Notes on R for Dummies

# Sourcing a Script

You can run scripts located in the scripting window with 3 commands:

* Ctrl+Enter: Send an individual line of code from the editor to the console. Click on the line of code you want to run and press Ctrl+Enter
* Select bloc +Ctrl+Enter: select the block of code you want to run and press keys
* Ctrl+Shift+Enter (or click source button): Send entire script to console (called “sourcing a script”)

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| Function Name | What is does | Chapter |
| print() | Returns the value for whatever you are printing such as variable or script. |  |
| paste() | Concatenates multiple text elements. Each element must have quotes around it and separated by a comma.  Paste(“hello”, “world!”)  [1] “Hello world!” |  |
| readline() | Returns to the user as a prompt the value that was “read” |  |
| ls() | Lists all variables you have created. You can also see these in workspace (top-right) -> Encironment |  |
| rm() | Removes the variable placed in parentheses. Run ls() again after to see it gone. You'll also see it disappear in the workspace window. Don’t need quotes in the variable name here. E.g.,  rm(variablename) |  |
| save() | Save an individual variable. Put it in double quotes, with file extension “.rda”. SO function would look like  save(“variablename.rda”) |  |
| save.image() | Save entire workspace |  |
| getwd() | Lists the working directory you are in. |  |
| load() | Retrieve saved data. Format same as save, e.g.,  Load(“variablename.rda”) |  |
| c() | Concatenate. Used to make a vector. Values are comma separatedfirst |  |
| install.packages() | Use this with package name in single or double quotes between brackets. If it works, you’ll get a technical message at end saying it was successfully installed | Ch.3, p. 41 |
| library() | Used to load a package. **NOTE:** A library is the directory where the packages are installed. **NEVER, EVER** call a package a library. That’s a mortal sin in the R community. (not sure why… ☺ ) | Ch.3, p.41 |
| detach() | Used to unload a package, but you have to specify the package name in brackets like:  detach(package:fortunes) | Ch.3, p.42 |
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See list of Reserved Words on Page 36:

* break
* else
* FALSE
* for
* function
* if
* Inf
* NA
* NaN
* next
* repeat
* return
* TRUE
* While

# Chapter 4: Getting Started with Arithmetic

R has 4 types of mathematical operators:

Basic Arithmetic Operators: Used by every basic programming language

Mathematical Functions: like the functions on an advanced technical calculator

Vector Operations: like sum()

Matrix Operations: Functions used for operations and calculations.

## Basic Arithmetic Operators

X + Y “+” adds the two values

X – Y “-“ subtracts

X \* Y Multiplications

X / y Division

X^y or X\*\*y x to the power of y

X%%y remainder of x divided by y, e.g., 7%%3=2

X %/% y x divided by y but rounded down (Integer divide), e.g., 7 %/% 3 = 2