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`	`read_csv()`	`df <- read_csv("<url>")`	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. read_csv(), read_rds(), etc.
`readxl`	`read_excel()`	`read_excel("dataset.xlsx")`	Read in an excel file.
Base R	`getwd()`	`getwd()`	Finds the current working directory.

Library/Package	Piece of code	Example of usage	What it does
Base `R`	`setwd()`	`setwd("Desktop")`	Changes the current working directory.

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