

Chapter 1

The software R

R is not a program that uses a sophisticated graphical user interface, as for example Microsoft Word is. Instead, R can be accessed and used by only writing text, without using the mouse.

R in its core really is a programm based on text instructions, also called commands. R can receive commands in two ways: The first is to read a whole file with the extension .R. Each line instructs R to do something. The second variant is interactive: the user types a command and then presses enter.

The following demonstration shows this way of working with R. Later, we will use a program called RStudio that is much more convenient to work with because it features a sophisticated graphical user interface. Even in Rstudio though, R commands are written in text.

Note that if you install R, a programm that is called *Rgui* will also be installed. This is the standard user interface for R, but we will work instead with RStudio.

The goal of this demonstration is to point out that R at its core is not dependent on windows or menus, but only on text.

- Windows users: → Go to the directory where you installed R, and open the bin directory, this is usually like C:\R\R-3.6.3\bin (the version number is likely to vary). Then doubleclick on R.exe
- Mac users: → Look for R using either the dock, the launchpad, finder, or the spotlight search, then start it.

A terminal will open. Write the following text and press enter (See Figure 1.1):

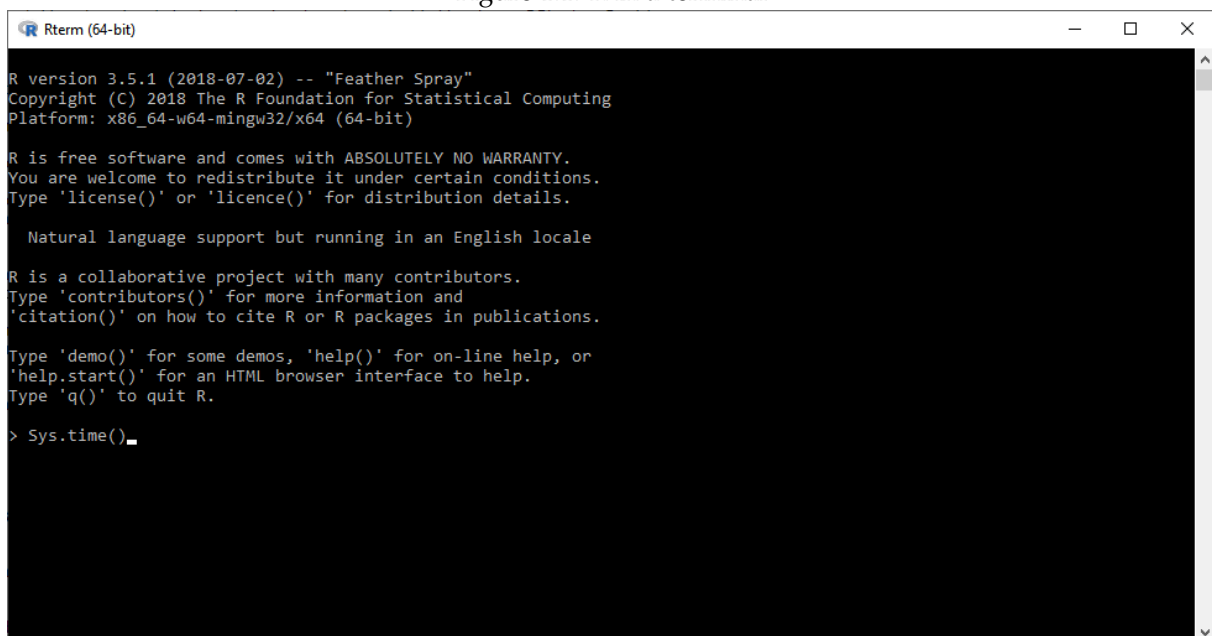
```
Sys.time()  
## [1] "2021-06-06 19:34:11 CEST"  
# latex rootdir: contains parent mantated prefix for files locations
```

The current system time will appear. Congratulations! You just run your first command using R.

Own experimentation

Run play around with the `demo()` function, for example try to execute `demo("graphics")`.

Figure 1.1: R in a terminal



```
Rterm (64-bit)
R version 3.5.1 (2018-07-02) -- "Feather Spray"
Copyright (C) 2018 The R Foundation for Statistical Computing
Platform: x86_64-w64-mingw32/x64 (64-bit)

R is free software and comes with ABSOLUTELY NO WARRANTY.
You are welcome to redistribute it under certain conditions.
Type 'license()' or 'licence()' for distribution details.

  Natural language support but running in an English locale

R is a collaborative project with many contributors.
Type 'contributors()' for more information and
'citation()' on how to cite R or R packages in publications.

Type 'demo()' for some demos, 'help()' for on-line help, or
'help.start()' for an HTML browser interface to help.
Type 'q()' to quit R.

> Sys.time()_
```