

R Cheat Sheet

Paulo Monteiro

This is an R Markdown cheat sheet.

1 Getting Started

1.1 Basics

Assigning a value to an object/variable (*R is case sensitive*):

```
x = 16
x
```

```
## [1] 16
```

```
str <- "a string"
str
```

```
## [1] "a string"
```

Lists all objects created in the workspace memory:

```
ls()
```

```
## [1] "str" "x"
```

```
objects()
```

```
## [1] "str" "x"
```

Remove object from workspace memory:

```
rm(str)
ls()
```

```
## [1] "x"
```

Inspect a command:

```
?sqrt
```

1.2 Vectors, Lists and Matrices

Creating a vector of integers and strings:

```
x=c(1,2,3,4,5);  
x
```

```
## [1] 1 2 3 4 5
```

```
colours=c("blue", "red")  
colours
```

```
## [1] "blue" "red"
```

Creating a sequence of elements:

```
2:9;
```

```
## [1] 2 3 4 5 6 7 8 9
```

```
seq(from=2, to=10, by=2)
```

```
## [1] 2 4 6 8 10
```

Repeat a number '1' or string 'hello' 5 times:

```
rep(1,times=5);rep("hello",times=5)
```

```
## [1] 1 1 1 1 1
```

```
## [1] "hello" "hello" "hello" "hello" "hello"
```

```
x=1:5; y=x+10
```

Creating a list and adding 10 to each element (*, /, - and + apply)

```
x=1:5; y=5:1; x+y
```

if two vectors are of the same length we may add/subtract/mult/div its elements

```
x=1:5; x[1]=16
```

Assigning 16 to index '1' of vector x

```
y[c(1,3)]
```

Select the first two elements of vector y

```
y[-c(1,3)]
```

Select all elements of vector y apart from the two first elements

```
y[y<3]
```

Select all elements less than 3 from vector y

```
mat=matrix(c(1,2,3,4,5,6,7,8,9), nrow=3, byrow=TRUE)
```

Create a matrix 3x3 with values entered by row

```
mat[1,2]
```

Extract an element from the matrix

```
mat[c(1,3),2]
```

Return elements 1 and 3 from column 2

```
mat[,1]
```

Return all elements from column 1

```
mat[2,]
```

Return all elements from the second row

Add another line to resume regular para