

Getting Started in R

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In this tutorial, you will take first steps with programming in R.

Confirming R packages properly installed

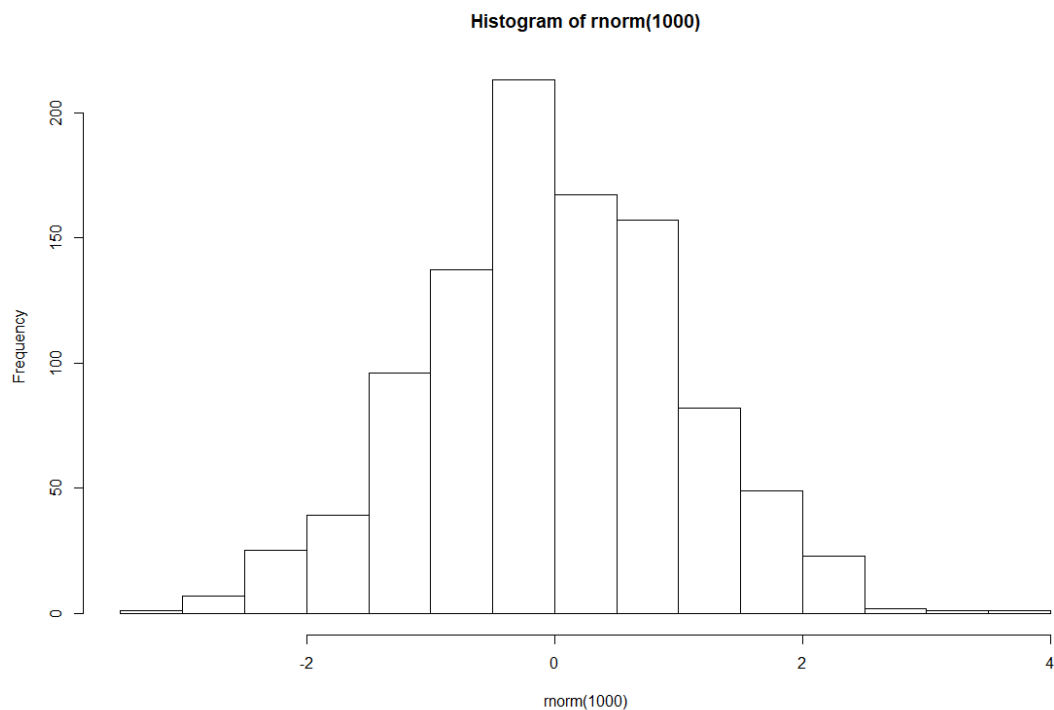
Let's see if your installation has been successful. Open R Studio. In the *Console*, type in (or copy and paste) the following commands and hit Enter after each line.

```
2+2           #2 plus 2
set.seed(1)   #Initial value for random number generation algorithm
hist(rnorm(1000)) #Histogram of 1,000 random observations from a standard
normal dist.
```

What you should be seeing is this:

```
2+2
[1] 4

set.seed(1)
hist(rnorm(1000))
```



Do you see this? Excellent...

First Steps

Let's do some very basic calculations, just to get the hang of R. Copy and paste the following code, line by line, into your console:

```
4 + 2      #Add 4 and 2
4 * 2      #Multiply 4 by 2
4 / 2      #Divide 4 by 2
x <- 4      #Assign the value 4 to the variable x
y <- 2      #Assign the value 2 to the variable y
x * y      #Multiply x by y
z <- x * y  #Assign the product of x and y to the variable z
z          #What is z?
sqrt(4 * 2) #Calculate the square root of 8
sqrt(z)     #Calculate the square root of z
```

Note that the “#” character indicates a comment in R. Anything after “#” in R is a comment and not executable code.

Go ahead and do some calculations by yourself.

Setting a Working Directory and Getting Ready

Let's get started:

- Create a new folder on your computer dedicated to this course.
- In the lower right quadrant of R Studio, go to “Files” tab and navigate to the folder you created. Now click on the “More” menu option and select “Set As Working Directory”.
- This means you can read from and write to the folder you created.
- Alternatively, in the upper left hand quadrant of R Studio, under “Session”, you can also “Set Working Directory”.
- Unpack the files in `Datasets.zip` and place them in the folder you created.
- Looking again at the lower right hand quadrant of R Studio, you should see the unpacked data sets in your Files tab.

Now type the following two lines of code into the console and execute each line by hitting return:

```
FireData <- read.table("norwegianfire.txt", sep="\t", header=FALSE)
head(FireData)
```

Does it work? Do you get 6 rows of data returned? Good! We will follow up from here in the first lecture.