Cheatography

r part3 Cheat Sheet

by Niki (worlddoit) via cheatography.com/170195/cs/35837/

Attributes 1

`attr()`	to retrieve or set single attributes
`structure()`	to set all the attributes in one shot
`attributes()`	to list all the attributes in one shot

(**Basics)

Matrices 1

```
mat2<-matrix(c(1,2,3, TRUE, FALSE, FALSE),3,2)
typeof(mat2)
[1] "double"
```

+ Subsetting matrices

The element in 1 row and 3column: `mat[1,3]`

Extract the second row: `mat[2, ]`

Extract the second column: `mat[ ,2]`

Erase the second column: `mat[,-2]`

Select a subset: `mat[1: 2,1:2]`

(**Basics)

Matrices 2

`t(A)`	transposed
`diag(A),diag(c(.))`	diagonal
`solve(.)`	inverse
`matrix(1:6,2,3)+ matrix(6:1,2,3)`	sum
`matrix(1:6,2,3)- matrix(6:1,2,3)`	substract
`matrix(1/(1:6),2,3)* matrix(1:6,2,3)`	product elem
`matrix(1/(1:6),2,3)%*% matrix(1:6,2,3)`	product
`crossprod(A,B)`	cross--product
`outer(A,B)`	outer product
`rbind() cbind()`	bind by rows, by columns

(**Basics)(***Advanced)

Attributes 2

+ Set two different attributes

```
x<-1:10
attr(x,"att1") <- "AttV"
attr(x,"att2") <- 14
```

+ Same with `structure`:

```
x <- structure(1:10, att1 = "AttV", att2 = 14)
```

+ Names:

```
names(x) <- c(.)
setNames(.,c(.))
```

+ Unnames:

```
unname(x)
names(x)<-NULL
```

+Identical?

```
identitcal(mat1,mat2)
```

+Yes, not the SAME

```
lobstr::obj_addr(mat1)
```

[1] "0xf3107a0"

```
lobstr::obj_addr(mat2)
```

[1] "0xf310610"

(**Basics)

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Lists 1 - generic vector

```
(lis1 <- list(1:5, c("a","b"),
 c(TRUE,FALSE,TRUE), 2.3))
[[1]]
[1] 1 2 3 4 5
[[2]]
[1] "a" "b"
[[3]]
[1] TRUE FALSE TRUE
[[4]]
[1] 2.3
```

A list can contain lists.

Lists 2

`typeof(lis1)`	"list"
`class(lis)`	"list"
`attributes(lis1)`	NULL
`is.object(lis1)`	FALSE
`is.list(lis1)`	TRUE

Lists 2 (cont)

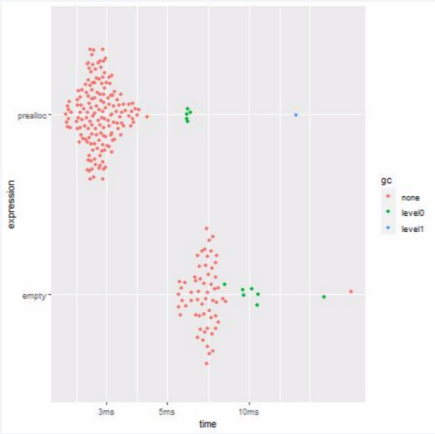
`str(lis1)`	`List of 4`
	`$ : int [1:5] 1 2 3 4 5`
	`$ : chr [1:2] "a" "b"`
	`$ : logi [1:3] TRUE FALSE TRUE`
	`$ : num 2.3`

`lobstr:ref()`	compare changes in the references
`unlist(lis1)`	"1" "2" "3" "a" "b" "1" "2" "3" "4"

`list_name[c(.)]`
`list_name[[.]]`
`list$name`
	Subset elements

(**Basics)(***Advanced)

Lists 3: Preallocation vs Empty



`vector ("li st",5) vs list()` (***Advanced)

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