



What They Forgot to Teach You About R



rstudio::conf
SAN FRANCISCO // JANUARY 27 - 30, 2020

from  Studio

R Startup / configuration

Kara Woo



@karawoo



@kara_woo

Slides:

Jim Hester



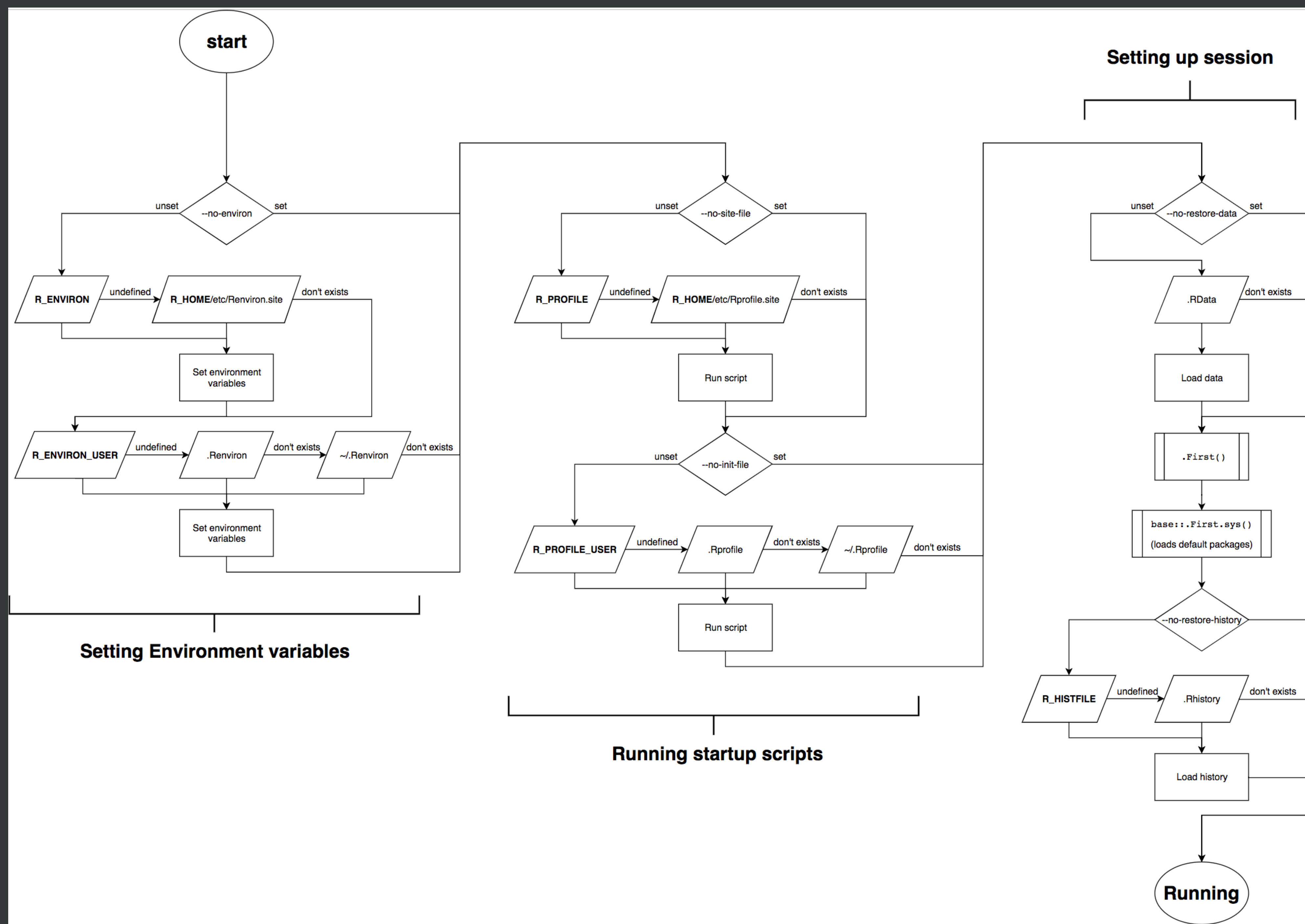
@jimhester

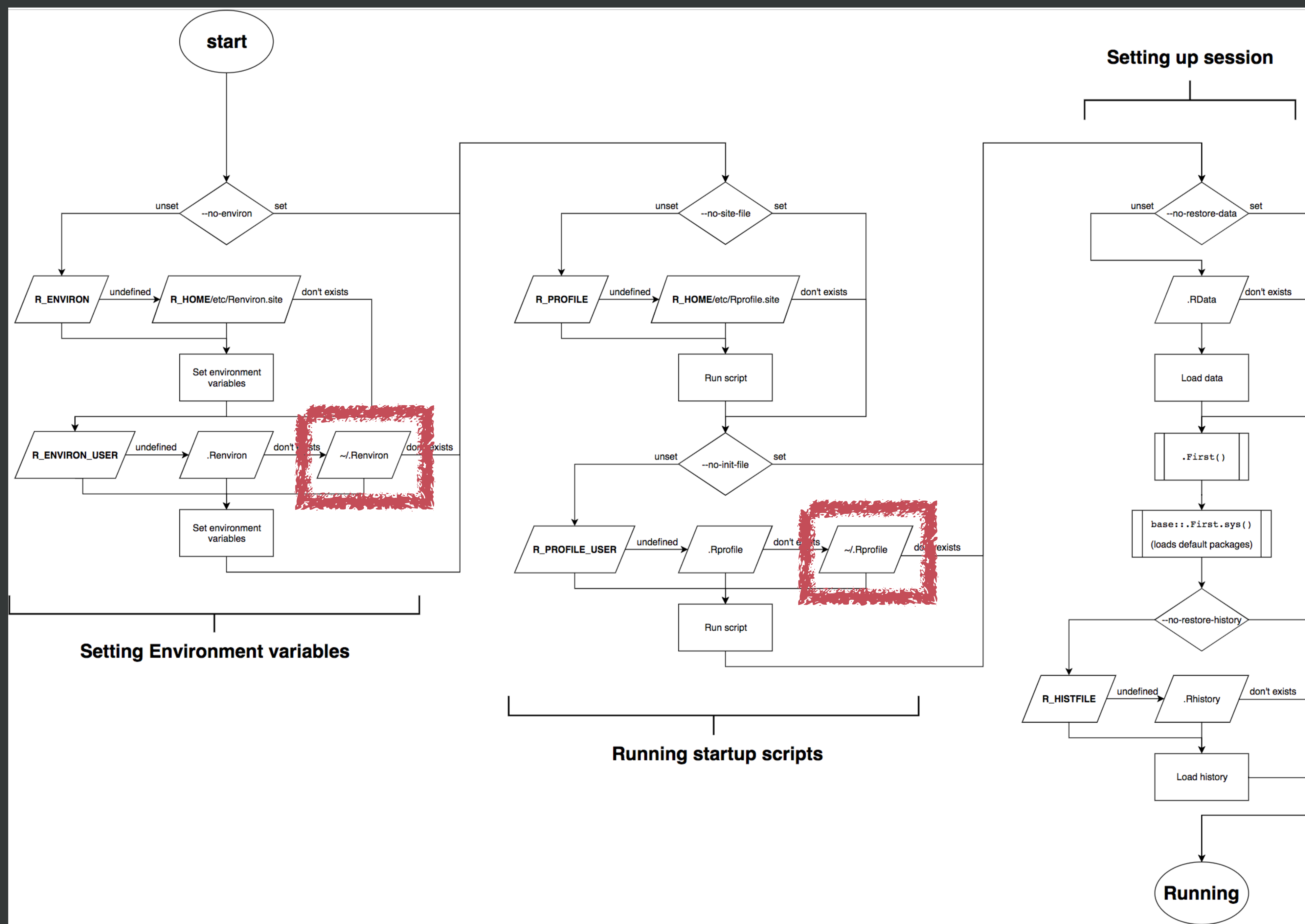
RStudio



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<https://whattheyforgot.org/r-startup.html>





Dotfiles

<https://dotfiles.github.io/>

.Renviron

.Rprofile

GitHub search for filename:.Rprofile.

.Renviron

R specific environment vars


API keys

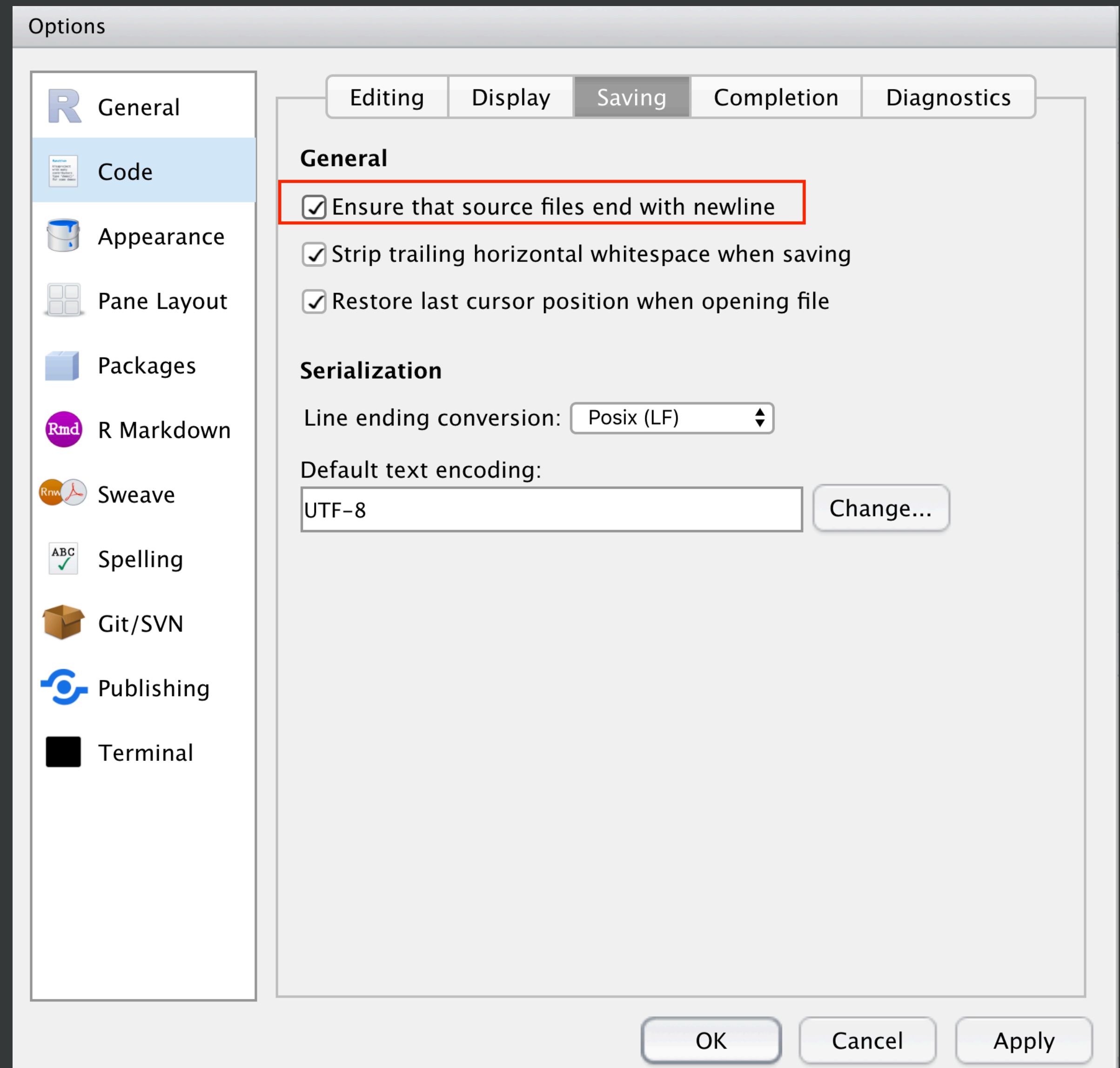
not R code

R_HISTSIZE=100000

GITHUB_PAT=abc123

R_LIBS_USER=~ /R/%p/%v

 .Renviron
and .Rprofile
must end in a
newline!




```
usethis::use_course("rstd.io/wtf-startup")
```

Pick one to open and flesh out:

01_startup_**spartan**.R

01_startup_**comfy**.R*

* worst case, there's always **jim**

.Rprofile

use for helpers you use *interactively*

runs on *every* session

Things to put in .Rprofile

- Set a default CRAN mirror
- Write a welcome message
- Customize R prompt
- Selectively change (but be **careful**)
 - Options, screen width, numeric display
 - Load frequently used **interactive** packages
 - Aliases / shortcuts for frequently used functions

Common pitfalls

```
options(stringsAsFactors = FALSE)
library(tidyverse)
library(ggplot2)
f <- dplyr::filter
theme_set(theme_bw())
```


If something appears in a script,
should *not* be in .Rprofile

Exceptions

```
library(usethis)  
library(devtools)  
s <- summary  
h <- utils::head
```



```
options(repos = c(CRAN = "https://cran.rstudio.org"))
```

```
if (interactive()) {  
  options(width = 120)  
}
```

```
usethis::use_course("rstd.io/wtf-startup")
```

Pick one to open and flesh out:

02_startup_**spartan**.R

02_startup_**comfy**.R*

* worst case, there's always **jim**

Kara's .Rprofile

```
options(  
  repos = c(  
    CRAN = "https://cloud.r-project.org",  
    Sage = "http://ran.synapse.org"  
  ),  
  browserNLdisabled = TRUE,  
  warnPartialMatchArgs = TRUE,  
  warnPartialMatchDollar = TRUE,  
  warnPartialMatchAttr = TRUE,  
  useFancyQuotes = FALSE,  
  usethis.full_name = "Kara Woo",  
  menu.graphics = FALSE  
)
```



```
if (interactive()) {  
  suppressMessages(require(devtools))  
  suppressMessages(require(usethis))  
  suppressMessages(require(testthat))  
  suppressMessages(require(reprex))  
}
```



```
stop( "Meow" )  
#> Error: meow  
  \  
  \  
  /\_/\  
  ( o.o )  
  > ^ <
```


.Rprofile inspiration



Kara Woo

@kara_woo



Alright [#rstats](#) twitter, share with me the useful and/or fun stuff you have in your .Rprofile and .Renviron 🧐

8:36 AM · Jan 11, 2020 · [TweetDeck](#)

[See replies](#)

Maintaining R

Kara Woo



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Jim Hester



@jimhester

RStudio














@jimhester_

<https://whattheyforgot.org/maintaining-r.html>

RStudio: upgrading packages

Update Packages

	Package	Installed	Available	NEWS
<input type="checkbox"/>	ape	5.1	5.2	
<input type="checkbox"/>	BiocManager	1.30.1	1.30.2	
<input type="checkbox"/>	conflicted	0.1.0.9000	1.0.0	
<input checked="" type="checkbox"/>	doParallel	1.0.11	1.0.14	
<input type="checkbox"/>	ggribes	0.5.0	0.5.1	
<input checked="" type="checkbox"/>	igraph	1.1.0	1.2.2	
<input type="checkbox"/>	magic	1.5-8	1.5-9	
<input checked="" type="checkbox"/>	mockery	0.4.1	0.4.1.1	
<input type="checkbox"/>	pROC	1.12.1	1.13.0	
<input type="checkbox"/>	rematch2	2.0.0.9000	2.0.1	
<input type="checkbox"/>	sm	2.2-5.5	2.2-5.6	












Select All Select None Install Updates Cancel

Upgrading packages

```
install.packages( "pkgname" )  
devtools::upgrade_packages( "pkgname" )
```

devtools will upgrade dev packages too

Upgrading all packages

Update Packages				
	Package	Installed	Available	NEWS
<input checked="" type="checkbox"/>	ape	5.1	5.2	
<input checked="" type="checkbox"/>	BiocManager	1.30.1	1.30.2	
<input checked="" type="checkbox"/>	conflicted	0.1.0.9000	1.0.0	
<input checked="" type="checkbox"/>	doParallel	1.0.11	1.0.14	
<input checked="" type="checkbox"/>	ggribges	0.5.0	0.5.1	
<input checked="" type="checkbox"/>	igraph	1.1.0	1.2.2	
<input checked="" type="checkbox"/>	magic	1.5-8	1.5-9	
<input checked="" type="checkbox"/>	mockery	0.4.1	0.4.1.1	
<input checked="" type="checkbox"/>	pROC	1.12.1	1.13.0	
<input checked="" type="checkbox"/>	rematch2	2.0.0.9000	2.0.1	
<input checked="" type="checkbox"/>	sm	2.2-5.5	2.2-5.6	
<div><div>Select All</div><div>Select None</div><div>Install Updates</div><div>Cancel</div></div>				

```
devtools::upgrade_packages(TRUE)
```

Downgrading packages

devtools: Tools to Make Developing R Packages Easier

Collection of package development tools.

Version: 1.13.6
Depends: R (≥ 3.0.2)
Imports: [http](#) (≥ 0.4), [utils](#), [tools](#), [methods](#), [memoise](#) (≥ 1.0.0), [whisker](#), [digest](#), [rs](#)
Suggests: [curl](#) (≥ 0.9), [crayon](#), [testthat](#) (≥ 1.0.2), [BiocInstaller](#), [Rcpp](#) (≥ 0.10.0), [M](#)
Published: 2018-06-27
Author: Hadley Wickham [aut], Jim Hester [aut, cre], Winston Chang [aut], RS
Maintainer: Jim Hester <james.hester at rstudio.com>
BugReports: <https://github.com/r-lib/devtools/issues>
License: [GPL-2](#) | [GPL-3](#) [expanded from: GPL (≥ 2)]
URL: <https://github.com/r-lib/devtools>
NeedsCompilation: no
Materials: [README](#) [NEWS](#)
CRAN checks: [devtools results](#)

Downloads:

Reference manual: [devtools.pdf](#)
Vignettes: [Devtools dependencies](#)
Package source: [devtools 1.13.6.tar.gz](#)
Windows binaries: r-devel: [devtools 1.13.6.zip](#), r-release: [devtools 1.13.6.zip](#), r-oldrel: [de](#)
OS X binaries: r-release: [devtools 1.13.6.tgz](#), r-oldrel: [devtools 1.13.6.tgz](#)
Old sources: [devtools archive](#)

google: cran devtools

old sources: devtools archive

```
devtools::install_version("devtools", "1.13.3")
```

Transferring libraries across R versions

OK If patch: 3.5.0 -> 3.5.1

NOT OK If minor: 3.4.3 -> 3.5.0

Have R handle automatically

MacOS: R_LIBS_USER=~/.Library/R/%v/library

Win: R_LIBS_USER=~/.R/win-library/x.y

```
fs::dir_create(Sys.getenv("R_LIBS_USER"))
```

```
# Install new version of R (lets say 3.5.0 in this example)
# and install fs and tibble packages
install.packages(c("fs", "tibble"))

# Create a new directory for the version of R
fs::dir_create("~/Library/R/3.5/library")

# Re-start R so the .libPaths are updated

# Lookup what packages were in your old package library
pkgs <- installed.packages("~/Library/R/3.4/library") %>%
  tibble::as_tibble()

# Filter these packages as needed

# Install the packages in the new version
install.packages(pkgs$Package)
```