R Notebook

```
library(mdsr)

## Loading tidyverse: ggplot2
## Loading tidyverse: tibble
## Loading tidyverse: tidyr
## Loading tidyverse: readr
## Loading tidyverse: purrr
## Loading tidyverse: dplyr

## Conflicts with tidy packages --------------------------------------------
-

## filter(): dplyr, stats
## lag():    dplyr, stats

## Loading required package: lattice

## Loading required package: ggformula

##
## New to ggformula?  Try the tutorials:
##   learnr::run_tutorial("introduction", package = "ggformula")
##   learnr::run_tutorial("refining", package = "ggformula")

## Loading required package: mosaicData

##
## The 'mosaic' package masks several functions from core packages in order
to add
## additional features.  The original behavior of these functions should not
be affected by this.
##
## Note: If you use the Matrix package, be sure to load it BEFORE loading
mosaic.

library(Lahman)

## Warning: package 'Lahman' was built under R version 3.4.2

View(Batting)

#Exercise 4.13
goodPlayers <- Batting %>%
  group_by(playerID) %>%
summarise(StolenBases = sum(SB), HomeRuns = sum(HR)) %>%
filter(StolenBases > 299 & HomeRuns > 299)
  View(goodPlayers)
```

```
#Exercise 4.15
fiftySeason <- Batting %>%
  filter(HR > 49) %>%
  group_by(playerID) %>%
  group_by(yearID) %>%
  mutate(BA = sum(H)/sum(AB)) %>%
  select(playerID, yearID, HR, H, AB, BA) %>%
  arrange(BA)
View(fiftySeason)
paste(fiftySeason[1,1], " has the lowest batting average.")

## [1] "bautijo02  has the lowest batting average."

#Exercise 5.1
homeRunsOverYears <- Teams %>%
  filter(teamID == "CHN") %>%
  select(yearID,HR,HRA) %>%
  gather(key = Allowed_Home_Runs, value = Home_Runs, -yearID)

graph <- ggplot(homeRunsOverYears, aes(x= yearID, y = Home_Runs, color =
Allowed_Home_Runs)) + geom_point() + geom_smooth(method = "lm", se = FALSE)
graph
```