Lab 11: Programming and Functions

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```
library(tidyverse)
```

The folder `Lab9Data` contains several CSV files. Each file contains an ID variable and a variable `res` that holds results of an experiment on the study subjects. You can obtain a vector with the file path and names with

```
dfiles <- dir("Lab11Data", full.names = TRUE)
dfiles
```

```
[1] "Lab11Data/exper1.csv" "Lab11Data/exper2.csv" "Lab11Data/exper3.csv"
[4] "Lab11Data/exper4.csv" "Lab11Data/exper5.csv" "Lab11Data/exper6.csv"
[7] "Lab11Data/exper7.csv" "Lab11Data/exper8.csv" "Lab11Data/exper9.csv"
```

1. Read the first datafile into a tibble named `ex_data`. Change the name of the `res` column to `experiment1`, by manipulating the `names` attribute of `ex_data`. That is, use `names(ex_data)[2] <- "experiment1"`.

2. Write a function `read_ex()` that takes `dfiles` and an experiment number `i` as arguments and returns a tibble with the name of the `res` column changed to the expermiment number. That is, `read_ex(dfiles,1)` should return the same tibble as in question 1.

3. Use your function from question 2 to read in the second data file. Join this second file to `ex_data` by `ID`.

4. Write a function called `read_ex_data()` that takes a folder name as its argument and
    1. reads in the data filenames from that folder,
    2. calls `read_ex()` to read the first datafile into `ex_data`,
    3. loops through the remaining data files, successively joining them to `ex_data`, and
    4. returns `ex_data`.