

# Packages & R code

*January 2018*

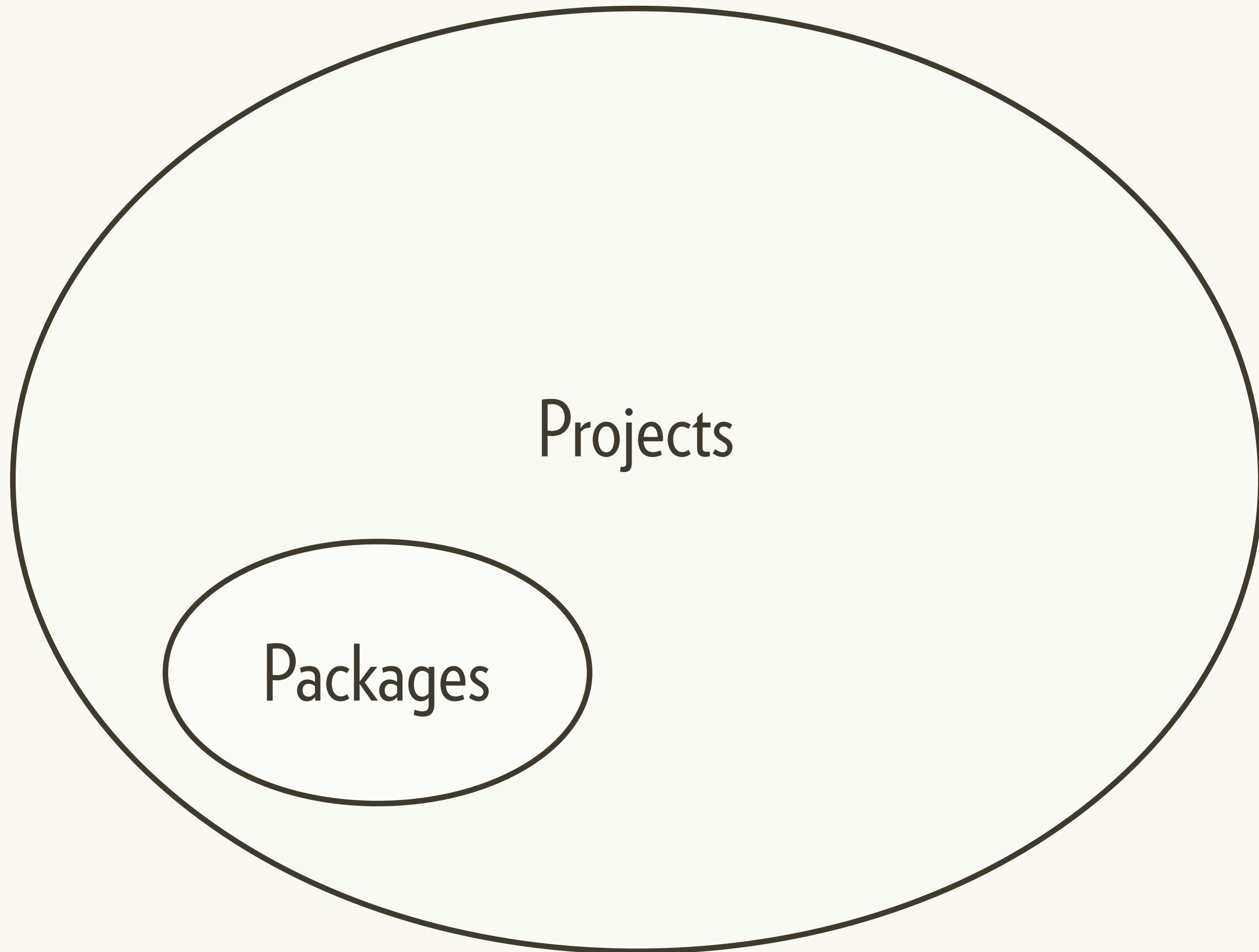
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# Motivation

A package is a set of  
conventions that  
(with the right tools)  
makes your life easier

“Seriously, it doesn’t have to be about sharing your code (although that is an added benefit!). It is about saving yourself time.”

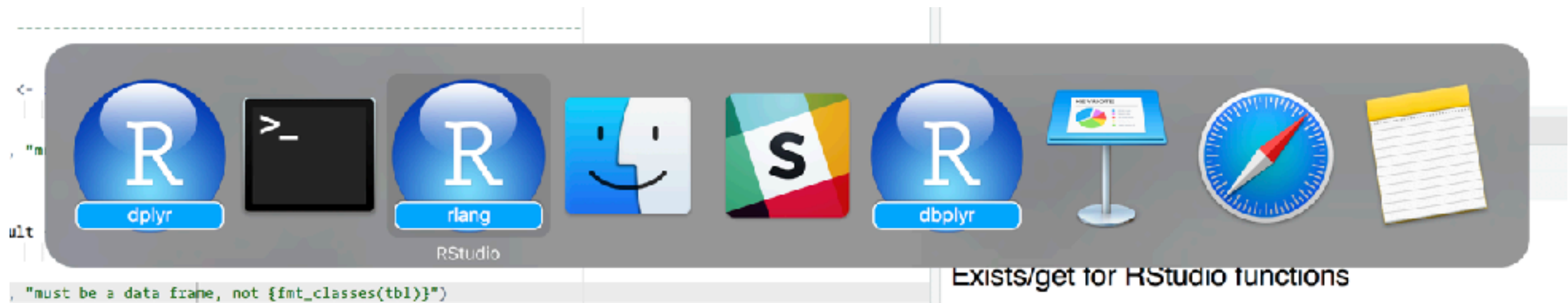
— *Hilary Parker*



RStudio projects

Why use RStudio projects?

3 reasons



Exists/get for RStudio functions

Work on multiple projects simultaneously and independently



# Manage working directories

If the first line of your R script is

```
setwd("C:\\path\\that\\only\\I\\have")
```

I will come into your office and SET YOUR  
COMPUTER ON FIRE 🔥.

— *Jenny Bryan*

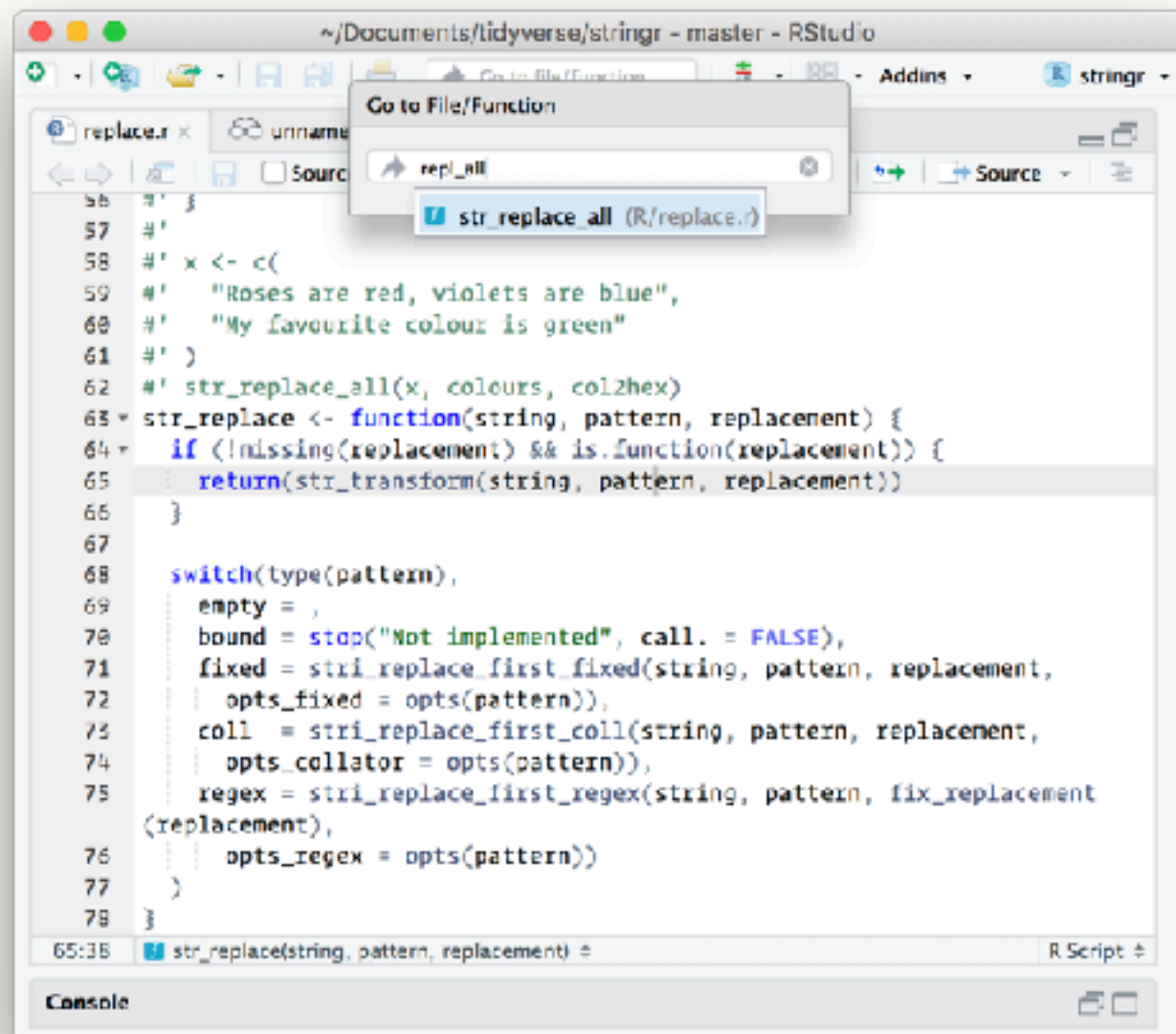
# Manage working directories



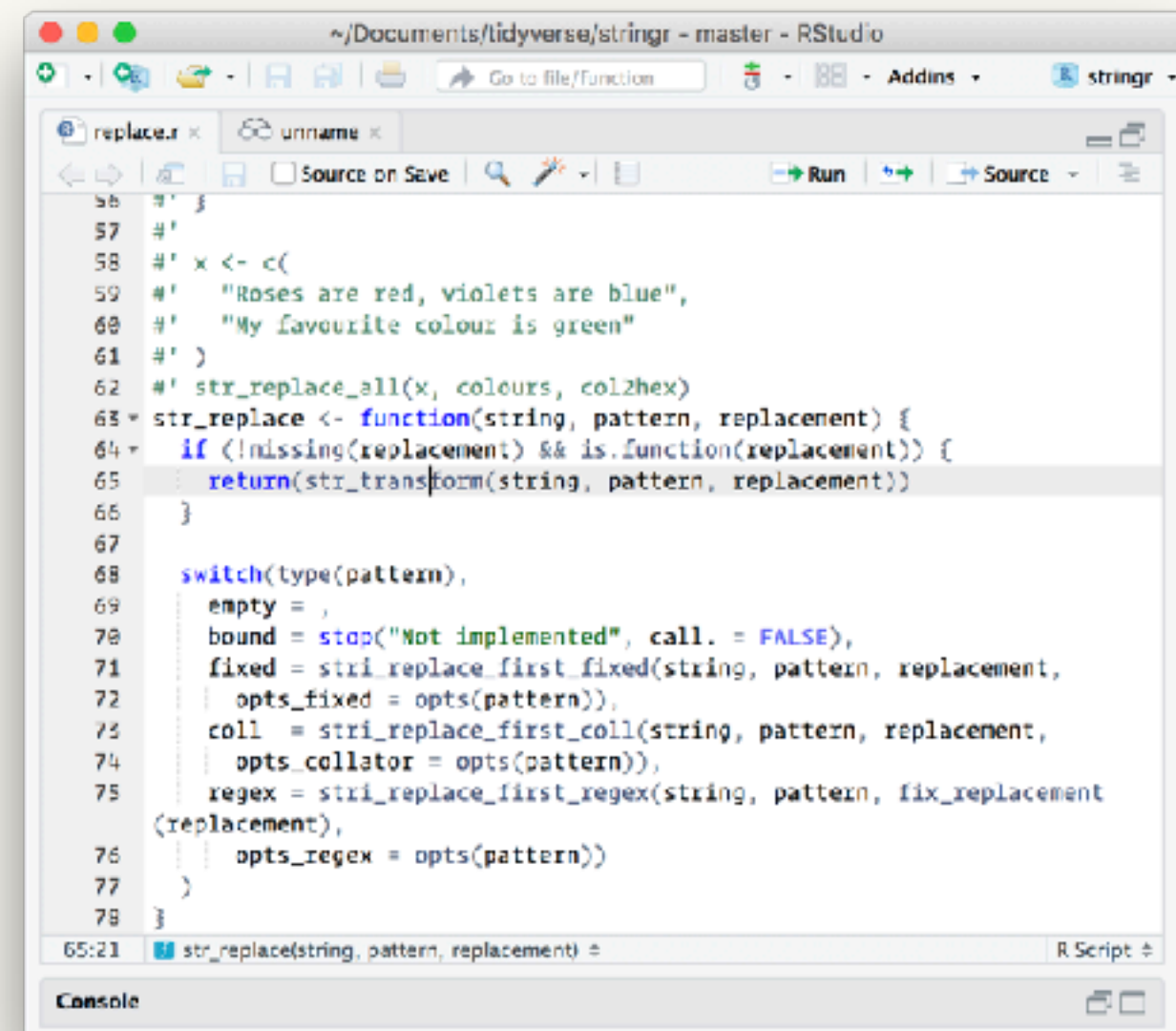
Double click to open project

**mylittlepony.Rproj**

# Enhanced navigation



Ctrl + . = find functions/files



F2 = jump to definition

My first package



```
package.skeleton()
```

**Never use this!**

# Your turn

```
# Verify that you can create a package with:  
usethis::create_package("~/Desktop/mypackage")
```

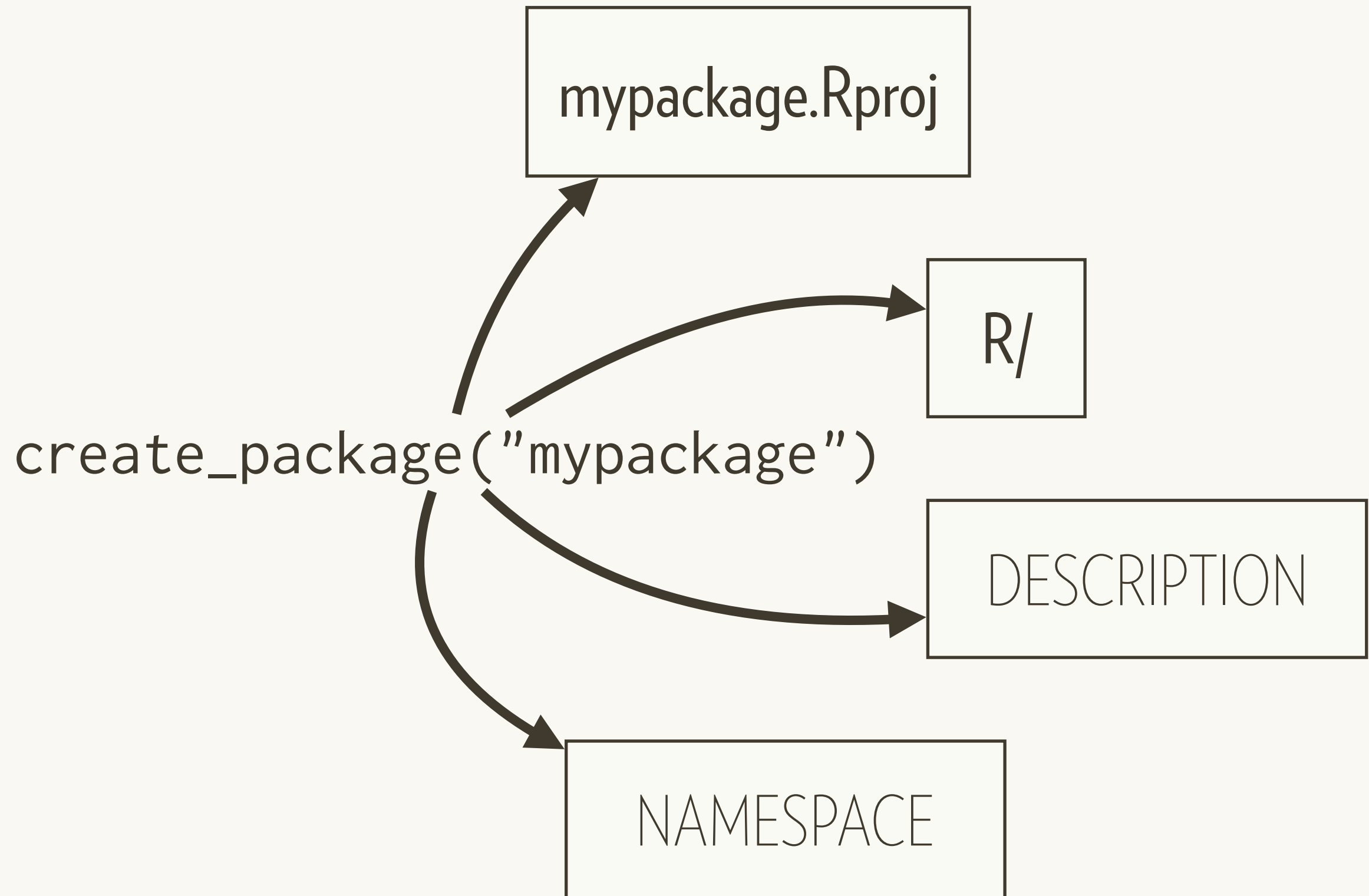


Good place to start; bad place to stop

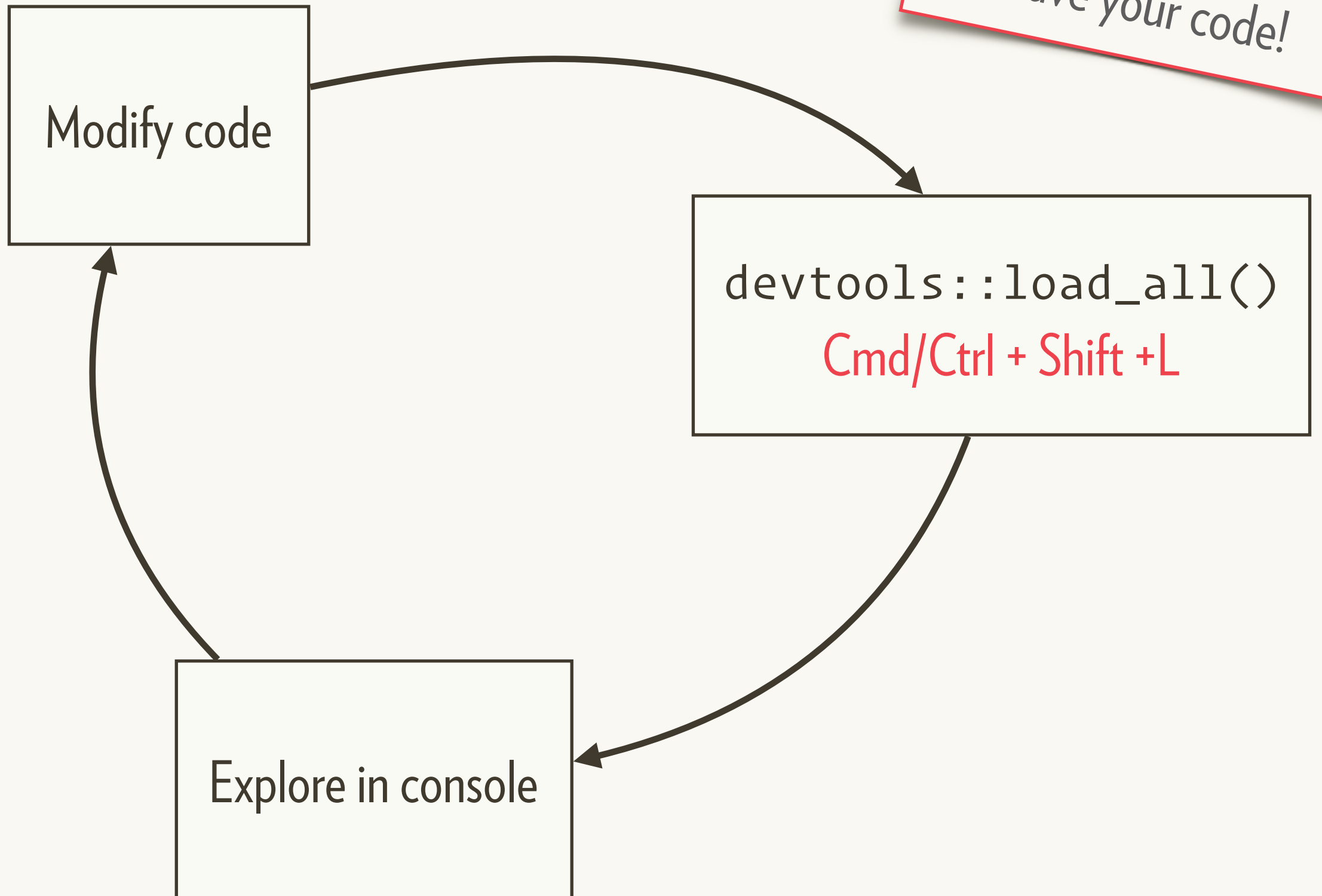
```
# What files and directories are created?
```

```
# You can also create new project using RStudio  
# but it has some slight differences that will  
# cause friction today (but not in general)
```

# What happens we run `create_package()`?



# Why bother?





Change project to:

[mylittlepony]

# Your turn

Jump to `rpony()` using only the keyboard.

Load all the functions (using a keyboard shortcut), then run `rpony(10)`.

Uhoh! I have forgotten to include `Fluttershy` in the list of ponies. Add her, reload the code, and verify that your change worked.

# What if you need to create a new file?

```
# There's a usethis helper for that too!
```

```
usethis::use_r("file-name")
```

```
# Organise files so that related code
```

```
# lives together. If you can give a file
```

```
# a concise and informative name, it's
```

```
# probably about right
```

# Your turn

Use `usethis::use_r("show")` to create a new file

Add a function that prints all ponies in alphabetical order.

Practice using the keyboard shortcuts.

R/RStudio setup

# Workflow setup: your .Rprofile

```
# Setup some code that is run every time  
# you start R: usethis::edit_r_profile()  
  
if (interactive()) {  
  suppressMessages(require(devtools))  
  suppressMessages(require(usethis))  
  suppressMessages(require(testthat))  
}
```

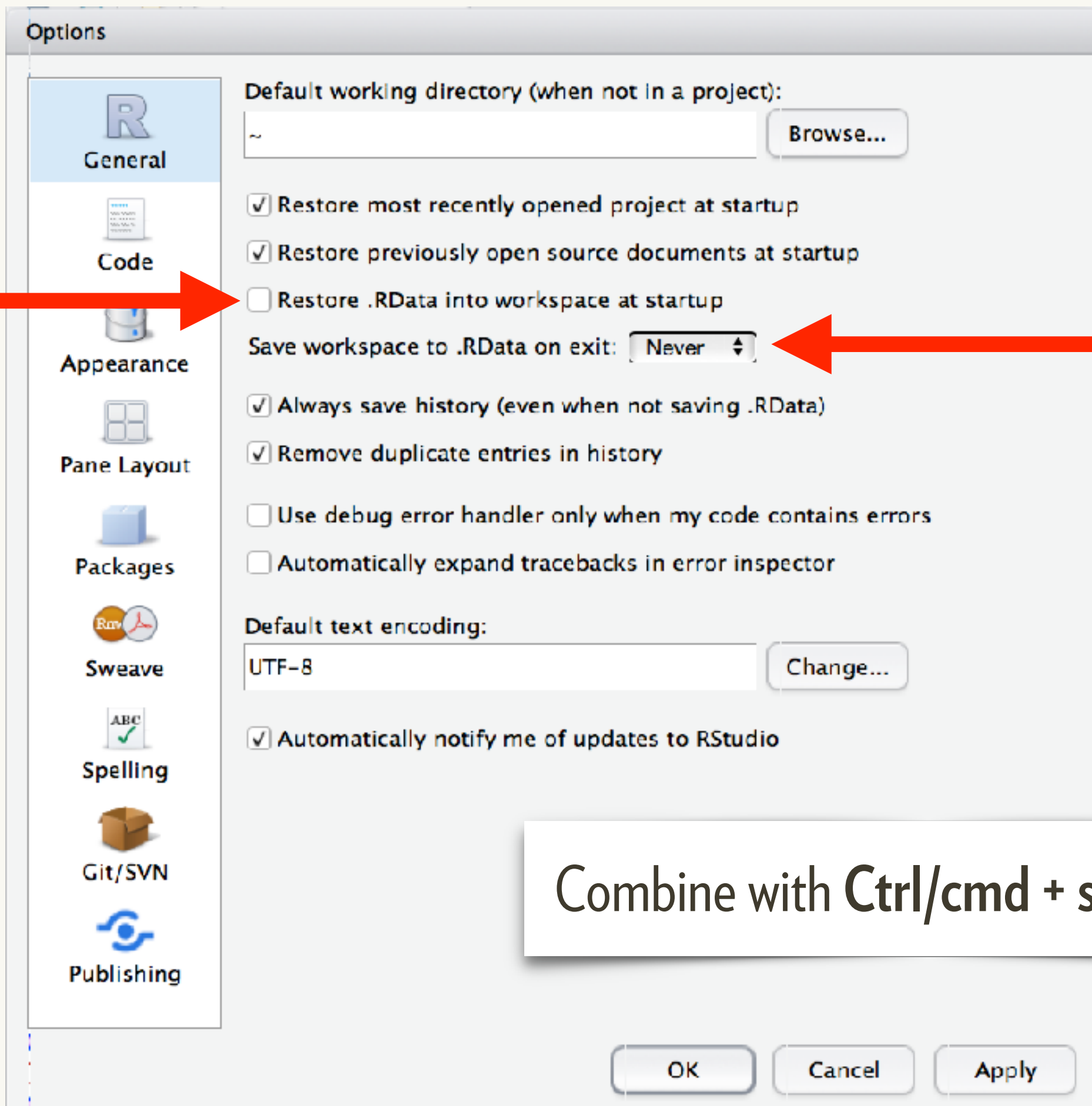
# Never include analysis packages here

```
if (interactive()) {  
  suppressMessages(require(ggplot2))  
  suppressMessages(require(dplyr))  
}
```

While you're in there, also add

```
options(  
  warnPartialMatchArgs = TRUE,  
  warnPartialMatchDollar = TRUE,  
  warnPartialMatchAttr = TRUE  
)
```





Combine with **Ctrl/cmd + shift + F10**

# Your turn

Follow the instructions in previous slides and make sure that you're optimally configured.

Read <https://www.tidyverse.org/articles/2017/12/workflow-vs-script/> for more justification/motivation



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