

# Lab 0: Download and Install R and RStudio

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This document shows you how to download and install R and RStudio on a Windows machine.

**Note:** I do not personally own a Windows machine so some of these instructions and images are from different resources and might be outdated. The installation instructions should be very close to the instructions for macOS (See file `lab0_macOS.pdf`). If the installation instructions, you face, are different from what proposed here, please let me know.

## Before we start

Make sure that you have about 500 MB of free space on your machine. We will need this space to install both R and RStudio, and when the program installs the compressed files expand to take much more space.

## How to install R

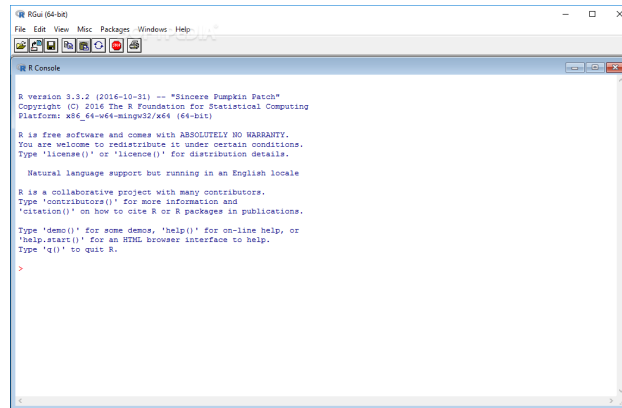
1. Go to [The website: Download R for Windows](#).
2. Click on the “Download R 4.1.2 for Windows” link at the top of the page. Your download should start immediately.
3. Once the file has been downloaded, click on it: it will unpack and copy all the files to your hard drive. (If you run into any issues, consult the FAQ sections in the link above.)
  - ACCEPT the default startup options.
  - YES to a Start Menu folder, and
  - YES to a desktop icon and to a Quick launch icon.

R is now **installed** on your computer.

**Note:** This version of R should run with no problems on Windows XP and later.

## How to test if R works?

1. Double-click on the R desktop shortcut. A window looking something like this should pop up:



The > character is called the prompt and is the place where we enter commands for the program to interpret. For instance, if you type `12+13` followed by the return/enter key, you will see:

```
12+13
```

```
## [1] 25
```

2. To quit R, call the quit function by typing `q()` and hitting the return key.

```
q()
```

R will ask you if you want to save your work. Don't save it. You have now left R.

We are not going to work with R environment directly this way. Instead we work with an integrated ecosystem called RStudio. RStudio will enable us to better compile our R codes and documents (e.g., assignments and project).

## How to install RStudio

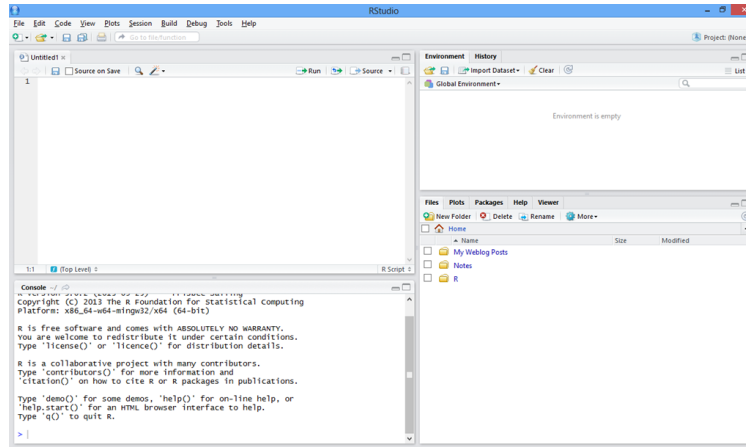
1. Go to [The website: Download the RStudio](#).
2. Click on the `RStudio-2021.092.2-382.exe - Windows 10` link. The file download will begin.
3. Once the file has been downloaded, click on it and walk through the installation process.
  - YES to the question on whether you want to allow this app to make changes to your device.
  - Choose Install Location: `C:\Program Files\RStudio`.

RStudio is now **installed** on your computer.

**Note:** To install RStudio, you have to first install R on your machine.

## How to test if Rstudio works?

1. Double-click on the RStudio icon in the Applications. A window titled "RStudio" should pop up. It should look like this:



2. Like in R, the > character in the Console window is where we enter commands for the program to interpret.
3. To exit RStudio, click on the red X at the top-right corner of the window. If prompted to save the workspace, do not save it.

## A note about filenames in Windows

In the Windows system, path names use backslashes, e.g. `C:\Users\armin\RWork\`. R, on the other hand, inherits its file and folder naming conventions from Unix which uses forward slashes instead: `C:/Users/armin/RWork/`.

**Note:** As an important rule, to avoid problems, we should avoid naming folders and files with spaces and special characters. As a general rule, I typically use underline to name the files and folder (without any space). For example, look at the name of this file `lab0_windows.pdf`. As another example, if armin wants to name his assignment 1 of stats 1510, armin can name his assignment file by `armin_hatefi_stat1510_assignment1_w22.pdf`.

*It was easy?! Yes, I know!*