

Review

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Load or Download a File?

Write a conditional statement that checks if surveys.csv exists in the working directory, if it doesn't then downloads it from <https://ndownloader.figshare.com/files/2292172> using download.file(), and finally loads the file into a data frame and displays the first few rows using the head() function. The url needs to be in quotes since it is character data.

```
survey.list <- list.files("/Users/jaijotkaur/Desktop/BI0197/data_science_research/data-raw")
any(survey.list)
```

```
## Warning in any(survey.list): coercing argument of type 'character' to logical
```

```
## [1] NA
```

```
library(stringr)
str_detect(list.files("/Users/jaijotkaur/Desktop/BI0197/data_science_research/data-raw"), "surveys.csv")
```

```
## [1] FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE
## [13] FALSE FALSE FALSE FALSE TRUE FALSE FALSE FALSE FALSE
```

```
is.element("surveys.csv", list.files("/Users/jaijotkaur/Desktop/BI0197/data_science_research/data-raw"))
```

```
## [1] TRUE
```

```
??str_detect
getwd()
```

```
## [1] "/Users/jaijotkaur/Desktop/BI0197/data_science_research/documents"
```

```
"a" == c("a", "b", "c")
```

```
## [1] TRUE FALSE FALSE
```

```
?list.files
```

```
if (is.element("surveys.csv", survey.list)) {
  print("The file surveys.csv is already downloaded")
} else {
  print("The file is not downloaded")
}
```

```
## [1] "The file surveys.csv is already downloaded"
```

```
# downloads it from https://ndownloader.figshare.com/files/2292172 using download.file()
download.file("https://ndownloader.figshare.com/files/2292172", "../data-raw/surveys-download.csv")
# loads the file into a data frame
surveydataframe <- read.csv("../data-raw/surveys-download.csv")
# displays the first few rows using the head() function
head(surveydataframe)
```

```
##   record_id month day year plot_id species_id sex hindfoot_length weight
## 1         1     7  16 1977      2         NL   M             32      NA
## 2         2     7  16 1977      3         NL   M             33      NA
## 3         3     7  16 1977      2         DM   F             37      NA
## 4         4     7  16 1977      7         DM   M             36      NA
## 5         5     7  16 1977      3         DM   M             35      NA
## 6         6     7  16 1977      1         PF   M             14      NA
```

Make a version of this conditional statement that is a function, where the name of the file is the first argument and the link for downloading the file is the second argument. The function should return the resulting data frame. Add some documentation to the top of the function describing what it does. Call this function using “species.csv” as the file name and <https://ndownloader.figshare.com/files/3299483> as the link. Print the first few rows of the resulting data frame using head().

```
# This function tests if a file is in the data raw directory and if not, it downloads it and reads it a
reading_csv <- function(file_name, link) {

# 1. Test if file is in the data-raw folder
# file_name <- "species.csv"
test <- !is.element(file_name, list.files(path = "../data-raw"))
download.file(link, "../data-raw/file")

# 2. If test is FALSE, download the file
if(test) {

# Option 1: save it with a random name:
# download.file(url = file_link, destfile = "../data-raw/temporary.csv")
# result <- read.csv(file = "../data-raw/temporary.csv")

# Option 2: save it with the name given in file name:
destination_file <- stringr::str_c("../data-raw", file_name)
download.file(url = link, destfile = destination_file)
result <- read.csv(file = destination_file)
return(result)
}
}
```

```
reading_csv(file_name = "species.csv", link = "https://ndownloader.figshare.com/files/3299483")
```