Workspace and Files

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Determine which directory your R session is using as its current working directory using getwd().

```
getwd()
```

```
## [1] "/Users/raphaelcarvalho/Documents/Cursos/JHU-datascience/rprogramming"
```

List all the objects in your local workspace using ls().

```
ls()
```

```
## character(0)
```

Assign 9 to x using x <- 9.

```
x <- 9
```

Now take a look at objects that are in your workspace using ls().

```
ls()
```

```
## [1] "x"
```

List all the files in your working directory using list.files() or dir().

```
x <- 9
```

List all the files in your working directory using list.files() or dir().

```
list.files()
```

```
##  [1] "README.md"           "swirl_lesson_1.html" "swirl_lesson_1.pdf"
##  [4] "swirl_lesson_1.Rmd"  "swirl_lesson_2.html" "swirl_lesson_2.Rmd"
##  [7] "swirl_lesson_3.html" "swirl_lesson_3.Rmd"  "swirl_lesson_4.Rmd"
## [10] "swirl_lesson_5.pdf"  "swirl_lesson_5.Rmd"
```

Using the args() function on a function name is also a handy way to see what arguments a function can take. Use the args() function to determine the arguments to list.files().

```
args(list.files)
```

```
## function (path = ".", pattern = NULL, all.files = FALSE, full.names = FALSE,
##     recursive = FALSE, ignore.case = FALSE, include.dirs = FALSE,
##     no.. = FALSE)
## NULL
```

Assign the value of the current working directory to a variable called “old.dir”.

```
old.dir <- getwd()
```

Use dir.create() to create a directory in the current working directory called “testdir”.

```
dir.create("testdir")
```

Set your working directory to “testdir” with the setwd() command.

```
setwd("testdir")
```

Create a file in your working directory called "mytest.R" using the file.create() function.

```
file.create("mytest.R")
```

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

This should be the only file in this newly created directory. Let's check this by listing all the files in the current directory.

```
list.files()
```

```
##  [1] "mytest.R"            "README.md"           "swirl_lesson_1.html"
##  [4] "swirl_lesson_1.pdf"  "swirl_lesson_1.Rmd"  "swirl_lesson_2.html"
##  [7] "swirl_lesson_2.Rmd"  "swirl_lesson_3.html" "swirl_lesson_3.Rmd"
## [10] "swirl_lesson_4.Rmd"  "swirl_lesson_5.pdf"  "swirl_lesson_5.Rmd"
## [13] "testdir"
```

Check to see if "mytest.R" exists in the working directory using the file.exists() function.

```
file.exists("mytest.R")
```

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

Access information about the file "mytest.R" by using file.info().

```
file.info("mytest.R")
```

```
##          size isdir mode               mtime               ctime
## mytest.R    0 FALSE  644 2019-05-19 16:14:58 2019-05-19 16:14:58
##                         atime uid gid           uname grname
## mytest.R 2019-05-19 16:14:58 501  20 raphaelcarvalho  staff
```

Change the name of the file "mytest.R" to "mytest2.R" by using file.rename().

```
file.rename("mytest.R", "mytest2.R")
```

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

Make a copy of "mytest2.R" called "mytest3.R" using file.copy().

```
file.copy("mytest2.R", "mytest3.R")
```

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

Provide the relative path to the file "mytest3.R" by using file.path().

```
file.path("mytest3.R")
```

```
## [1] "mytest3.R"
```

You can use file.path to construct file and directory paths that are independent of the operating system your R code is running on. Pass 'folder1' and 'folder2' as arguments to file.path to make a platform-independent pathname.

```
file.path("folder1", "folder2")
```

```
## [1] "folder1/folder2"
```

Create a directory in the current working directory called "testdir2" and a subdirectory for it called "testdir3", all in one command by using dir.create() and file.path().

```
dir.create("testdir2", "testdir3", recursive = TRUE)
```

Go back to your original working directory using setwd(). (Recall that we created the variable old.dir with the full path for the orginal working directory at the start of these questions.)

```
setwd(old.dir)
```

Removing everything:

```
file.remove('mytest2.R', 'mytest3.R')
```

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

```
file.remove("./testdir", "./testdir2")
```

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