Practical Exercise 1 + R and R Studio Setup

Eduard Bukin

Installing R and R Studio

About the R and RStudio

To learn more about R and RStudio, use R For Data Science (Second Edition), specifically R4DS Chapter "Intro", section 1.4 Prerequisites

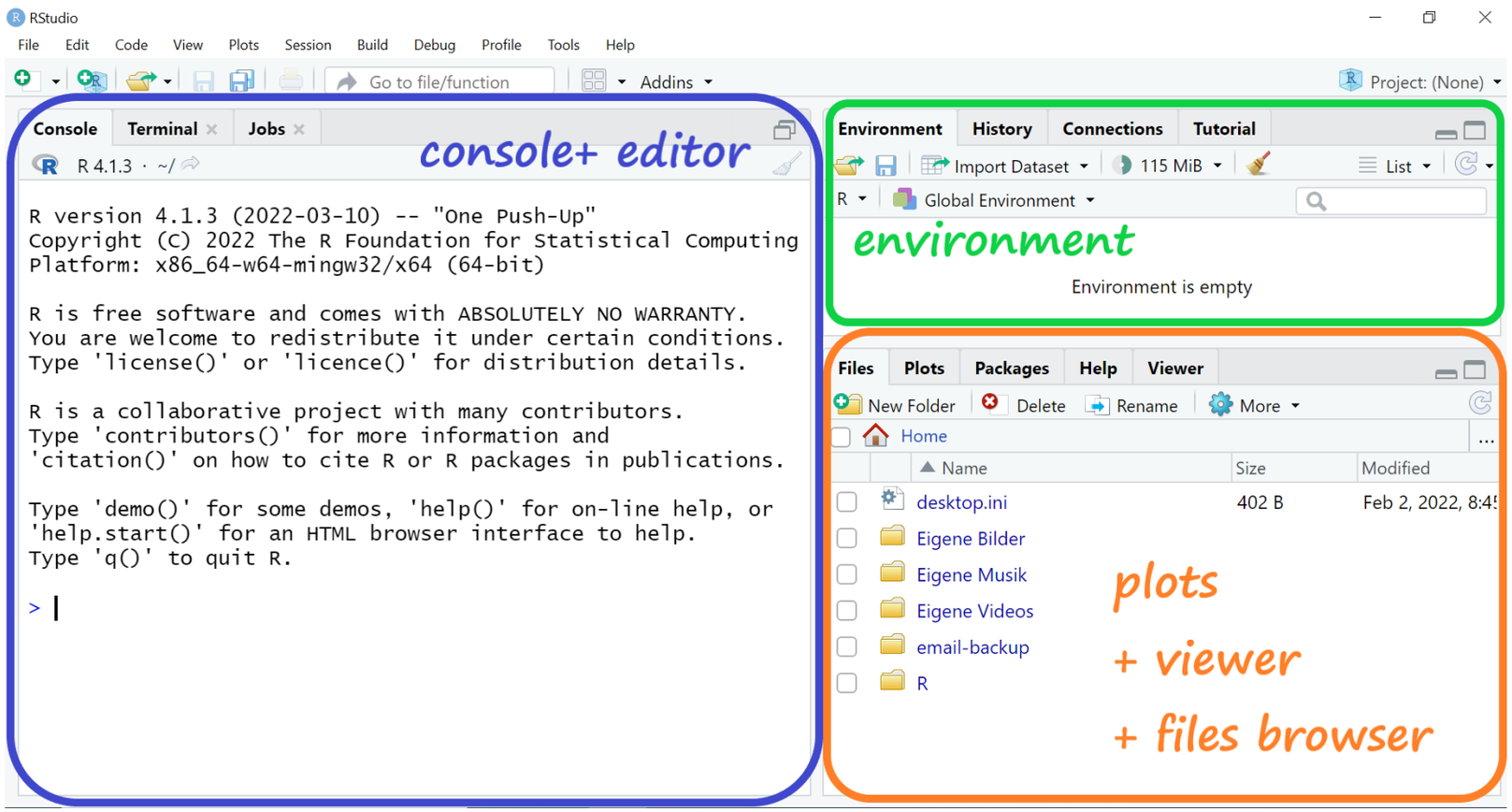
- R is an open-source statistical programming language
- R is also an environment for statistical computing and graphics
- It's easily extensible with packages, see: https://cran.r-project.org/

- RStudio is an IDE (integrated development environment) for R
- RStudio is not a requirement for programming with R, but it's commonly used by R programmers and data scientists https://www.rstudio.com/

R + RStudio Installation

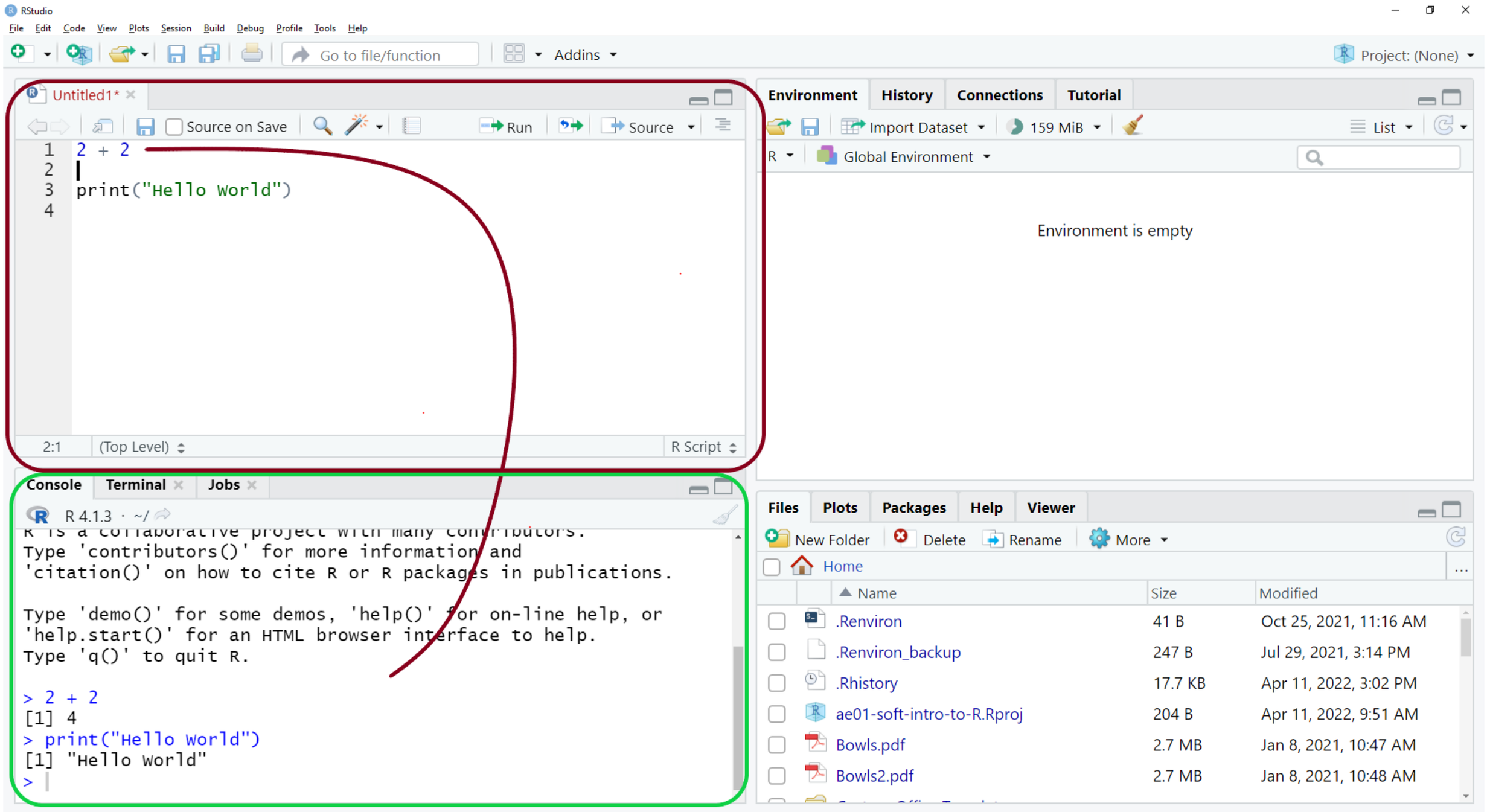
1. **Download R** from here: cran.r-project.org
2. **Install R** by double click on the installation file and clicking next…
3. **Download free version of R Studio** from here: rstudio.com
4. **Install RStudio** by double click on the installation file and clicking next…
5. **Check that RStudio** has been installed by typing “RStudio” in the start menu or Windows search.
6. (Optional) **Check that R** has been installed by typing “R x” in the start menu or Windows search.

R and R Studio: introduction and interface

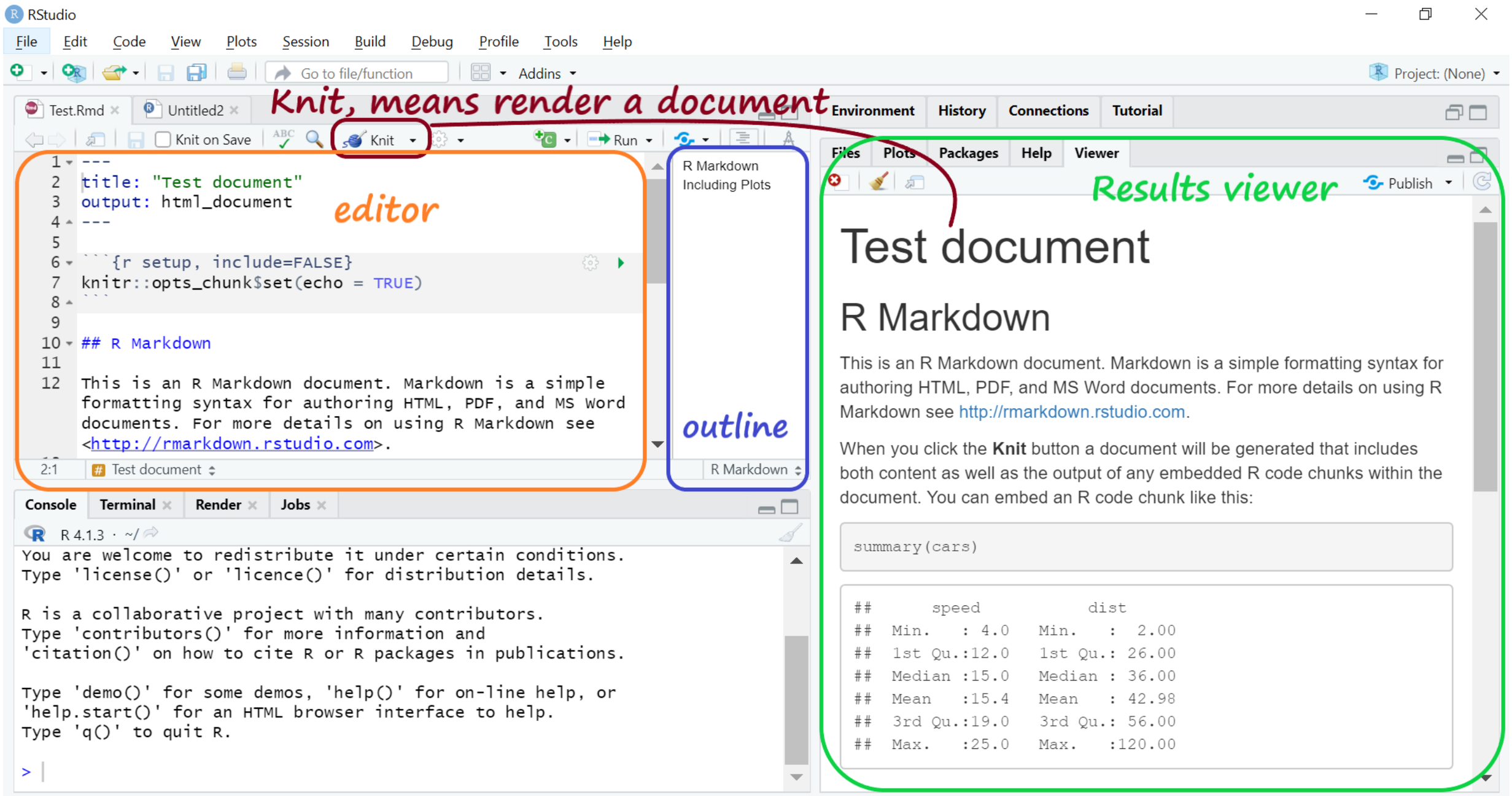


- Console (left bottom) - to type the R code into
- Editor (left top) - to **write** and **SAVE** scripts, analysis and documentation.
- Environment (right top) - overview of the r session and objects in there
- Plots, Files and Viewer (right bottom) - files navigation, plots export and inspection.

Scripts editor



R Markdown editor



Practical Exercise 01. Checks and balances in the RCT

Application Exercise 01

In the classroom:

Turn on your PC

Use these log in and password.

> **Important**
>
> Login: `ZH-user-pcl`
>
> Password: `V5-senc!3ken`

1. Go to: bit.ly/3GD8Oap
2. Scroll and download `ex01-rct.zip`.
3. **DON'T OPEN IT!** setup your working folders first (next slide).

Setup working folders

Navigate to your user folder: `C > Users > Name of your user account`;

- Create there a **course folder** names `{your initial}-mk223-2023`.
  - Use it for your course for all in-class work;
  - on my pc the course folder is called `eb-mk223-2023`;
  - the full path is `C:\Users\ZH-user-pcl\eb-mk223-2023`;

- Paste `ex01-rct.zip` from downloads to the **course folder**;

- Unzip `ex01-rct.zip` into ex01-rct;

Launch the R Studio from the project “ae01-soft-intro-to-R”

- Navigate to `ex01-rct` in your **course folder**
- Open `ex01-rct.Rproj` that has R studio icon and `.Rproj` extension: