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Transcriptomics 7633
Exercise #2

M2_1.1) Give three reasons you would want to create a function.

You would might need a function to extract data from a file, you might need to manipulation or convert that data into a usable format, and lastly you may need to filter or analyze the resulting data.frame, chart, or table

M2_1.2) What are the three different parts of a function?

The body, the code/formals and the arguments

M2_1.3) What is the purpose of the return() command?

It ends the execution of the function and returns to the start

M2_2.1) What is the purpose of curly brackets {}?

It just portrays a block or chunk of code

M2_2.2) What is the difference between "if else" and "ifelse" statements?

From my understanding, if else is a bit more strict and has more pre-requisite requirements than ifelse

M2_3.1) In what scenario would you want to use a while loop instead of a for loop?

If you want a loop to end based on a condition besides the number of times it runes, then you can use a while loop

M2_3.2) How do you stop a repeat loop?

You would use a break statement

M2_4.1) Explain in words, what will the following command do? 'apply(data, 2, min)'

You are sorting data in the 2 column/row by the minimum values

M2_4.2) Why is it better to use apply() function instead of looping?

The apply function ends when the sorting/manipulating is complete, while a loop needs be specified when to end

M2_4.3) What is the first argument of the apply function?

The first argument is which data/table/dataframe you are looking to work with

M2_5.1) What are commands to create a pdf document with your plot?

You can use the pdf() function where you just specify the file, width and height

M2_5.2) How many plots will you get in a page if you started with: par(mfrow=c(2,3))?

You will get 6 plots

M2_5.3) How do I draw a line on a pre-existing plot?

You can use the function abline() to draw lines on pre existing plots

M2_6.1) What is the difference between a barplot and a histogram?

A barplot separates by categories while a histogram can display numerical and quantity trends

M2_6.2) What statistical values are presented about the data in a boxplot?

Minimum, first quartile, median, third quartile, and maximum

M2_7.1) What command is useful to look at the first few rows of a matrix or dataframe?

You can use the data() function

M2_7.2) Which command will be useful to identify all occurrence of a pattern?

You use the grepl() function for all occurrences of a pattern