Function Lab

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Part 1

(a) Write a function that takes a vector as input and returns the difference between the maximum value in a vector and the minimum value in a vector

(b) Make three vectors, on of the number 1 to 10, one of the even number 2 to 20, and one of the number 10 to 100 counting by 10s

(c) Run your function from part (a) on each of your vectors

(d) Make a vector of strings, `c("my", "name", "is", "bob")`, run your function from part (a) on this vector, what happens? (Note, remember to comment out lines of code that throw errors before knitting.)

(e) Make a matrix of the numbers 1 to 100 filled by row with 10 rows and 10 columns.

(f) Use `apply` to run your function from (a) on all the rows of your matrix in part `e`, then run your function on all the columns.

Part 2

(a) Write a function that takes a string, convers it to lower case, removes the words "a", "an" and "the", removes extra white spaces, then returns the new string. (Hint: use the `stringr` package.)

```
library(stringr)
```

(b) Run your function on the `sentences` dataset (which comes with `stringr`). Print the first 10 new sentences.

(c) What happens if you run your function on a vector containing the numbers 1 through 10?