01\_explore-libraries\_jenny.R

ab

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## how jenny might do this in a first exploration  
## purposely leaving a few things to change later!

Which libraries does R search for packages?

.libPaths()

## [1] "/Users/ab/Library/R/3.4/library"   
## [2] "/Library/Frameworks/R.framework/Versions/3.4/Resources/library"

## let's confirm the second element is, in fact, the default library  
.Library

## [1] "/Library/Frameworks/R.framework/Resources/library"

library(fs)  
path\_real(.Library)

## /Library/Frameworks/R.framework/Versions/3.4/Resources/library

Installed packages

library(tidyverse)

## ── Attaching packages ───────────────────────────────────────────────────── tidyverse 1.2.1 ──

## ✔ ggplot2 2.2.1 ✔ purrr 0.2.4  
## ✔ tibble 1.4.2 ✔ dplyr 0.7.4  
## ✔ tidyr 0.8.0 ✔ stringr 1.2.0  
## ✔ readr 1.1.1 ✔ forcats 0.2.0

## ── Conflicts ──────────────────────────────────────────────────────── tidyverse\_conflicts() ──  
## ✖ dplyr::filter() masks stats::filter()  
## ✖ dplyr::lag() masks stats::lag()

ipt <- installed.packages() %>%  
 as\_tibble()  
  
## how many packages?  
nrow(ipt)

## [1] 188

Exploring the packages

## count some things! inspiration  
## \* tabulate by LibPath, Priority, or both  
ipt %>%  
 count(LibPath, Priority)

## # A tibble: 5 x 3  
## LibPath Priority n  
## <chr> <chr> <int>  
## 1 /Library/Frameworks/R.framework/Versions/3.4/Resources… base 14  
## 2 /Library/Frameworks/R.framework/Versions/3.4/Resources… recommend… 15  
## 3 /Library/Frameworks/R.framework/Versions/3.4/Resources… <NA> 73  
## 4 /Users/ab/Library/R/3.4/library optional 1  
## 5 /Users/ab/Library/R/3.4/library <NA> 85

## \* what proportion need compilation?  
ipt %>%  
 count(NeedsCompilation) %>%  
 mutate(prop = n / sum(n))

## # A tibble: 3 x 3  
## NeedsCompilation n prop  
## <chr> <int> <dbl>  
## 1 no 90 0.479   
## 2 yes 90 0.479   
## 3 <NA> 8 0.0426

## \* how break down re: version of R they were built on  
ipt %>%  
 count(Built) %>%  
 mutate(prop = n / sum(n))

## # A tibble: 4 x 3  
## Built n prop  
## <chr> <int> <dbl>  
## 1 3.4.0 66 0.351  
## 2 3.4.1 19 0.101  
## 3 3.4.2 22 0.117  
## 4 3.4.3 81 0.431

Reflections

## reflect on ^^ and make a few notes to yourself; inspiration  
## \* does the number of base + recommended packages make sense to you?  
## \* how does the result of .libPaths() relate to the result of .Library?

Going further

## if you have time to do more ...  
  
## is every package in .Library either base or recommended?  
all\_default\_pkgs <- list.files(.Library)  
all\_br\_pkgs <- ipt %>%  
 filter(Priority %in% c("base", "recommended")) %>%  
 pull(Package)  
setdiff(all\_default\_pkgs, all\_br\_pkgs)

## [1] "assertthat" "backports" "base64enc" "BH"   
## [5] "bindr" "bindrcpp" "broom" "callr"   
## [9] "cellranger" "cli" "colorspace" "crayon"   
## [13] "curl" "DBI" "dbplyr" "debugme"   
## [17] "dichromat" "digest" "dplyr" "evaluate"   
## [21] "forcats" "ggplot2" "glue" "gtable"   
## [25] "haven" "highr" "hms" "htmltools"   
## [29] "httr" "jsonlite" "knitr" "labeling"   
## [33] "lazyeval" "lubridate" "magrittr" "markdown"   
## [37] "mime" "mnormt" "modelr" "munsell"   
## [41] "openssl" "pillar" "pkgconfig" "plogr"   
## [45] "plyr" "psych" "purrr" "R6"   
## [49] "RColorBrewer" "Rcpp" "readr" "readxl"   
## [53] "rematch" "reprex" "reshape2" "rlang"   
## [57] "rmarkdown" "rprojroot" "rstudioapi" "rvest"   
## [61] "scales" "selectr" "stringi" "stringr"   
## [65] "tibble" "tidyr" "tidyselect" "tidyverse"   
## [69] "translations" "utf8" "viridisLite" "whisker"   
## [73] "xml2" "yaml"

## study package naming style (all lower case, contains '.', etc  
  
## use `fields` argument to installed.packages() to get more info and use it!  
ipt2 <- installed.packages(fields = "URL") %>%  
 as\_tibble()  
ipt2 %>%  
 mutate(github = grepl("github", URL)) %>%  
 count(github) %>%  
 mutate(prop = n / sum(n))

## # A tibble: 2 x 3  
## github n prop  
## <lgl> <int> <dbl>  
## 1 F 91 0.484  
## 2 T 97 0.516