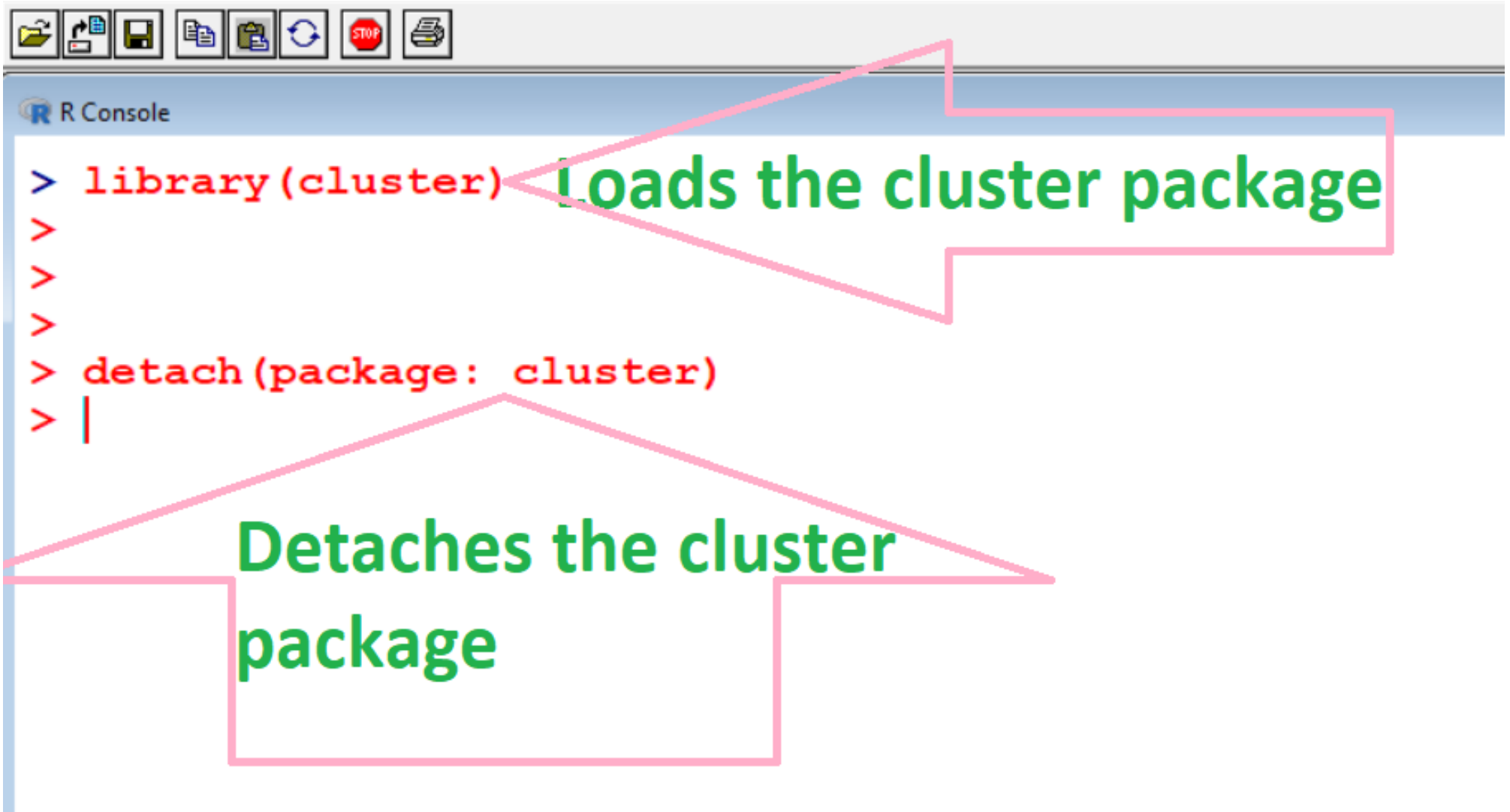
It removes it from the **search()** path of available R objects.

Usually this is either a **data.frame** which has been attached or a package which was attached by **library**.

To get rid of everything, including data frames, type
rm(list=ls())

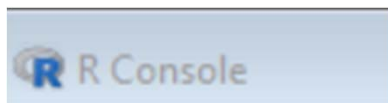
Then we get....

Cleaning up the Windows

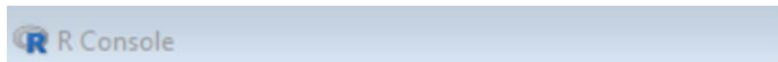


How to quit in R

Type 'q()' to quit R.



```
> q()|
```



```
> q()
```

