

# Day 2 Cheatsheet

## Basic R

### Major concepts

- **Package** - a package in R is a bundle or “package” of code (and or possibly data) that can be loaded together for easy repeated use or for sharing with others.
- The R console is a full calculator:
  - +, -, /, \* are add, subtract, divide and multiply
  - ^ or \*\* is power
  - parentheses – ( and ) – work with order of operations
  - %% finds the remainder
- # is the comment symbol; nothing to its right is evaluated.

### Functions

Library/Package	Piece of code	Example of usage	What it does
Base R	<-	x <- 1	Assigns a name to something in the R environment.
Base R	c()	x <- c(1, 3)	Combines values into a vector or list.
Base R	str(x)	str(x)	Gets a summary of the object x structure.
Base R	class(x)	class(x)	Returns the type of the values in object x.
Base R	print(x)	print(x)	Prints out contents of x.
Base R	length(x)	length(x)	Returns how long the object x is.

## Data Input/Output

### Major concepts

- **Delimited file** - columns within the file have boundaries created with some type of punctuation - for example, a csv file stands for comma separated values, thus the columns are delimited or separated by commas. txt files often use tabs.

- **tibble** – a rectangular data frame, where data are split into rows and columns.
- **File path** - where a file lives on your computer (or on the internet) - File paths can be relative or absolute.
- **Getting help** - For any function, you can write `?FUNCTION_NAME`, or `help("FUNCTION_NAME")` to look at the help file for that function.
- **R Projects** set the working directory where the .Rproj file is.
- **R Markdown** files look for file paths relative to where the .Rmd file is located

## Functions

Library/Package	Piece of code	Example of usage	What it does
readr	<code>read_csv()</code>	<code>df &lt;- read_csv("&lt;url&gt;")</code>	Reads in a TSV file from a specified file path. This function can be tailored to read in other common types of files. i.e. <code>read_csv()</code> , <code>read_rds()</code> , etc.
readxl	<code>read_excel()</code>	<code>read_excel("dataset.xlsx")</code>	Read in an excel file.
Base R	<code>getwd()</code>	<code>getwd()</code>	Finds the current working directory.
Base R	<code>setwd()</code>	<code>setwd("Desktop")</code>	Changes the current working directory.

\* This format was adapted from the cheatsheet format from AlexsLemonade.