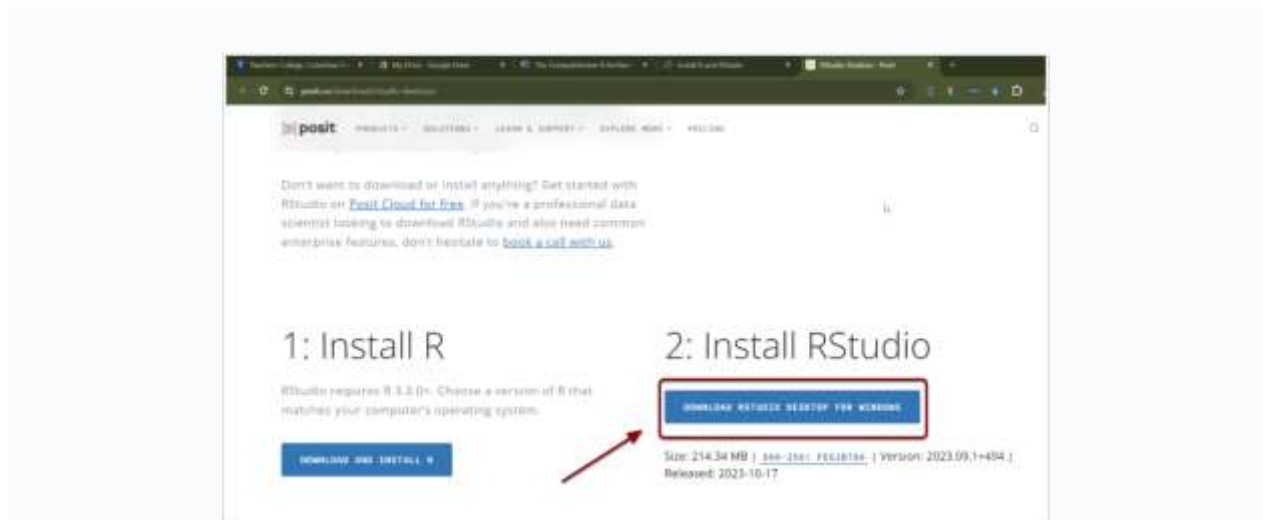


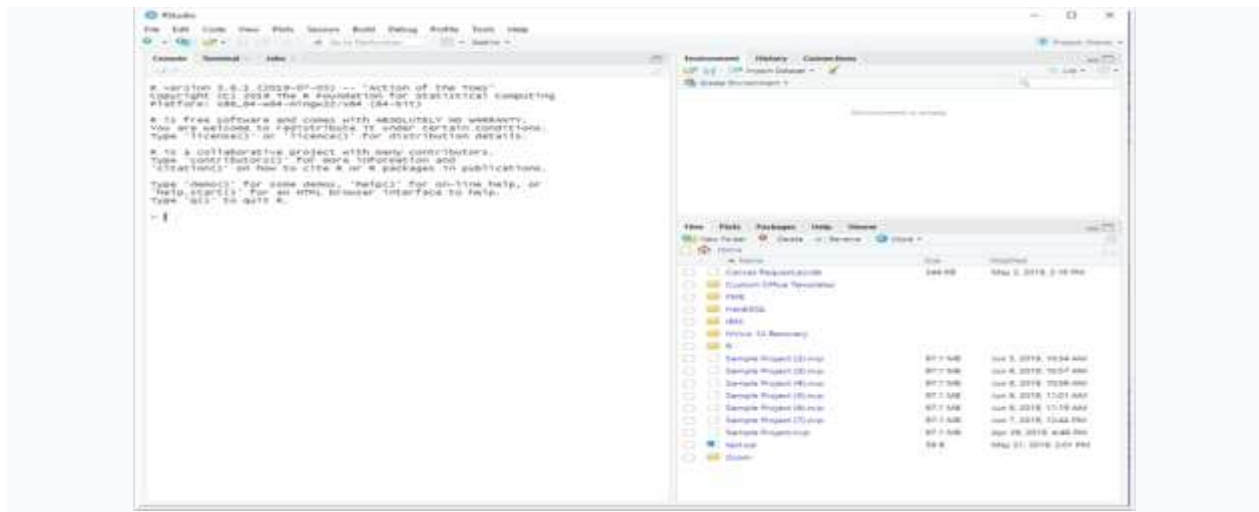
Click Download RStudio.



16. After downloading the package, the RStudio Setup wizard will open. Click Next and follow the installation steps.




17. After the setup wizard completes the installation process, RStudio will open.



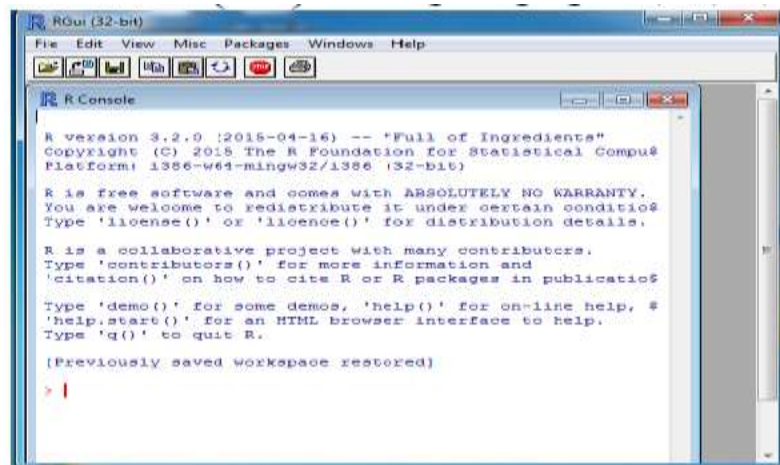
## ❖ Running R

1. After ensuring that R and RStudio are installed on your computer.

2. Click the RStudio  icon or the R  icon on your desktop or in the Applications menu to launch it.

3. The RStudio or R window will open.

## ❖ R Program interface

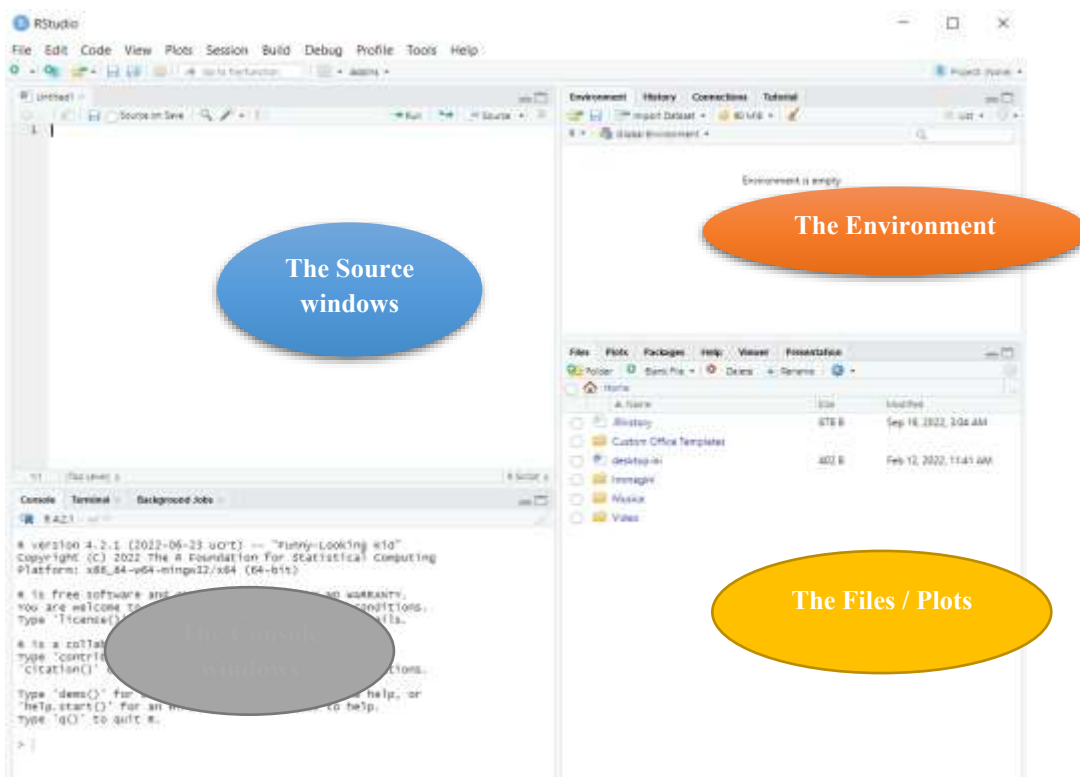


## ❖ The RStudio Interface

RStudio is an alternative interface to R. It adds some easy-to-use components and makes many packages readily available. When you run RStudio, the screen appears divided into four windows, each with several tabs. Each one performs a specific function:

- The Console window,
- The Source window,
- The Environment / History / Connections / Tutorial window, and
- The Files / Plots / Packages / Help / Viewer window

Below is a brief explanation of the user interface, which changes depending on the program's settings or version.



## 1- The Console window

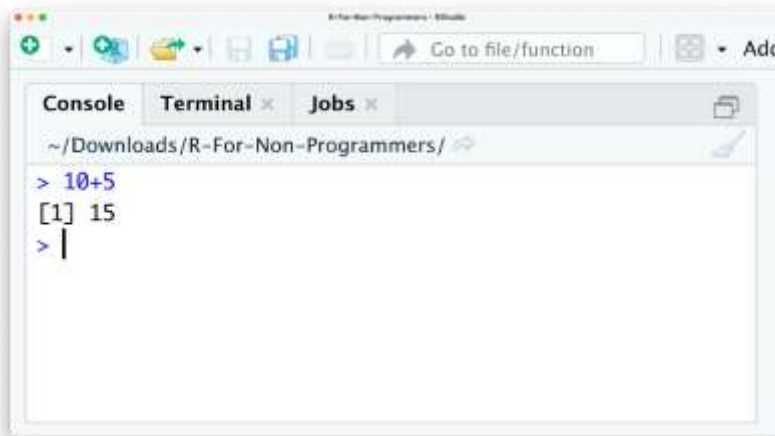
The console is located in the lower left box, similar to the R program window where commands are typed, code is executed, and various operations are performed in R,

and the output of programming and calculations is displayed . An example of this is calculating the sum of  $10 + 5$ . Click the mouse control, type the calculation into the control, and then press the Enter key ↵ on the keyboard. The result will be very clear:

```
10 + 5
```

```
> [1] 15
```

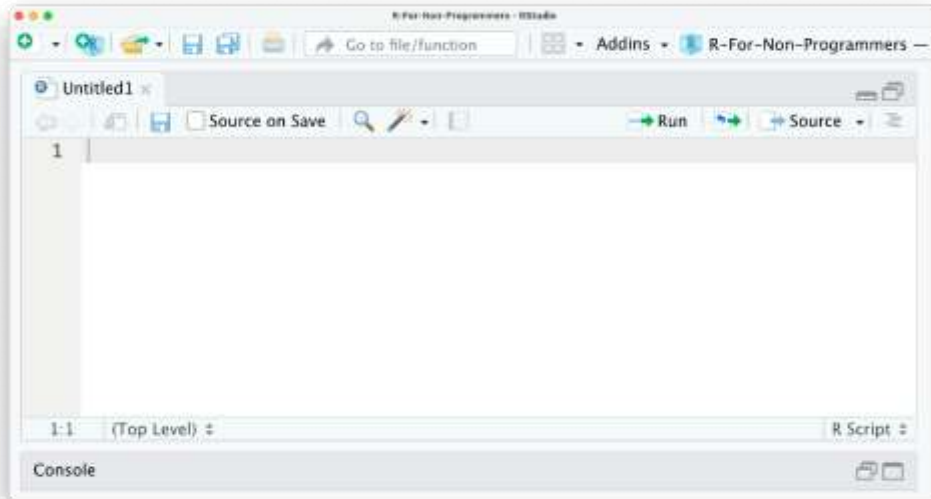
Here is a screenshot of how it should look like at your end in RStudio:



At the top right of the Control Panel, there is a broom-like icon. This icon is very important because it cleans the Control Panel. Sometimes the Control Panel can become very cluttered and difficult to read. Clicking on the broom icon will clear the Control Panel of all text. The keyboard shortcut for this is Ctrl+L on PCs.

## 2-The Source window

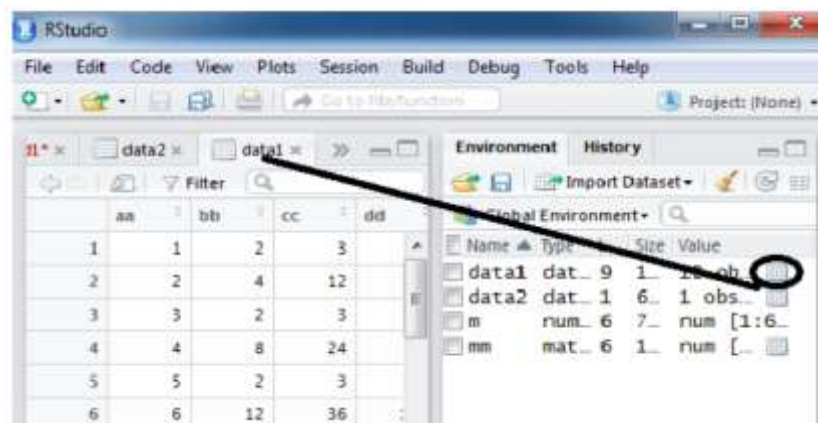
It is located in the upper left box, and in it you write an expression, function, or package in the R language to save it for later, and it can be moved to the console window to execute it and find the result faster.



### 3. The Environment / History / Connections / Tutorial window

Their locations are in the right-hand pane:

- **Storage Environment:** In this part of the screen, any function or code defined in the console is stored. Datasets, database imports, and applications are immediately listed in the console. The figure below shows the name of each variation in the work environment. Clicking on it allows you to record data in the screen part next to the pass:



- **The History tab** keeps a record of all previous commands. It also helps when testing operations, as you can save either the entire list or select commands to send to the R program for further processing.

#### 4- The Files / Plots / Packages / Help / Viewer window

Its location is at the bottom right and contains five tabs:

- **Files tab:** Displays all files and folders, along with a bar containing icons (New Folder, Delete, Rename), and others. It also displays the file names.
- **Plots tab:** Used to display graphs created in R, which may consist of one or more graphs. You can also save the graph by clicking the Export icon, which can be saved as an image or PDF.
- **Packages tab:** Displays a list of additional packages included in the RStudio installation that are also loaded into R, along with a brief description next to each package. Other functions can also be installed by clicking Install Packages.
- **Help tab:** Helps you search an extensive help directory, and opens automatically when you call up instructions for a command queried in the console.
- **Viewer tab:** This is the core of RStudio in the browser, where you can develop web applications with R.

