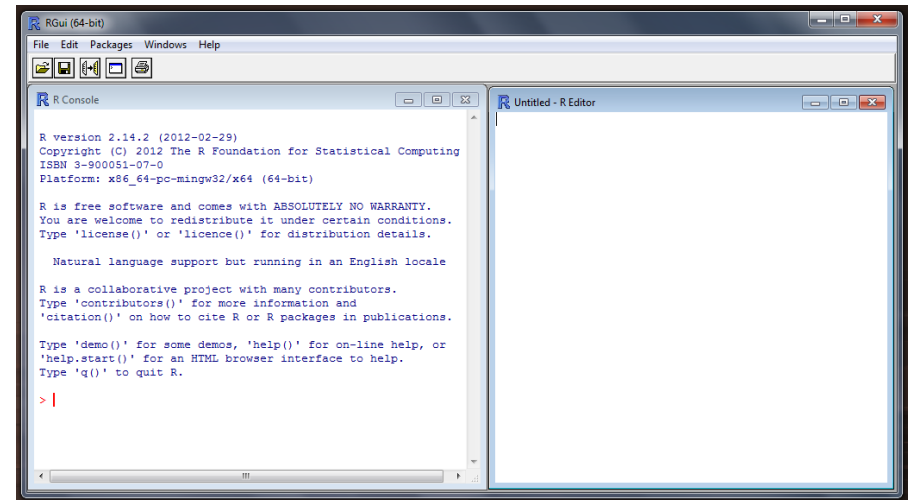


Getting to know the code editor

What is R?

The R Project for Statistical Computing

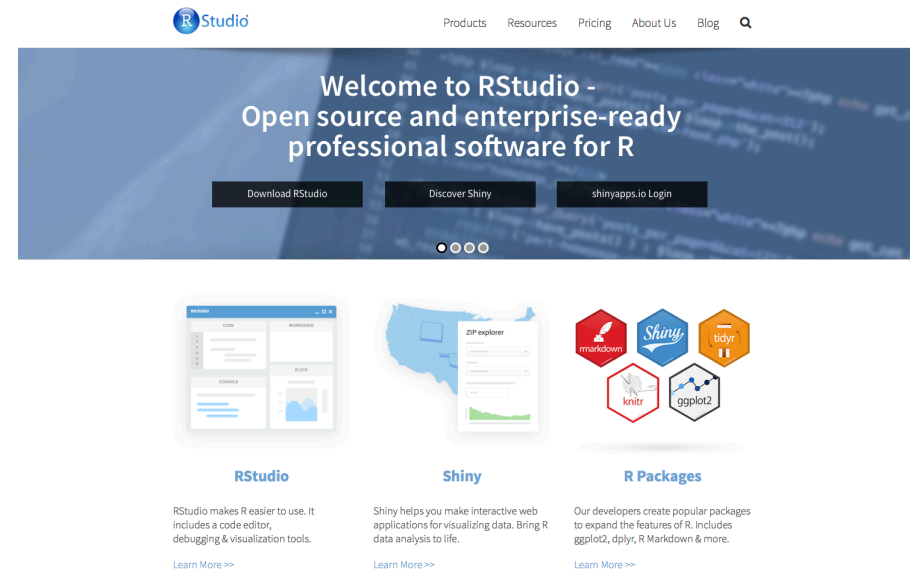
- R is a high-level programming language.
- R is also a software environment for statistical computing and graphics that interprets the R language and provides two ways to perform analyses:
 1. R console
 2. Simple R editor
- However, separate windows for the console, coding window, and graphic device can get confusing.



What is RStudio?

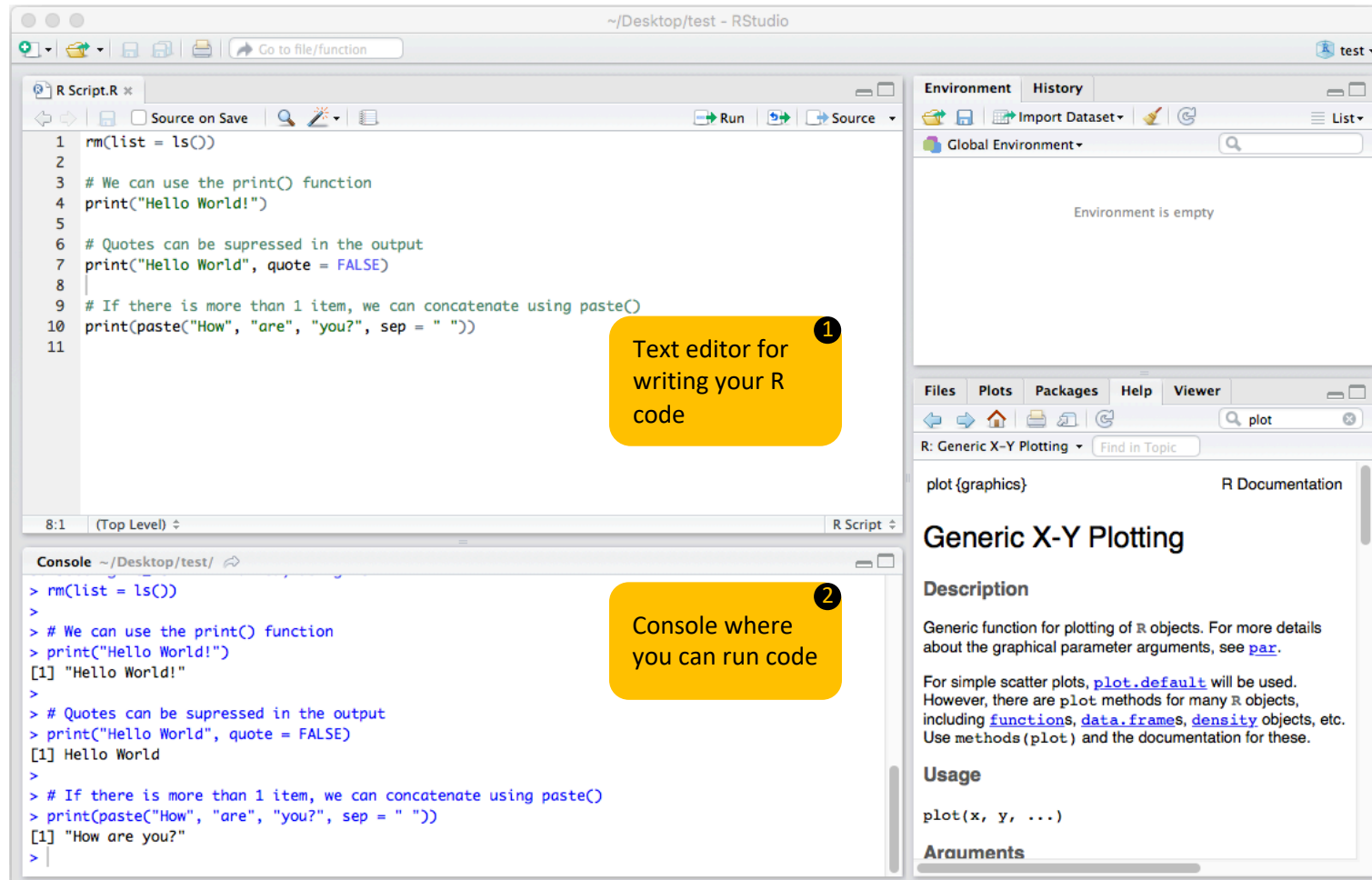
RStudio is an open-source IDE for R

- RStudio is an Integrated **D**evelopment **E**nvironment (**IDE**):
- It provides tools to write faster, better R code:
 - R Console
 - Enhanced editor
 - Workspace manager
 - Debugging Tool
- Available for many operating systems
- Desktop & Server version



What is RStudio?

RStudio makes it easy to write R code



What is RStudio?

RStudio makes it easy to write R code

The screenshot shows the RStudio IDE interface with the following components and annotations:

- Source Editor (Top Left):** Contains R code for a simple script.


```

1 rm(list = ls())
2
3 # We can use the print() function
4 print("Hello World!")
5
6 # Quotes can be suppressed in the output
7 print("Hello World", quote = FALSE)
8
9 # If there is more than 1 item, we can concatenate using paste()
10 print(paste("How", "are", "you?", sep = " "))
11

```
- Environment/History (Top Right):**
 - Environment:** Shows the current workspace. An annotation (3) points to it with the text: "Detect which variables are in your environment".
 - History:** Shows a list of executed commands. An annotation (4) points to it with the text: "History of commands".
- Files/Plots/Packages/Help/Viewer (Bottom Right):**
 - Files:** Shows the file explorer.
 - Plots:** Shows the plot window.
 - Packages:** Shows installed and available packages.
 - Help:** Shows the help documentation for the selected topic. An annotation (5) points to it with the text: "File Explorer and Help Documentation".
 - Viewer:** Shows the output of the code.
- Console (Bottom Left):** Shows the output of the code executed in the source editor.


```

> rm(list = ls())
>
> # We can use the print() function
> print("Hello World!")
[1] "Hello World!"
>
> # Quotes can be suppressed in the output
> print("Hello World", quote = FALSE)
[1] Hello World
>
> # If there is more than 1 item, we can concatenate using paste()
> print(paste("How", "are", "you?", sep = " "))
[1] "How are you?"
>

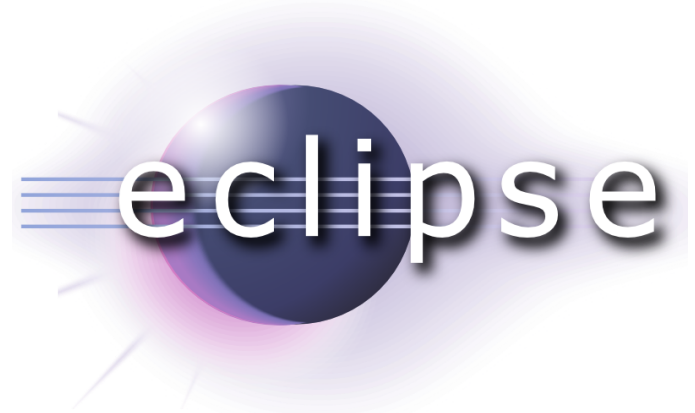
```

What is RStudio?

If you don't like RStudio, alternatives exist

Other R compatible IDEs include:

1. Visual Studio / Eclipse
2. Text editors, e.g.:
 - Visual Studio Code
 - Sublime
 - Emacs
 - TextWrangler
3. R-Commander / ...




Alternative R distributions such as Microsoft R Open can make your life easier

- Instead of the standard R distribution (<https://www.r-project.org/>), you can use an alternative R distribution such as Microsoft R Open. These make the installation process and access to additional functionalities easier.
- Microsoft R Open (<https://mran.microsoft.com/open>), for example, includes additional capabilities for improved performance and reproducibility.

Microsoft R Application Network

Home About R Microsoft R Open R Packages R Community R Tools

Microsoft R Open: The Enhanced R Distribution




Microsoft R Open is **the enhanced distribution of R** from Microsoft Corporation. It is a complete open source platform for statistical analysis and data science.

The current version, Microsoft R Open 3.5.3, is based on (and 100% compatible with) R-3.5.3, the most widely used statistics software in the world, and is therefore fully compatibility with all packages, scripts and applications that work with that version of R. It includes additional capabilities for **improved performance, reproducibility**, as well as support for **Windows and Linux-based platforms**.

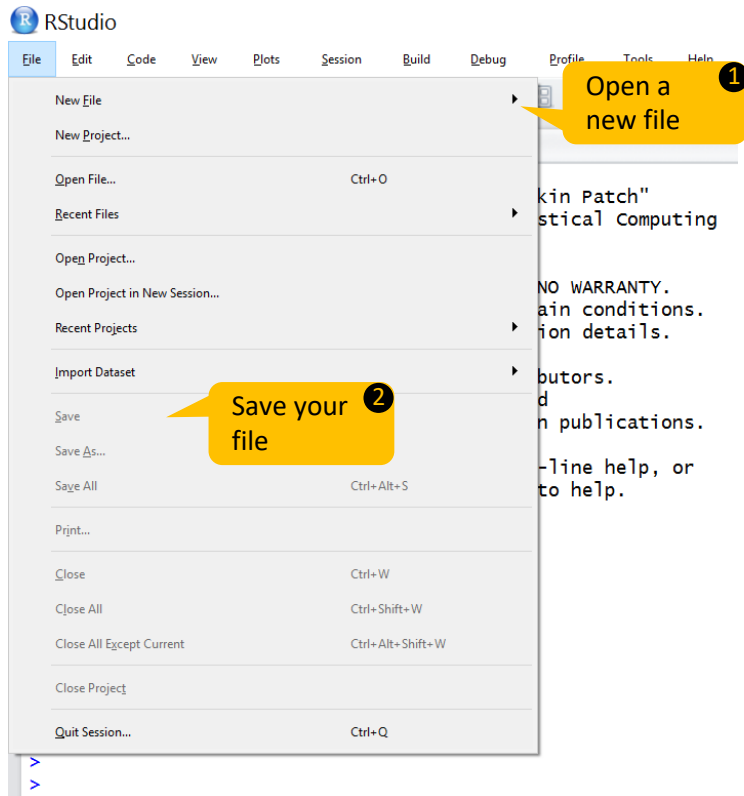
Like R, Microsoft R Open is open source and free to download, use, and share.

[Learn more...](#)

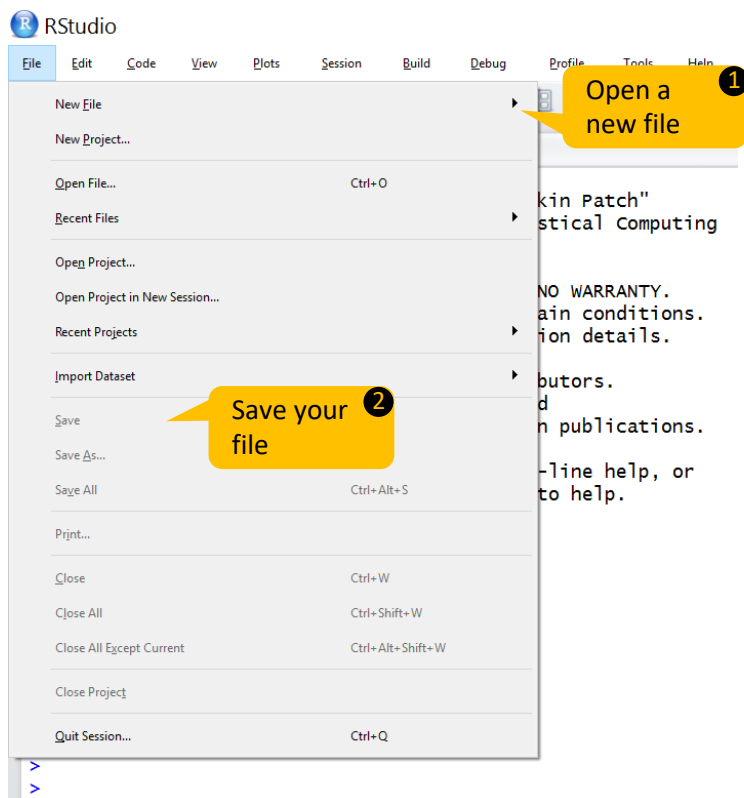
 **DOWNLOAD**

[Release News](#)

Use the code editor in RStudio to run R code



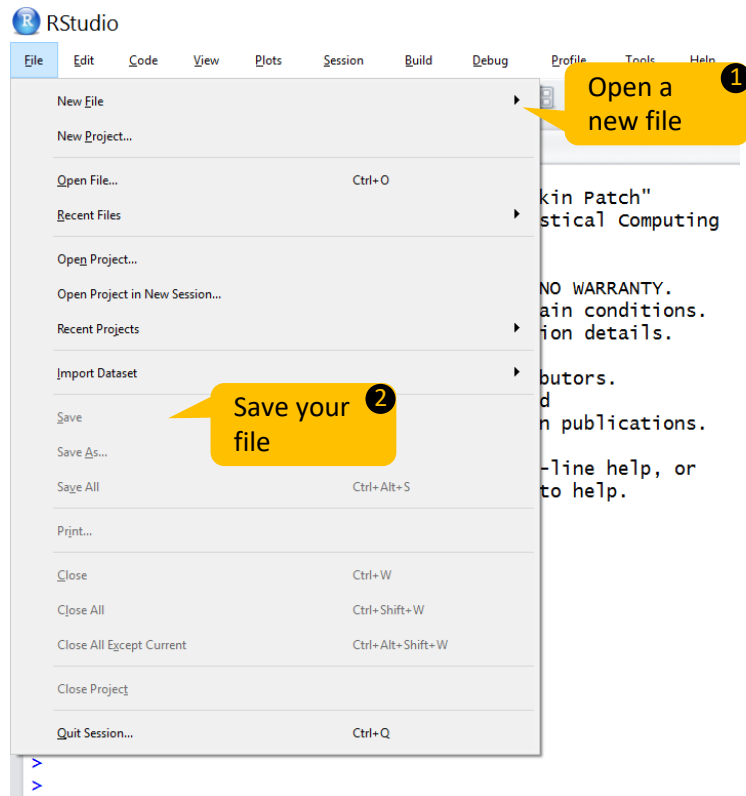
Use the code editor in RStudio to run R code



Write and run the following code:

```
print("This is my first  
line of code.")
```

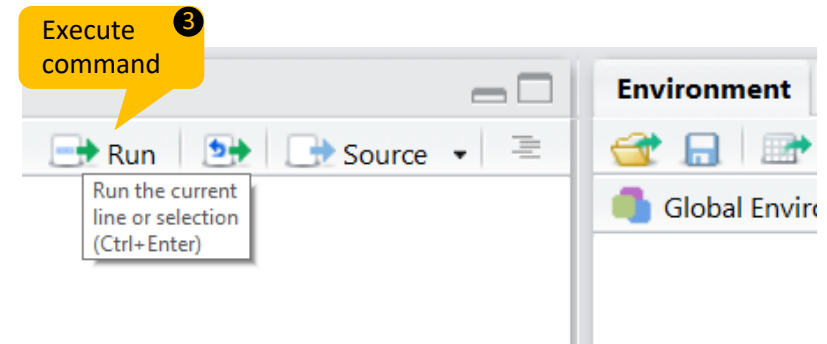
Use the code editor in RStudio to run R code



Write and run the following code:

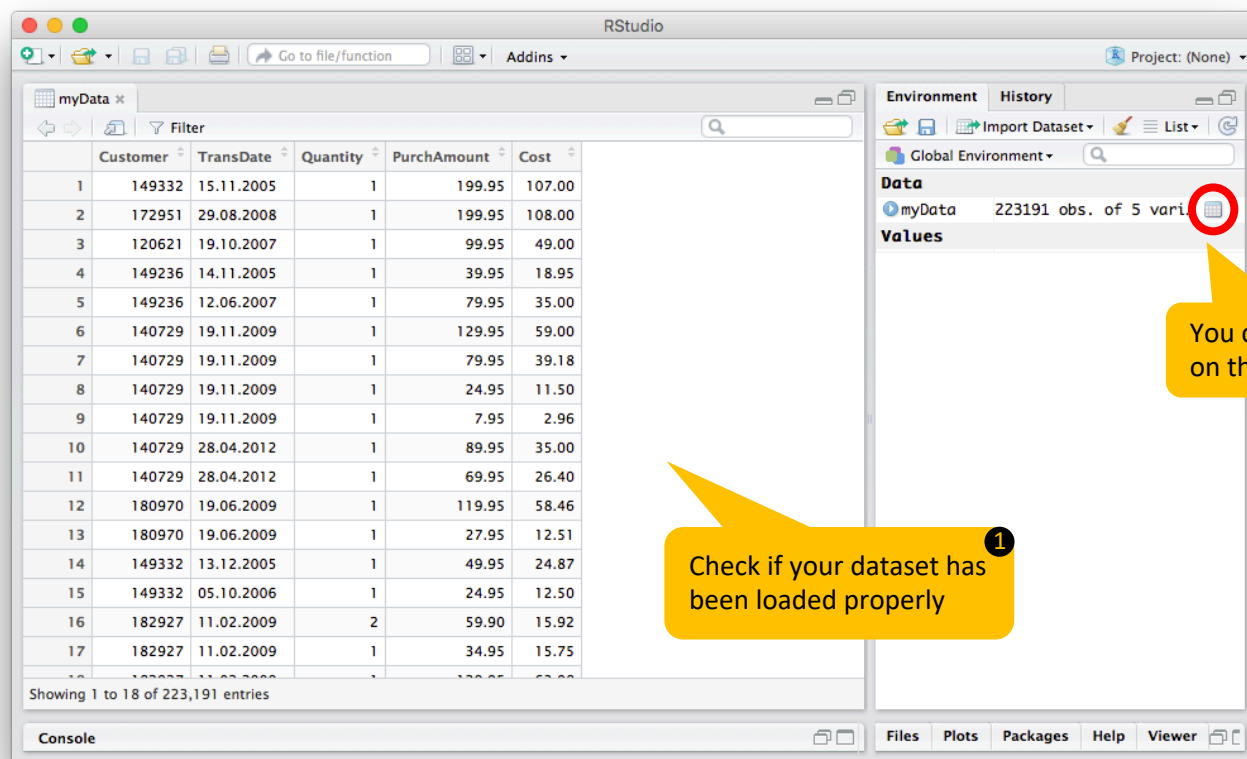
```
print("This is my first  
line of code.")
```

Run your code (and watch what happens in the console):



➤ To run the entire script: Ctrl+Alt+R

RStudio offers further functionalities



View(myData)

Getting to know the code editor