review

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#1 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.

```
getwd()
```

```
## [1] "/Users/atziri/Bio 195-197/Data Science/documents"
```

```
"surveys.csv" == c(list.files("/Users/atziri/Bio 195-197/Data Science/raw-data"))
```

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

```
surveys <- list.files("/Users/atziri/Bio 195-197/Data Science/raw-data") == "surveys.csv"
```

```
is.element("surveys.csv", list.files("/Users/atziri/Bio 195-197/Data Science/raw-data") )
```

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

```
is.element("surveys.csv", list.files("/Users/atziri/Bio 195-197/Data Science/raw-data") )
```

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

```
surveys <- list.files("../raw-data")

if (is.element("surveys.csv", surveys)){
  print("file is downloaded")
} else {
   print("file is not downloaded")
  download.file("https://ndownloader.figshare.com/files/2292172",
             "../raw-data/surveys-download.csv")
surveys_data <- read.csv("../raw-data/surveys-download.csv")
 head(surveys_data)
}
```

```
## [1] "file is downloaded"
```

#2 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 argumen

```r
#This function tests if a file is in the raw-data directory and if not it download it and read it as da

reading_csv <- function(file_name, file_link) {

# 1. test if file_name is in the raw-data folder
# file_name <- "species.csv"

test <- !is.element(file_name, list.files(path = "../raw-data"))

# 2. if test is FALSE, download the file

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

  # result <- read.csv(file = "../raw-data/temporary.csv")

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

```r
reading_csv <- function(file_name, file_link) {
  test <- is.element(file_name, list.files(path = "../raw-data"))# removed the exclamation mark for it
  if (test) {
    destination_file <- stringr:: str_c("../raw-data/", file_name)
    download.file(url = file_link, destfile = destination_file)

    result <- read.csv(file = destination_file)
  }
    return(result)
}
```

```r
reading_csv(file_name = "species.csv",
            file_link = "https://ndownloade.figshare.com/files/3299483")
```

```
##    species_id              genus          species    taxa
## 1          AB         Amphispiza        bilineata    Bird
## 2          AH Ammospermophilus          harrisi  Rodent
## 3          AS         Ammodramus       savannarum    Bird
## 4          BA            Baiomys          taylori  Rodent
## 5          CB   Campylorhynchus brunneicapillus    Bird
## 6          CM        Calamospiza      melanocorys    Bird
## 7          CQ         Callipepla         squamata    Bird
## 8          CS           Crotalus       scutalatus Reptile
## 9          CT      Cnemidophorus           tigris Reptile
## 10         CU      Cnemidophorus        uniparens Reptile
```

```
## 11    CV        Crotalus         viridis Reptile
## 12    DM        Dipodomys        merriami  Rodent
## 13    DO        Dipodomys           ordii  Rodent
## 14    DS        Dipodomys     spectabilis  Rodent
## 15    DX        Dipodomys             sp.  Rodent
## 16    EO          Eumeces       obsoletus Reptile
## 17    GS         Gambelia           silus Reptile
## 18    NL          Neotoma        albigula  Rodent
## 19    NX          Neotoma             sp.  Rodent
## 20    OL        Onychomys     leucogaster  Rodent
## 21    OT        Onychomys        torridus  Rodent
## 22    OX        Onychomys             sp.  Rodent
## 23    PB       Chaetodipus         baileyi  Rodent
## 24    PC           Pipilo        chlorurus    Bird
## 25    PE       Peromyscus        eremicus  Rodent
## 26    PF       Perognathus         flavus  Rodent
## 27    PG        Pooecetes        gramineus    Bird
## 28    PH       Perognathus       hispidus  Rodent
## 29    PI       Chaetodipus     intermedius  Rodent
## 30    PL       Peromyscus        leucopus  Rodent
## 31    PM       Peromyscus      maniculatus  Rodent
## 32    PP       Chaetodipus    penicillatus  Rodent
## 33    PU           Pipilo          fuscus    Bird
## 34    PX       Chaetodipus            sp.  Rodent
## 35    RF  Reithrodontomys      fulvescens  Rodent
## 36    RM  Reithrodontomys       megalotis  Rodent
## 37    RO  Reithrodontomys        montanus  Rodent
## 38    RX  Reithrodontomys             sp.  Rodent
## 39    SA       Sylvilagus       audubonii  Rabbit
## 40    SB         Spizella         breweri    Bird
## 41    SC       Sceloporus          clarki Reptile
## 42    SF         Sigmodon      fulviventer  Rodent
## 43    SH         Sigmodon        hispidus  Rodent
## 44    SO         Sigmodon     ochrognathus  Rodent
## 45    SS      Spermophilus       spilosoma  Rodent
## 46    ST      Spermophilus    tereticaudus  Rodent
## 47    SU       Sceloporus       undulatus Reptile
## 48    SX         Sigmodon             sp.  Rodent
## 49    UL           Lizard             sp. Reptile
## 50    UP           Pipilo             sp.    Bird
## 51    UR           Rodent             sp.  Rodent
## 52    US           Sparrow            sp.    Bird
## 53    ZL      Zonotrichia      leucophrys    Bird
## 54    ZM          Zenaida        macroura    Bird
```