RStudio IDE : : **CHEAT SHEET**

Documents and Apps

Open Shiny, R Markdown, knitr, Sweave, LaTeX, .Rd files and more in Source Pane

Check spelling | Render output | Choose output format | Configure render options | Insert code chunk | Publish to server

Jump to previous chunk | Jump to next chunk | Run code | Show file outline | Visual Editor (reverse side)

Jump to section or chunk

Run this and all previous code chunks | Run this code chunk

Set knitr chunk options

Access markdown guide at **Help > Markdown Quick Reference**
See reverse side for more on **Visual Editor**

RStudio recognizes that files named **app.R**, **server.R**, **ui.R**, and **global.R** belong to a shiny app

Run app | Choose location to view app | Publish to shinyapps.io or server | Manage publish accounts

Package Development

Create a new package with
File > New Project > New Directory > R Package

Enable roxygen documentation with
Tools > Project Options > Build Tools

Roxygen guide at **Help > Roxygen Quick Reference**

See package information in the **Build Tab**

Install package and restart R | Run devtools::load_all() and reload changes

Run R CMD check

Customize package build options

Load All ^⇧L
Clean and Rebuild
Test Package ^⇧T
Check Package ^⇧E
Build Source Package
Build Binary Package
Configure Build Tools...

Clear output and rebuild

Run package tests

Source Editor

Navigate backwards/forwards | Open in new window | Save | Find and replace | Compile as notebook | Run selected code

report.Rmd | app.R | script.R

Source on Save | Run | Source

```
1  # Good Start...
2
3
4
5
6  "P0030001"
7  "P0030002"
8  "P0030003"
9  "P0030004"
10
11
12  get_digit <- function() {
13    ("num" %% (10 ^ n))
14    %/% (10 ^ (n - 1))
15  }}
16
17
18
19  fo
20
21
22
23
24
25
26
```

Re-run previous code | Source with or w/out Echo or as a Local Job | Show file outline

Multiple cursors/column selection with **Alt + mouse drag**.

Code diagnostics that appear in the margin. Hover over diagnostic symbols for details.

Syntax highlighting based on your file's extension

Tab completion to finish function names, file paths, arguments, and more.

for {snippet}
for {base}
force {base}

for (${1:variable} in ${2:vector}) {
  ${0}
}

Multi-language code snippets to quickly use common blocks of code.

Jump to function in file | Change file type

Console | Terminal | R Markdown | Jobs

```
R R 4.1.0 · ~/Desktop/app/
[1] 3
> 2 + 3
[1] 2 + 3
>
> 3 + 4
>
> View(mtcars)
>
```

Working Directory | Run scripts in separate sessions | Maximize, minimize panes

Ctrl/Cmd + ↑ to see history | R Markdown Build Log | Drag pane boundaries

RStudio opens plots in a dedicated **Plots** pane

Files | Plots | Packages | Help | Viewer
Zoom | Export | Publish

Navigate recent plots | Open in window | **Export plot** | Delete plot | Delete all plots

GUI **Package** manager lists every installed package

Files | Plots | Packages | Help | Viewer
Install | Update

Name	Description	Version
tibble	Simple Data Frames	3.1.2
tidyr	Tidy Messy Data	1.1.3

Install Packages | Update Packages | Browse package site

Click to load package with **library()**. Unclick to detach package with **detach()**.

Tab Panes

Import data with wizard | History of past commands to run/copy | Manage external databases | View memory usage | R tutorials

Environment | History | Connections | Build | Git | Tutorial

Import Dataset | 148 MiB | List

R | Global Environment

Load workspace | Save workspace | Clear R workspace | Search inside environment

Choose environment to display from list of parent environments | Display objects as list or grid

Data
df   3 obs. of 2 variables
Values
x   1
Functions
foo   function (x)

Displays saved objects by type with short description | View in data viewer | View function source code

Files | Plots | Packages | Help | Viewer
New Folder | Delete | Rename | More

Home | Desktop | app

Copy...
Copy To...
Move...
Copy Folder Path to Clipboard
Set As Working Directory
Go To Working Directory
Open New Terminal Here
Show Folder in New Window
Show Hidden Files

More file options

Create folder | Delete file | Rename file | Change directory

Path to displayed directory

Name		Modified
app.R		Jul 10, 2021, 6:21 PM
app.Rproj	303 B	Jul 10, 2021, 4:51 PM

A File browser keyed to your working directory. Click on file or directory name to open.

RStudio opens documentation in a dedicated **Help** pane

Files | Plots | Packages | Help | Viewer
R: Render R Markdown | Find in Topic | Refresh Help Topic

Home page of helpful links | Search within help file | Search for help file

Viewer pane displays HTML content, such as Shiny apps, RMarkdown reports, and interactive visualizations

Files | Plots | Packages | Help | Viewer
Publish

Stop Shiny app | Publish to shinyapps.io, rpubs, RSConnect, … | Refresh

View(<data>) opens spreadsheet like view of data set

Filter

	mpg	cyl	disp	hp	drat	wt	qsec	vs	am
Mazda RX4	21.0	6	160.0	110	3.90	2.620	16.46	0	1
Mazda RX4 Wag	21.0	6	160.0	110	3.90	2.875	17.02	0	1

Filter rows by value or value range | Sort by values | Search for value

Version Control

Turn on at **Tools > Project Options > Git/SVN**

A Added | M Modified
D Deleted | R Renamed | ? Untracked

Stage files: | Commit staged files | Push/Pull to remote | View History | Current branch

Environment | History | Connections | Build | Git | Tutorial
Diff | Commit | (no branch)

Staged	Status	Path
	?	.gitignore
	A M	app.R

Open shell to type commands

Show file diff to view file differences

Changes | History | (no branch) | Stage | Revert | Ignore | Pull | Push

Staged	Status	Path
	?	.gitignore
	A M	app.R
	A M	app.Rproj

Commit message

Amend previous commit | Commit

Show | Staged | Unstaged | Context 5 lines | Ignore Whitespace | Stage All | Discard All

```
@@ -1,13 +1,11 @@
  #
  # This is a Shiny web application. You can run the application by clicking
```

Debug Mode

Use **debug(), browser(),** or a breakpoint and execute your code to open the debugger mode.

Launch debugger mode from origin of error | Open traceback to examine the functions that R called before the error occurred

Console | Terminal | Jobs
```
> hello()

Error
```
Show Traceback
Rerun with Debug

Click next to line number to add/remove a breakpoint. | Highlighted line shows where execution has paused.

```
7  # Indicate whether a positive number is a palindrome
8  palindrome <- function(num) {
9    digits <- floor(log(num, 10)) + 1
10   for (x in 1:(digits %/% 2)) {
11     digit1 <- get_digit(num, x)
12     digit2 <- get_digit(num, (digits + 1) - x)
13     if (digit1 != digit2)
14       return(FALSE)
15   }
16   return(TRUE)
17 }
18
19 # Find the largest palindrome that is the product of two 3-digit
20 biggest_palindrome <- function() {
21   best <- 0
```

Values
digit1 9
digits 8
num   10000L

Traceback
palindrome(candidate) at palindrome.R:12
biggest_palindrome() at palindrome.R:25

```
Browse[3]> f
debug at ~/RStudio-Essentials/Essentials-2/palindrome.R#12: digit2
<- get_digit(num, (digits + 1) - x)
Browse[2]>
```

Run commands in environment where execution has paused | Examine variables in executing environment | Select function in traceback to debug

Console | Terminal | Jobs
Next | Continue | Stop

Step through code one line at a time | Step into and out of functions to run | Resume execution | Quit debug mode

Keyboard Shortcuts

RUN CODE
	Windows/Linux	Mac
Search command history	Ctrl+**arrow-up**	Cmd+**arrow-up**
Interrupt current command	Esc	Esc
Clear console	Ctrl+L	Ctrl+L

NAVIGATE CODE
Go to File/Function	Ctrl+.	Ctrl+.

WRITE CODE
Attempt completion	Tab or Ctrl+Space	Tab or Ctrl+Space
Insert <− (assignment operator)	Alt+-	Option+-
Insert %>% (pipe operator)	Ctrl+Shift+M	Cmd+Shift+M
(Un)Comment selection	Ctrl+Shift+C	Cmd+Shift+C

MAKE PACKAGES
	Windows/Linux	Mac
Load All (devtools)	Ctrl+Shift+L	Cmd+Shift+L
Test Package (Desktop)	Ctrl+Shift+T	Cmd+Shift+T
Document Package	Ctrl+Shift+D	Cmd+Shift+D

DOCUMENTS AND APPS
|		
Knit Document (knitr)	Ctrl+Shift+K	Cmd+Shift+K
Insert chunk (Sweave & Knitr)	Ctrl+Alt+I	Cmd+Option+I
Run from start to current line	Ctrl+Alt+B	Cmd+Option+B

MORE KEYBOARD SHORTCUTS
Keyboard Shortcuts Help	Alt+Shift+K	Option+Shift+K
Show Command Palette	Ctrl+Shift+P	Cmd+Shift+P

View the Keyboard Shortcut Quick Reference with **Tools > Keyboard Shortcuts** or **Alt/Option + Shift + K**
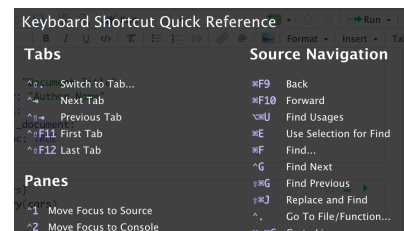
Search for keyboard shortcuts with **Tools > Show Command Palette** or **Ctrl/Cmd + Shift + P**.
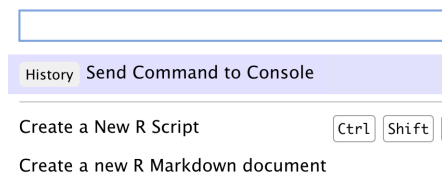
Visual Editor

- Check spelling
- Render output
- Choose output format
- Choose output location
- Insert code chunk
- Jump to previous chunk
- Jump to next chunk
- Run selected lines
- Publish to server
- Show file outline
- Back to Source Editor (front page)
- Block format
- Heading 2
- Lists and block quotes
- Links
- Citations
- Images
- Clear formatting
- Format
- More formatting
- Insert blocks, citations, equations, and special characters
- Insert and edit tables
- R Markdown Including Plots
- File outline
- Insert verbatim code
- Add/Edit attributes
- Jump to chunk or header
- Set knitr chunk options
- Run this and all previous code chunks
- Run this code chunk

```
---
title: "Document Title"
author: "Author Name"
output:
  html_document:
    toc: TRUE
---
```

```
{r setup, include=FALSE}
knitr::opts_chunk$set(echo = TRUE)
```

R Markdown

This is an R Markdown document. Markdown is a simple formatting syntax for authoring HTML, PDF, and MS Word documents.

```
{r cars}
summary(cars)
```

RStudio Workbench

WHY RSTUDIO WORKBENCH?

Extend the open source server with a commercial license, support, and more:

- open and run multiple R sessions at once
- tune your resources to improve performance
- administrative tools for managing user sessions
- collaborate real-time with others in shared projects
- switch easily from one version of R to a different version
- integrate with your authentication, authorization, and audit practices
- work in the RStudio IDE, JupyterLab, Jupyter Notebooks, or VS Code

Download a free 45 day evaluation at **www.rstudio.com/products/workbench/evaluation/**

Share Projects

File > New Project

RStudio saves the call history, workspace, and working directory associated with a project. It reloads each when you re-open a project.

- Start **new R Session** in current project
- Close R Session in project
- Active shared collaborators
- Name of current project
- **Select R Version**
- **Share Project** with Collaborators

Run Remote Jobs

Run R on remote clusters (Kubernetes/Slurm) via the Job Launcher

- Monitor launcher jobs
- Launch a job
- Run launcher jobs remotely