

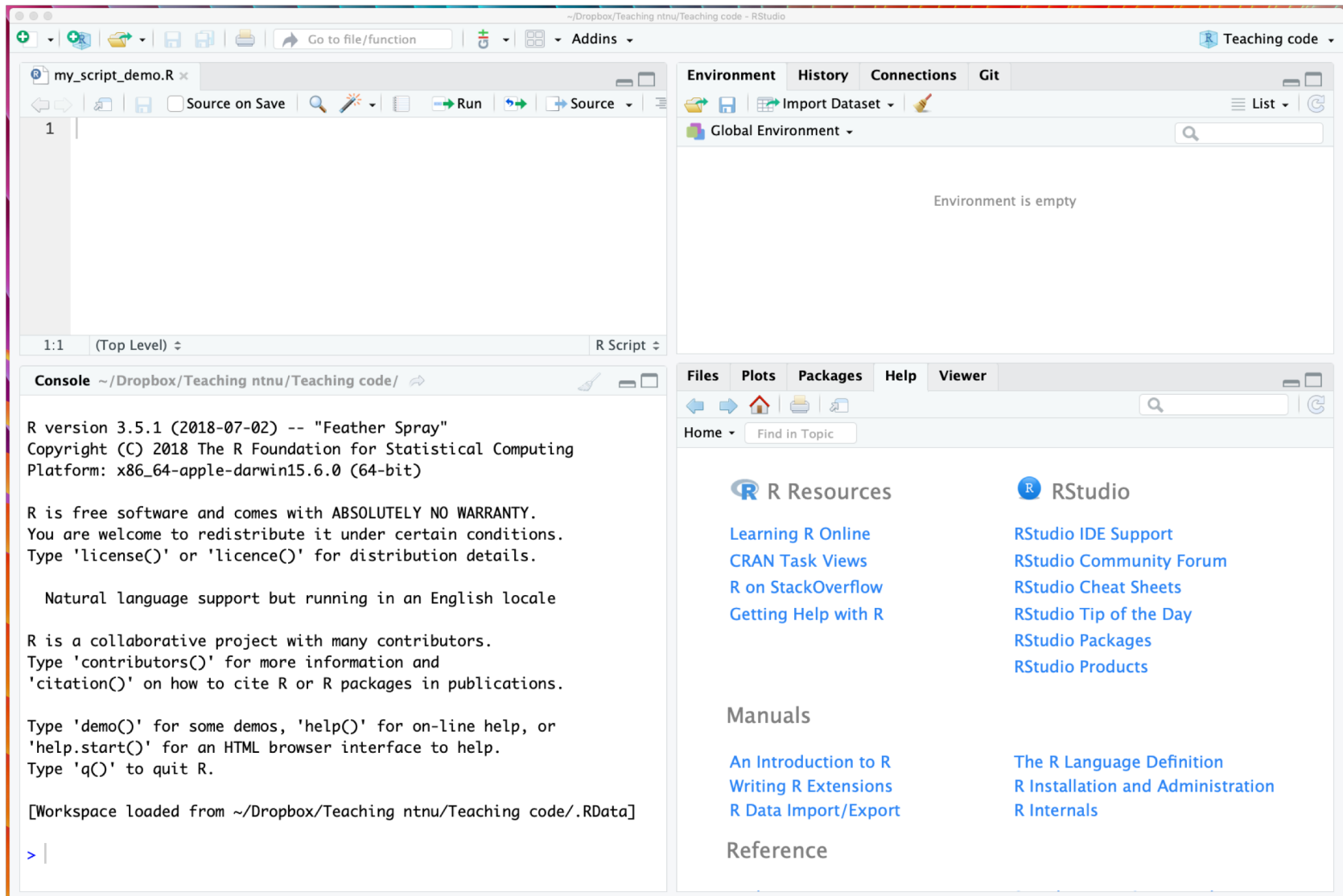
Tips and tricks for using RStudio

Outline

1. Using RStudio and scripts
2. Some key R words for today's exercises

Using scripts in RStudio

Using scripts in RStudio



Using scripts in RStudio

The screenshot displays the RStudio IDE interface, which is divided into four main panes:

- Script Editor (Top Left):** Shows a file named `my_script_demo.R` with a single line of code: `1`. The status bar at the bottom indicates the cursor is at line 1:1, column 1, in the "Top Level" scope of an "R Script".
- Environment Pane (Top Right):** Displays the "Global Environment" and shows that the "Environment is empty".
- Console (Bottom Left):** Contains the R startup message and help text:

```
R version 3.5.1 (2018-07-02) -- "Feather Spray"
Copyright (C) 2018 The R Foundation for Statistical Computing
Platform: x86_64-apple-darwin15.6.0 (64-bit)

R is free software and comes with ABSOLUTELY NO WARRANTY.
You are welcome to redistribute it under certain conditions.
Type 'license()' or 'licence()' for distribution details.

Natural language support but running in an English locale

R is a collaborative project with many contributors.
Type 'contributors()' for more information and
'citation()' on how to cite R or R packages in publications.

Type 'demo()' for some demos, 'help()' for on-line help, or
'help.start()' for an HTML browser interface to help.
Type 'q()' to quit R.

[Workspace loaded from ~/Dropbox/Teaching ntnu/Teaching code/.RData]
> |
```
- Help Pane (Bottom Right):** Displays the "R Resources" and "RStudio" sections. The "R Resources" section includes links to [Learning R Online](#), [CRAN Task Views](#), [R on StackOverflow](#), and [Getting Help with R](#). The "RStudio" section includes links to [RStudio IDE Support](#), [RStudio Community Forum](#), [RStudio Cheat Sheets](#), [RStudio Tip of the Day](#), [RStudio Packages](#), and [RStudio Products](#). The "Manuals" section includes links to [An Introduction to R](#), [Writing R Extensions](#), [R Data Import/Export](#), [The R Language Definition](#), [R Installation and Administration](#), and [R Internals](#). The "Reference" section is also visible.

Using scripts in RStudio

The screenshot displays the RStudio IDE interface, divided into four main panes:

- Script Editor (Top Left):** Shows a file named `my_script_demo.R` with a single line of code: `1`. The status bar at the bottom indicates `1:1 (Top Level)` and `R Script`.
- Environment Pane (Top Right):** Displays the `Global Environment` with the message `Environment is empty`.
- Console (Bottom Left):** Shows the R version `3.5.1 (2018-07-02)` and the operating system `x86_64-apple-darwin15.6.0 (64-bit)`. It also displays the R license information and a workspace load message: `[Workspace loaded from ~/Dropbox/Teaching ntnu/Teaching code/.RData]`.
- Help Pane (Bottom Right):** Displays the `R Resources` and `RStudio` sections, including links to `Learning R Online`, `CRAN Task Views`, `R on StackOverflow`, `Getting Help with R`, `RStudio IDE Support`, `RStudio Community Forum`, `RStudio Cheat Sheets`, `RStudio Tip of the Day`, `RStudio Packages`, `RStudio Products`, `Manuals`, `An Introduction to R`, `Writing R Extensions`, `R Data Import/Export`, `The R Language Definition`, `R Installation and Administration`, and `R Internals`.

Using scripts in RStudio

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- Script Editor (Top Left):** Shows a file named `my_script_demo.R` with a single line of code: `1`. The status bar at the bottom indicates the cursor is at line 1:1, column 1, in the "Top Level" environment.
- Environment Pane (Top Right):** Displays the "Global Environment" and shows that the environment is empty.
- Console (Bottom Left):** Contains the R startup message and instructions. The word "Console" is overlaid in large text. The message includes:
 - R version 3.5.1 (2018-07-02) -- "Feather Spray"
 - Copyright (C) 2018 The R Foundation for Statistical Computing
 - Platform: x86_64-apple-darwin15.6.0 (64-bit)
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 - Type `'demo()'` for some demos, `'help()'` for on-line help, or `'help.start()'` for an HTML browser interface to help.
 - Type `'q()'` to quit R.
 - [Workspace loaded from `~/Dropbox/Teaching ntnu/Teaching code/.RData`]
- Help Pane (Bottom Right):** Displays the "R Resources" and "RStudio" sections, including links to learning resources, manuals, and reference materials.

Using scripts in RStudio

The screenshot displays the RStudio interface with four main panes:

- Script Editor (Top Left):** Shows a file named `my_script_demo.R` with a single line of code: `1`. The status bar at the bottom indicates `1:1 (Top Level) R Script`.
- Environment Pane (Top Right):** Titled "Teaching code", it shows the `Global Environment` with the message "Environment is empty".
- Console (Bottom Left):** Displays the R version `3.5.1 (2018-07-02)` and the "Feather Spray" theme. It includes the copyright notice for the R Foundation and instructions on how to use `license()`, `licence()`, `demo()`, `help()`, `help.start()`, and `q()`. It also shows the workspace loaded from `~/Dropbox/Teaching ntnu/Teaching code/.RData`.
- Help Pane (Bottom Right):** Titled "Teaching code", it provides links to **R Resources** (Learning R Online, CRAN Task Views, R on StackOverflow, Getting Help with R) and **RStudio** (RStudio IDE Support, RStudio Community Forum, RStudio Cheat Sheets, RStudio Tip of the Day, RStudio Packages, RStudio Products). It also lists **Manuals** (An Introduction to R, Writing R Extensions, R Data Import/Export) and **Reference** (The R Language Definition, R Installation and Administration, R Internals).

Using scripts in RStudio

The image shows the RStudio interface with four main panes:

- Script window:** Displays a file named `my_script_demo.R` with the text "Script window" in the center. The status bar at the bottom indicates "1:1 (Top Level)" and "R Script".
- Environment pane:** Located at the top right, it shows the "Global Environment" and states "Environment is empty".
- Console:** Located at the bottom left, it shows the R version (3.5.1) and copyright information. It also displays the R license text and workspace loading status.
- Help pane:** Located at the bottom right, it displays "R Resources" and "RStudio" links, as well as "Manuals" and "Reference" sections.

Script window content:

```
1
```

Script window

1:1 (Top Level) R Script

Console:

```
R version 3.5.1 (2018-07-02) -- "Feather Spray"
Copyright (C) 2018 The R Foundation for Statistical Computing
Platform: x86_64-apple-darwin15.6.0 (64-bit)

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[Workspace loaded from ~/Dropbox/Teaching ntnu/Teaching code/.RData]
> |
```

Environment pane:

Teaching code - RStudio

Environment History Connections Git

Import Dataset

Global Environment

Environment is empty

Help pane:

Files Plots Packages Help Viewer

Home Find in Topic

R Resources

- [Learning R Online](#)
- [CRAN Task Views](#)
- [R on StackOverflow](#)
- [Getting Help with R](#)

RStudio

- [RStudio IDE Support](#)
- [RStudio Community Forum](#)
- [RStudio Cheat Sheets](#)
- [RStudio Tip of the Day](#)
- [RStudio Packages](#)
- [RStudio Products](#)

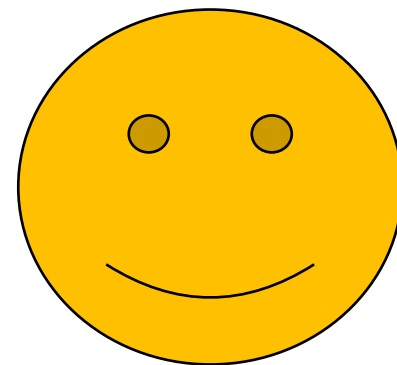
Manuals

- [An Introduction to R](#)
- [Writing R Extensions](#)
- [R Data Import/Export](#)
- [The R Language Definition](#)
- [R Installation and Administration](#)
- [R Internals](#)

Reference

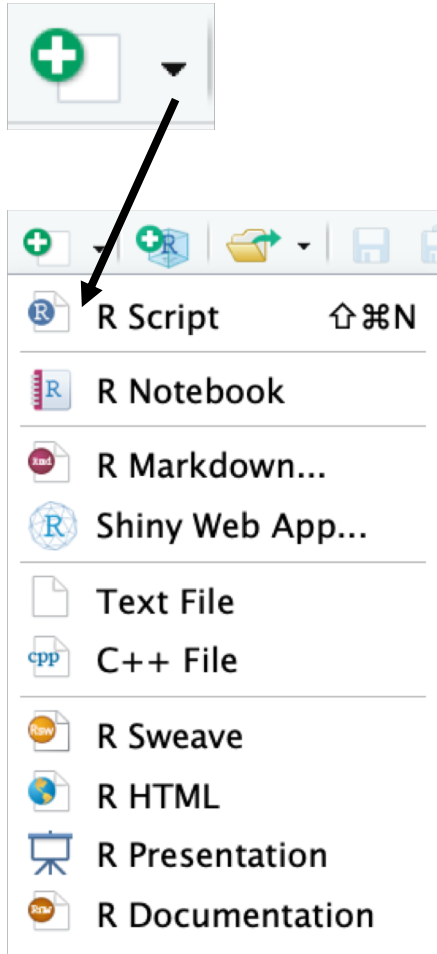
Why use scripts?

- You can save your code
- Easier to change the code
- Easier to repeat analyses – can run straight from the script
- You can use comments

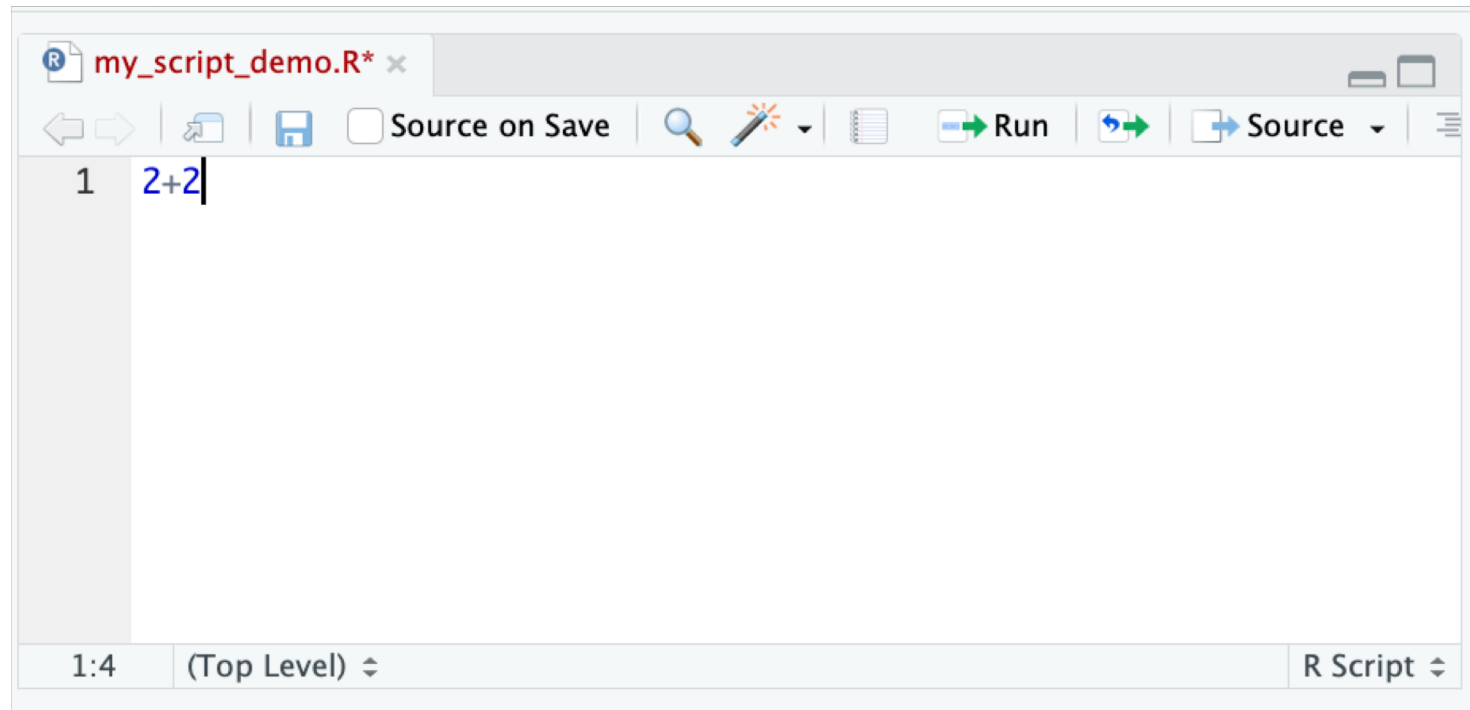


Basics of an R script

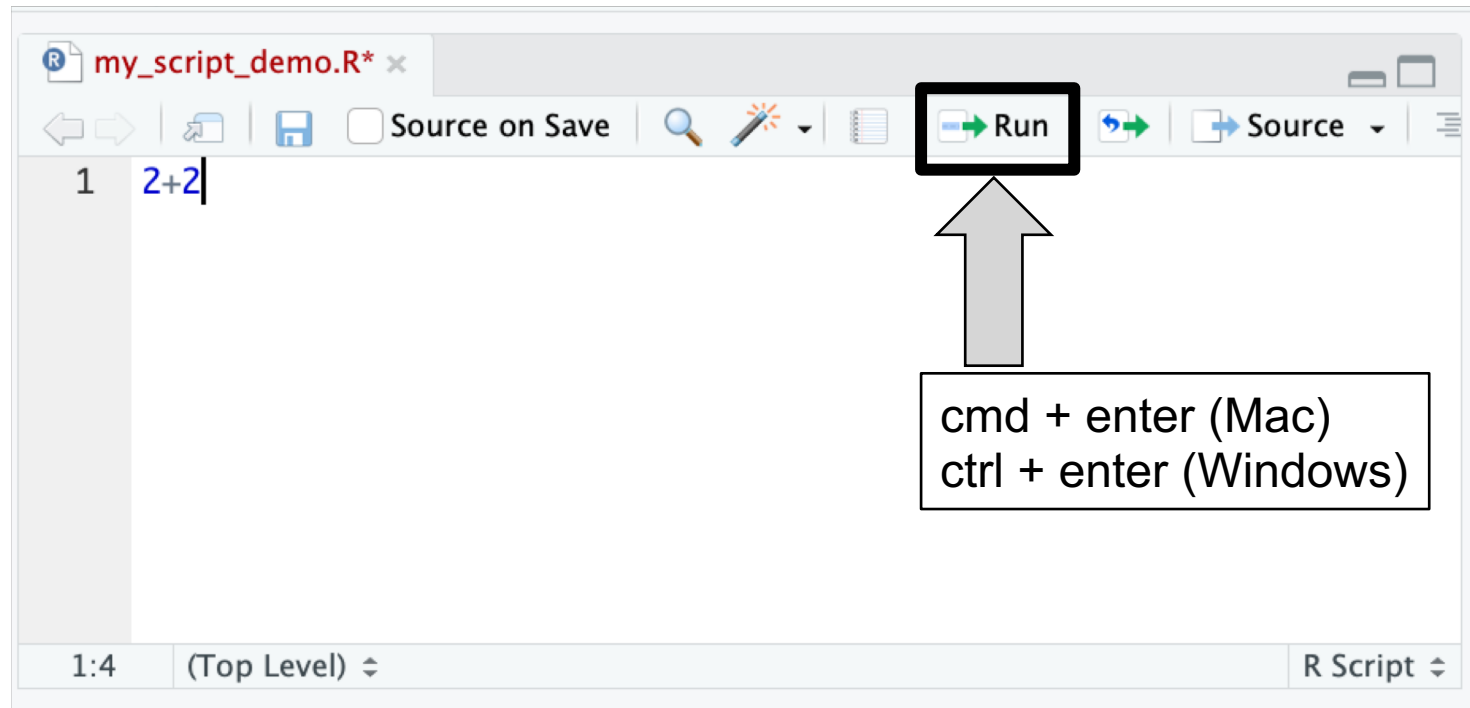
To open a new script



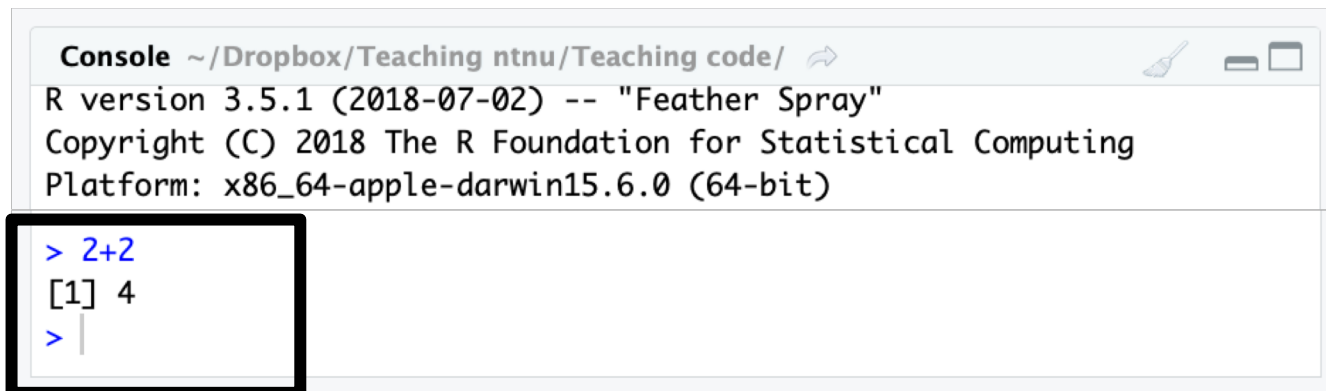
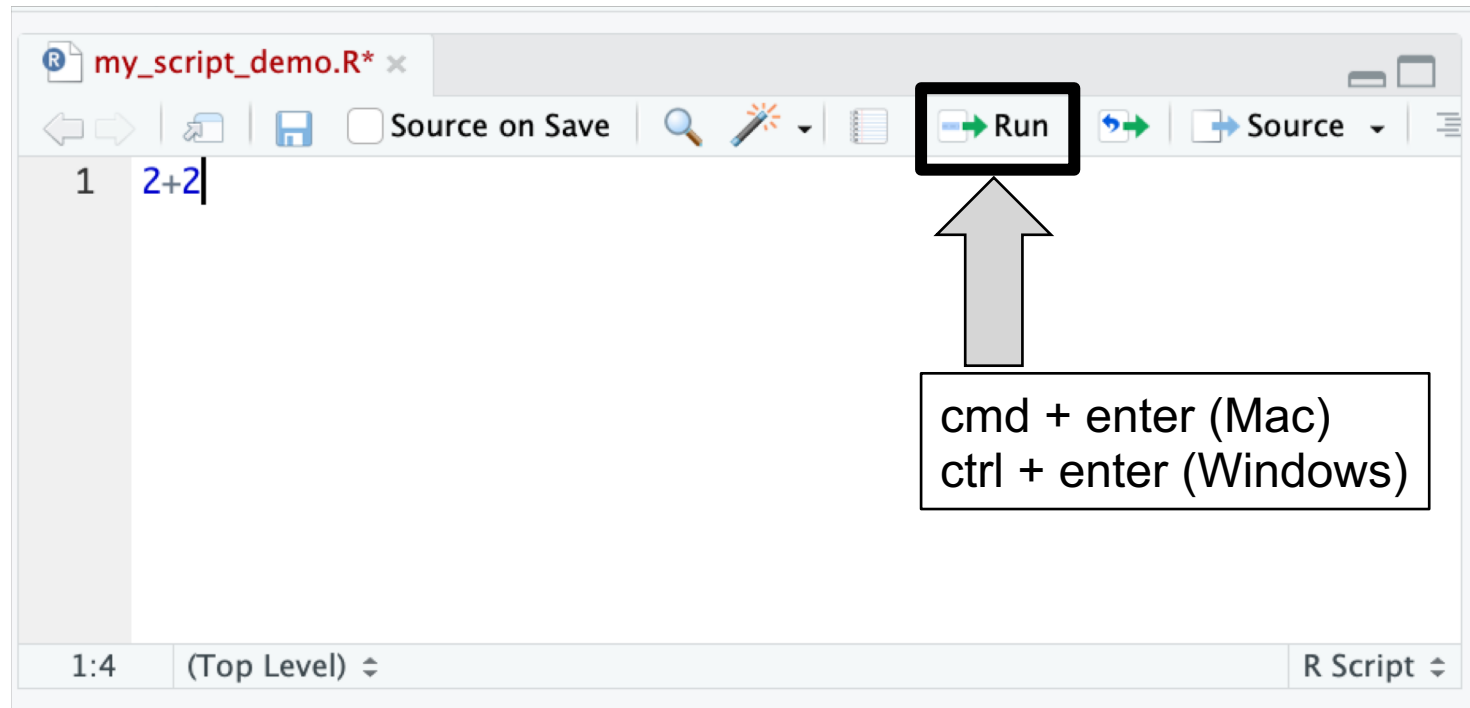
Basics of an R script



Basics of an R script



Basics of an R script



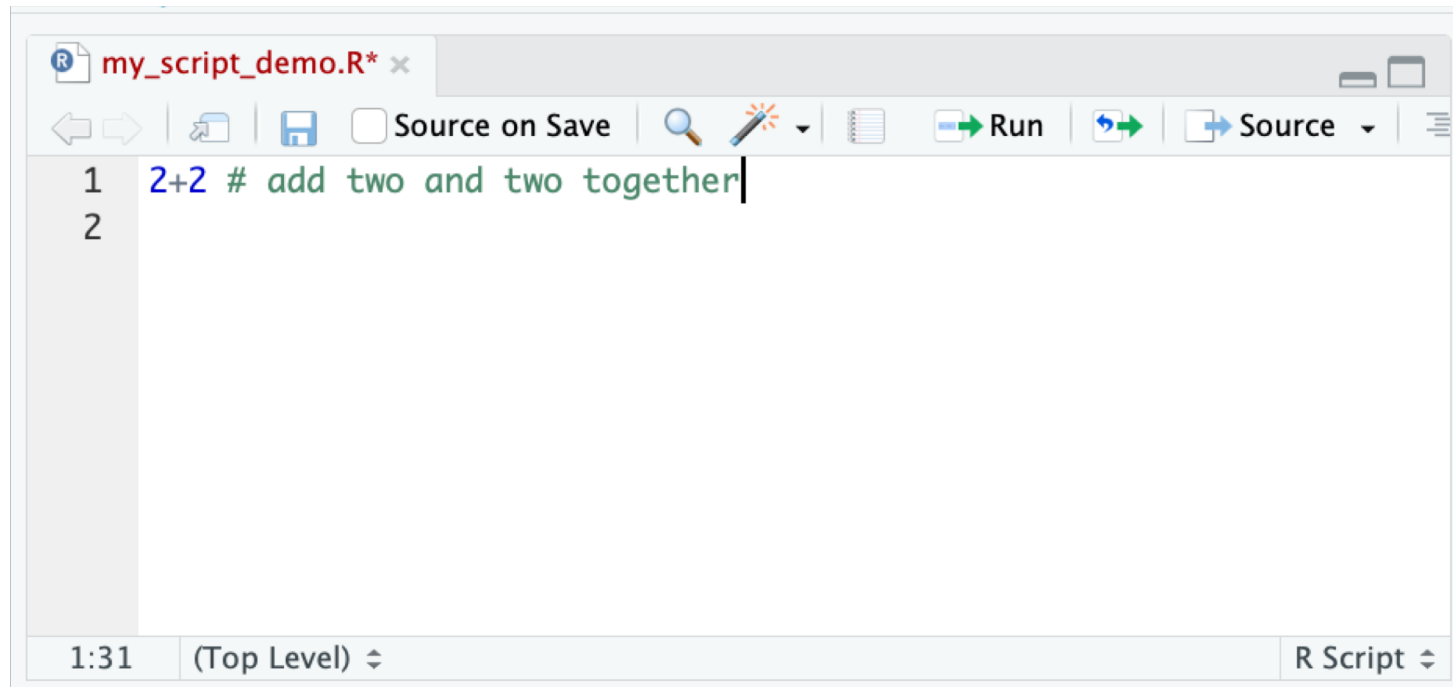
Comments

Comments

```
# this is a comment
```

Comments

```
# this is a comment
```

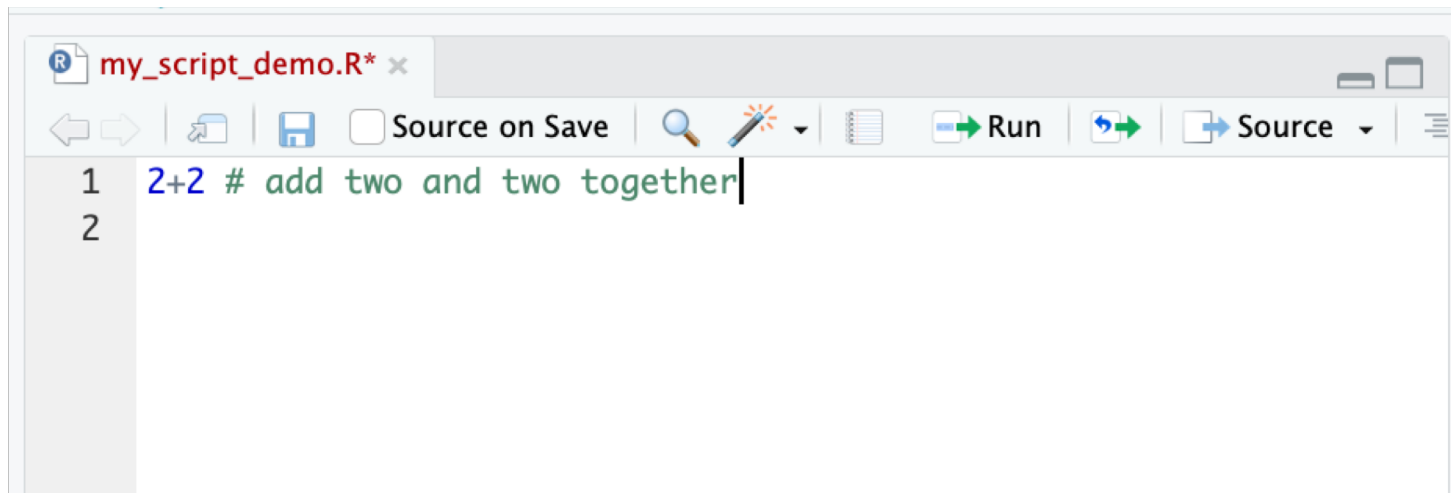


The screenshot shows an R script editor window titled "my_script_demo.R*". The editor contains two lines of code: line 1 is "2+2" and line 2 is "# add two and two together". The comment is highlighted in green. The editor has a toolbar with icons for navigation, search, and execution. The status bar at the bottom shows "1:31" and "(Top Level)".

```
1 2+2
2  # add two and two together
```

Comments

```
# this is a comment
```



The screenshot shows an R script editor window. The title bar reads "my_script_demo.R*". The toolbar includes icons for navigation, saving, and running. The source code area contains two lines: line 1 is "2+2 # add two and two together" and line 2 is empty. The comment part of the first line is highlighted in green.

```
1 2+2 # add two and two together
2
```

Console ~/Dropbox/Teaching ntnu/Teaching code/ ↗

Platform: x86_64-apple-darwin15.6.0 (64-bit)

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```
> 2+2 # add two and two together
```

```
[1] 4
```

```
> |
```

Some key words we will need today

Some key words we will need today

- Assign
- Object
- Function
- Argument

Some key words we will need today

- Assign
- Object
- Functions
- Arguments



Can learn about these in RStudio find script at:
<https://www.math.ntnu.no/emner/ST2304/2019v/Week2/>

right click script file and choose > Save As

Revision example

Object



Function



```
mean_W_times <- mean(W_times)
```

Assign



Argument
(this one is an
object too)



Summary

1. Using RStudio and scripts

2. Key words:

- Assign
- Object
- Function
- Argument

Summary

1. Using RStudio and scripts
2. Key words:
 - Assign
 - Object
 - Function
 - Argument

Keep coming back to lecture, glossary, R resources, google, and help!