R Programming For Beginners

Dr. Arvind Mer & Dr. Wail Ba-Alawi

The Haibe-Kains Lab
Princess Margaret Cancer Centre
University Health Network
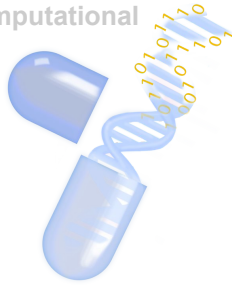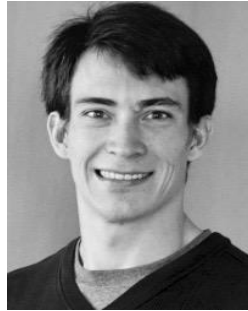University of Toronto

@ amer@uhnresearch.ca

@ArvidMer

@ ba3lwi@gmail.com

@wail_baalawi

Princess Margaret Cancer Centre

UHN

UNIVERSITY OF TORONTO

Petr Smirnov

Ian Smith

Helping Us

Ali Madani

About This Workshop

- Aimed towards people who don't have any prior experience in programming

- R and RStudio is installed

- You will learn by doing

- Course material can be used as reference

- At the end of this workshop, you will not be an expert in R but you will be comfortable in R

Download the material from
https://bit.ly/2ZXbTu7
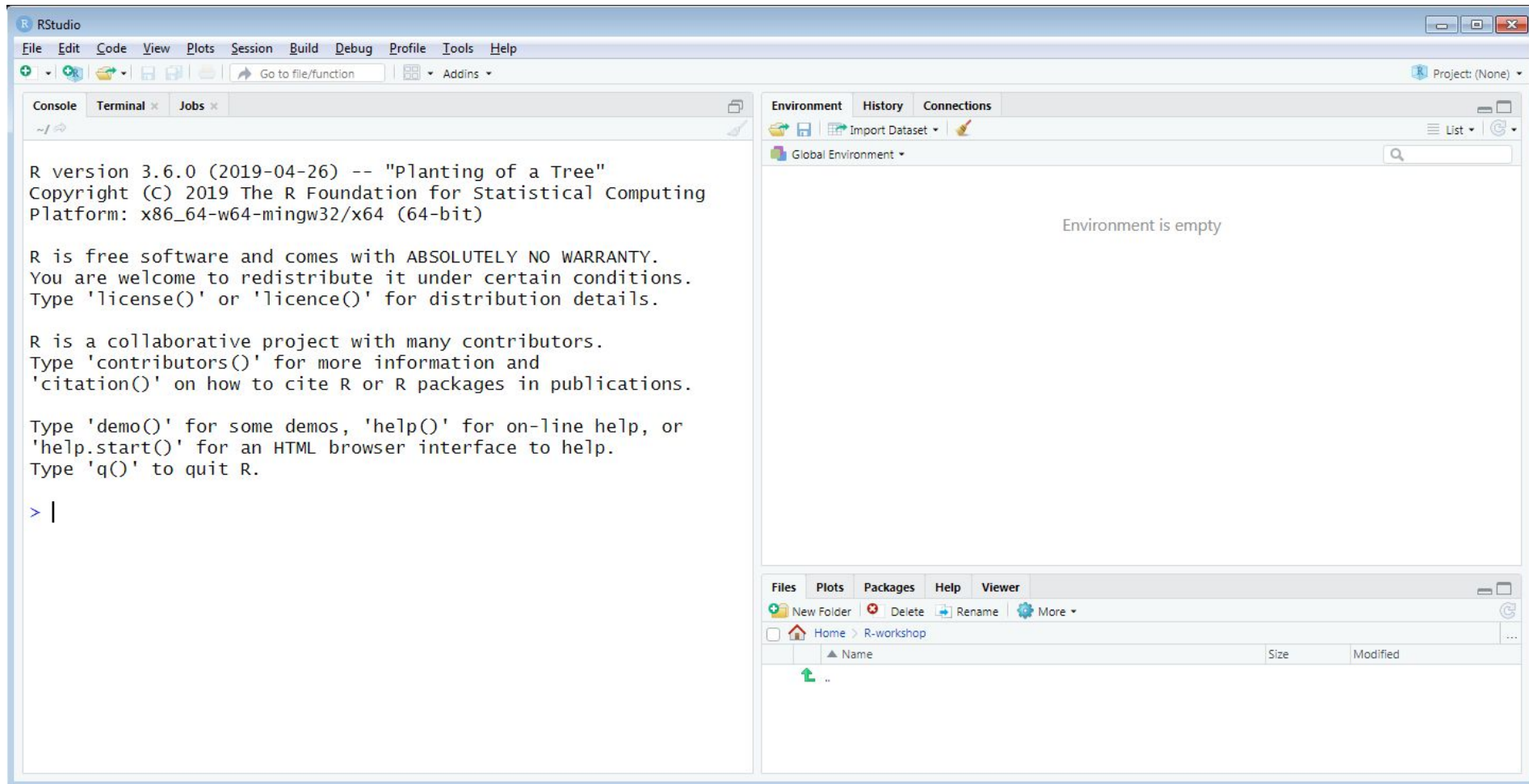
Introduction to R

What is R?

- R is a programming language focused on statistical analysis and data visualization

Why R?

- R is great because:
  - It is 100% free
  - R codes are transparent, shareable and reproducible
  - R is interpreted type of programming language
  - R has a huge community base
  - 1000s of packages are available
  - Popular among Bioinformaticians and (Bio)Statisticians

RStudio

RStudio

Console

RStudio

- In the Console type **x=1** and press **Enter**

RStudio

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RStudio

RStudio

RStudio

RStudio

Create New File

- Go to File
- Click on "New File" > "R script"
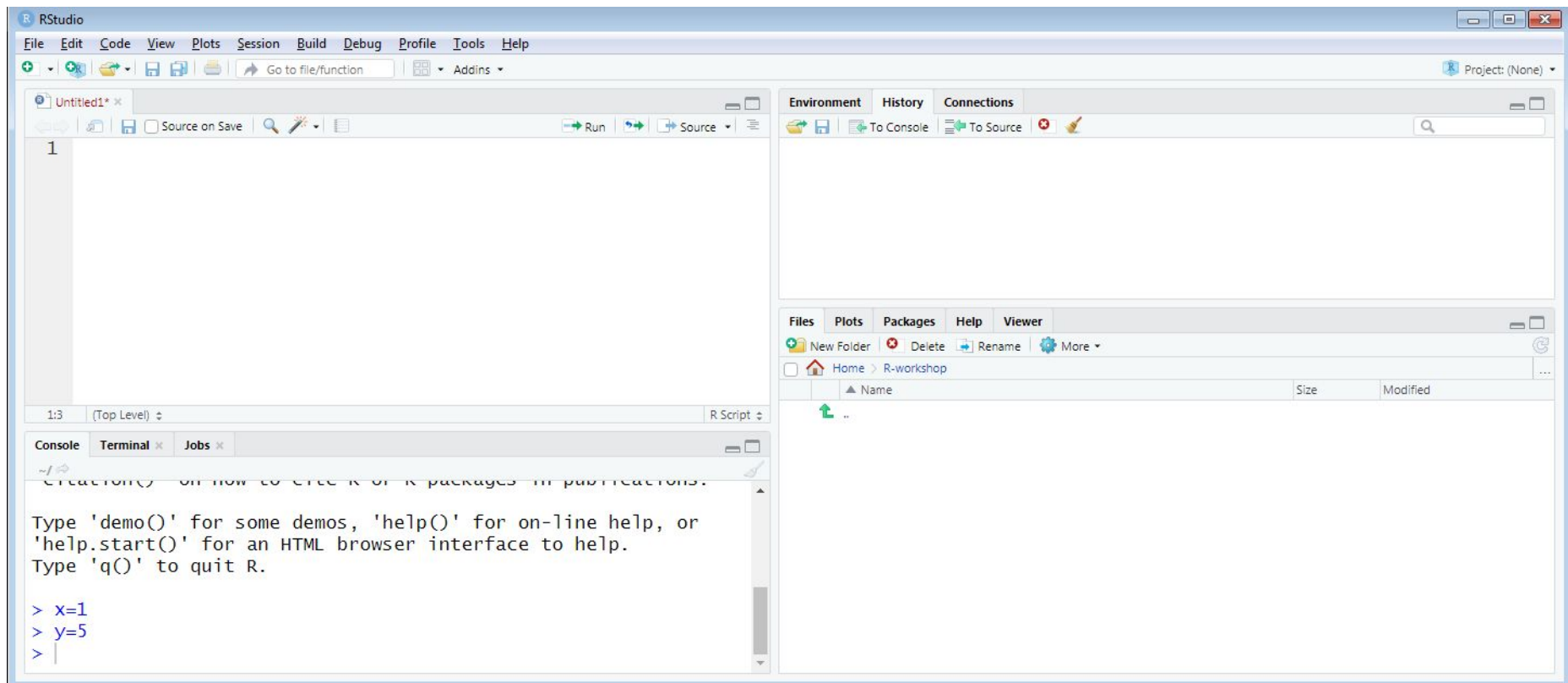
Run code

- Type few code
- Put mouse pointer on the line and click on "Run"
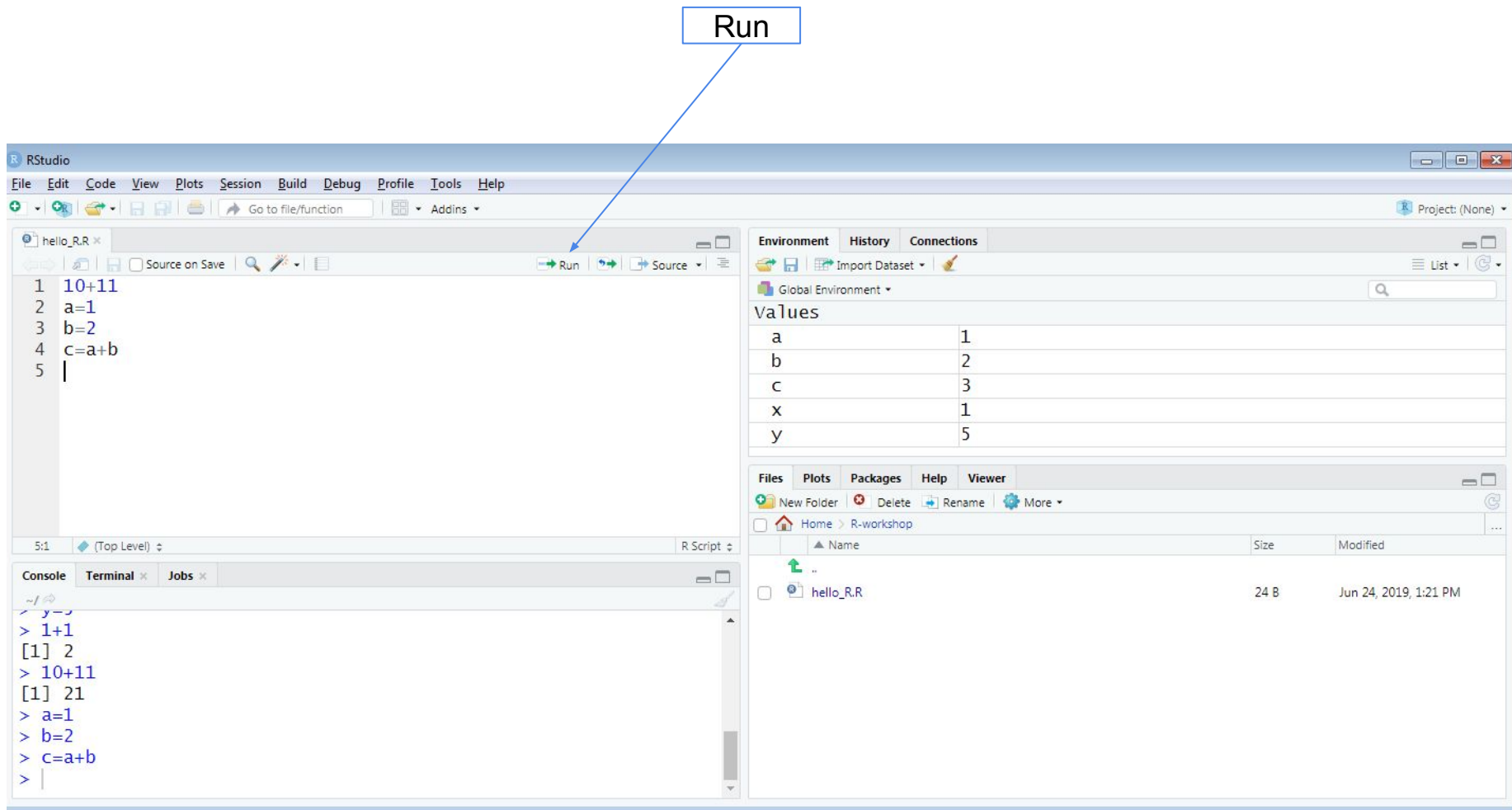
Run code

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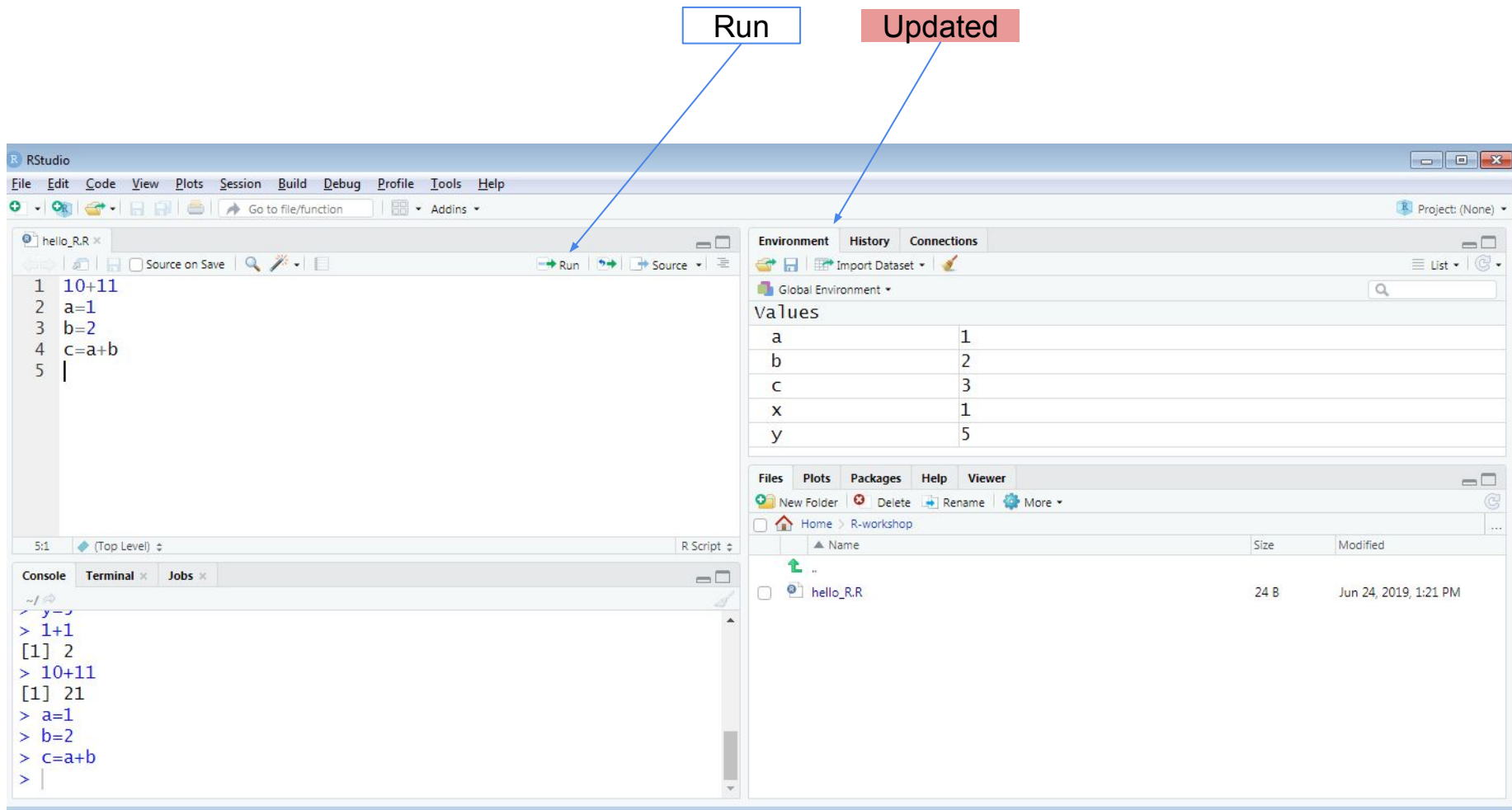
Save File

- Click on "File" and "save"
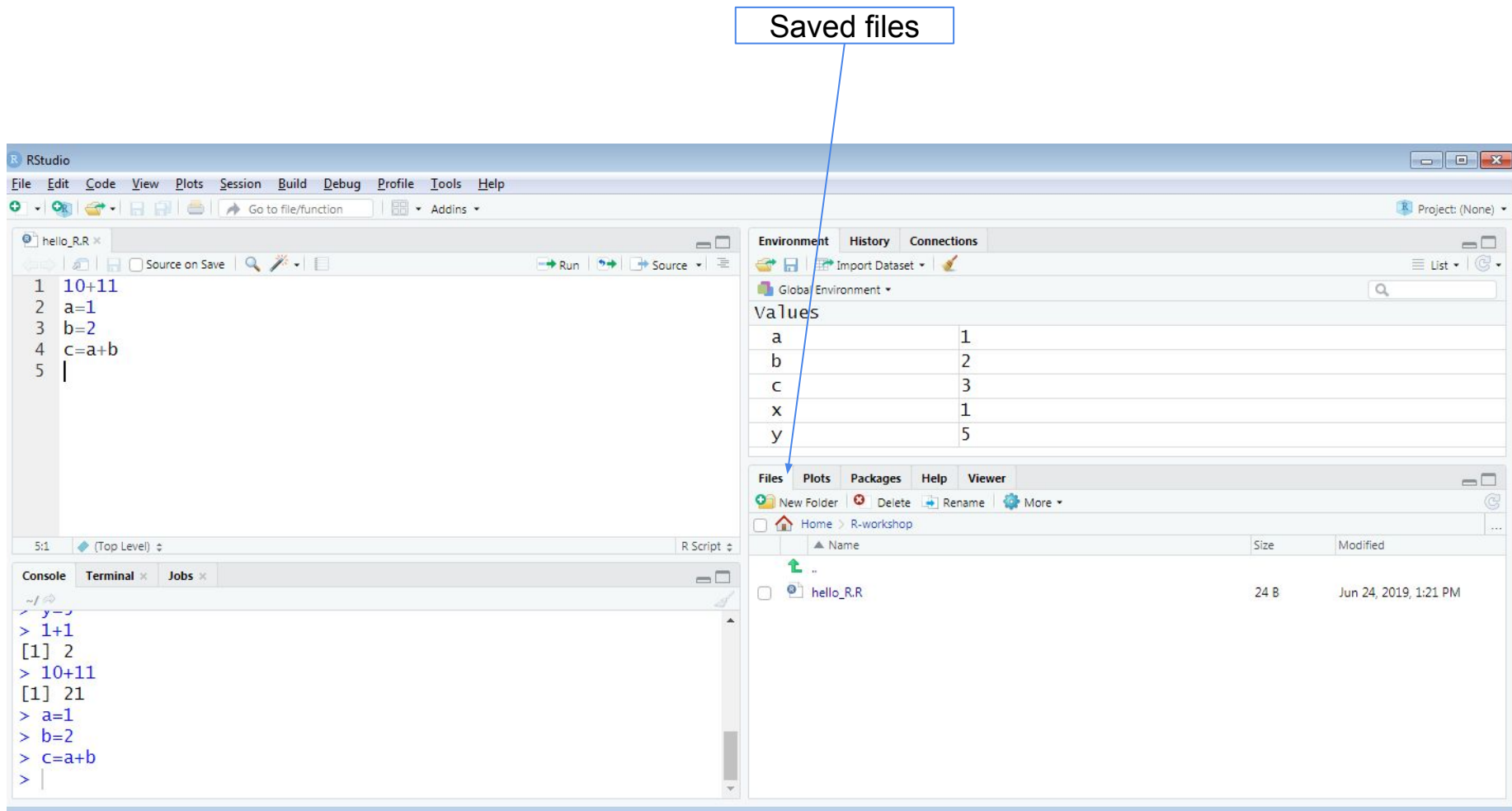
Saved files

Create Project

- If you have several files related to one project it is a good idea to put all the files at one place
- History will also be saved
- To create a new project Click on:
    - File > New Project (it will ask to save old material, click on save)
    - Click on "New Directory"

Create Project

- If you have several files related to one project it is a good idea to put all the files at one place
- History will also be saved
- To create a new project Click on:
  - File > New Project (it will ask to save old material, click on save)
  - Click on "New Directory" and then "New Project"

Create Project

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- History will also be saved
- To create a new project Click on:
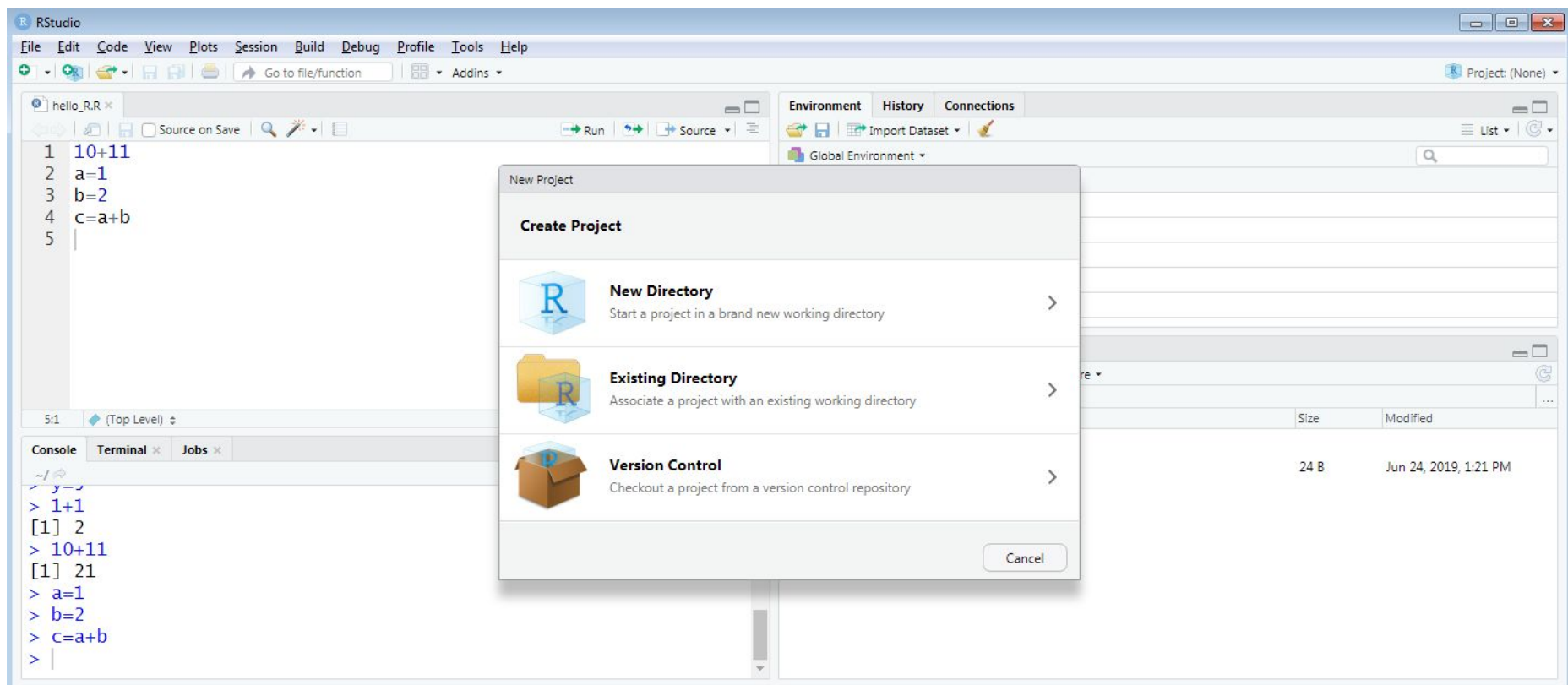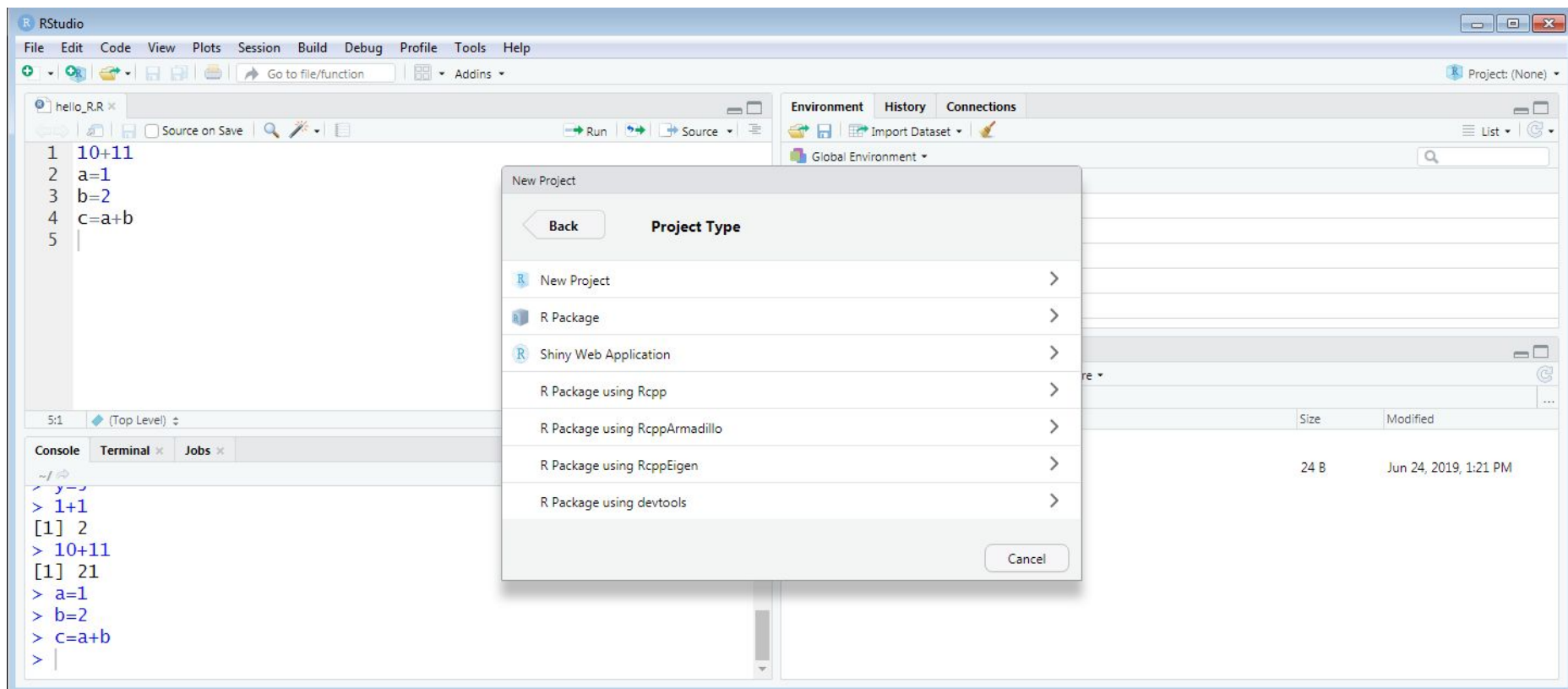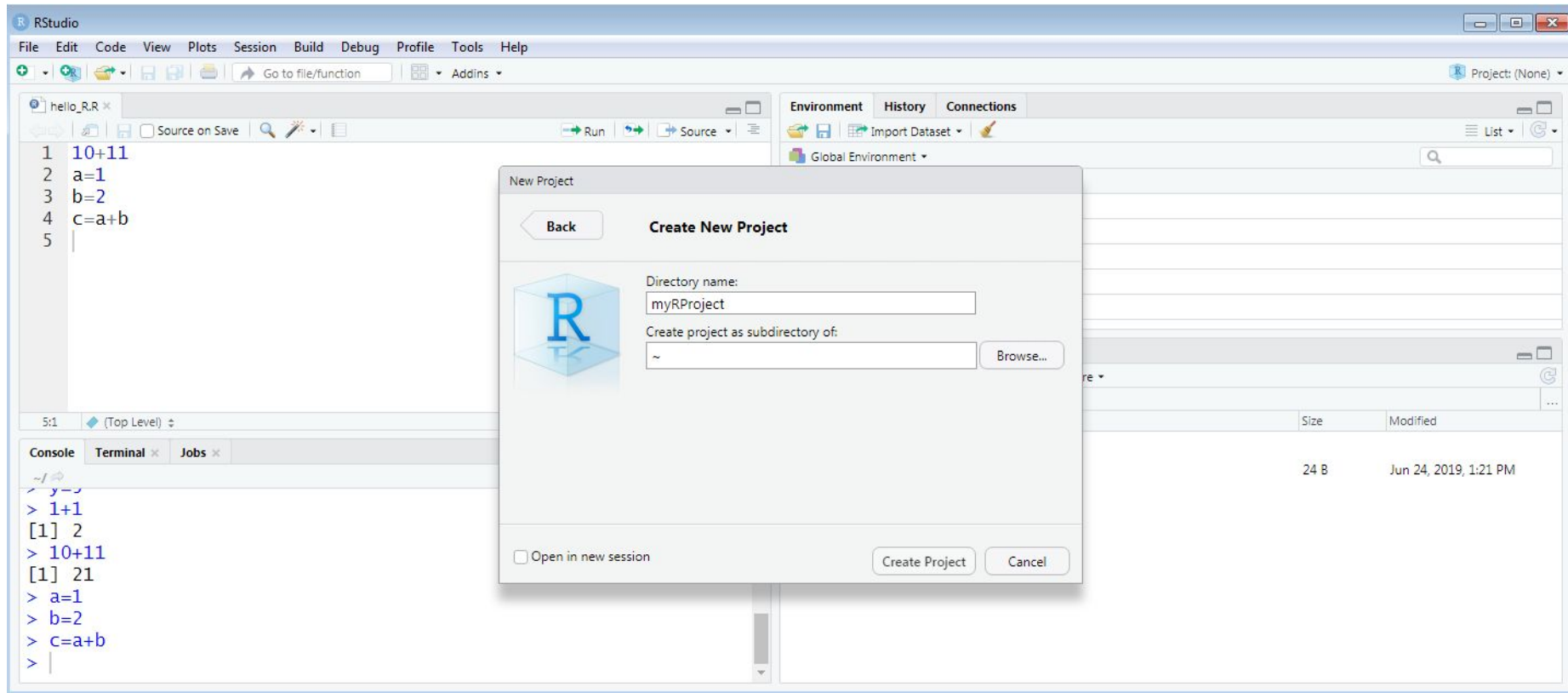 - File > New Project (it will ask to save old material, click on save)
  - Click on "New Directory" and then "New Project"
  - Give your project name "myRProject"
  - Click on "Create Project"

Create Project

- Now create a new file and save it as "hello_R"
- Notice the files in the "Files" tab.
- All R files are listed here
- If you close RStudio (or it crashes) you can open it again by going to "myRProject" folder and clicking on "myRProject.Rproj" file