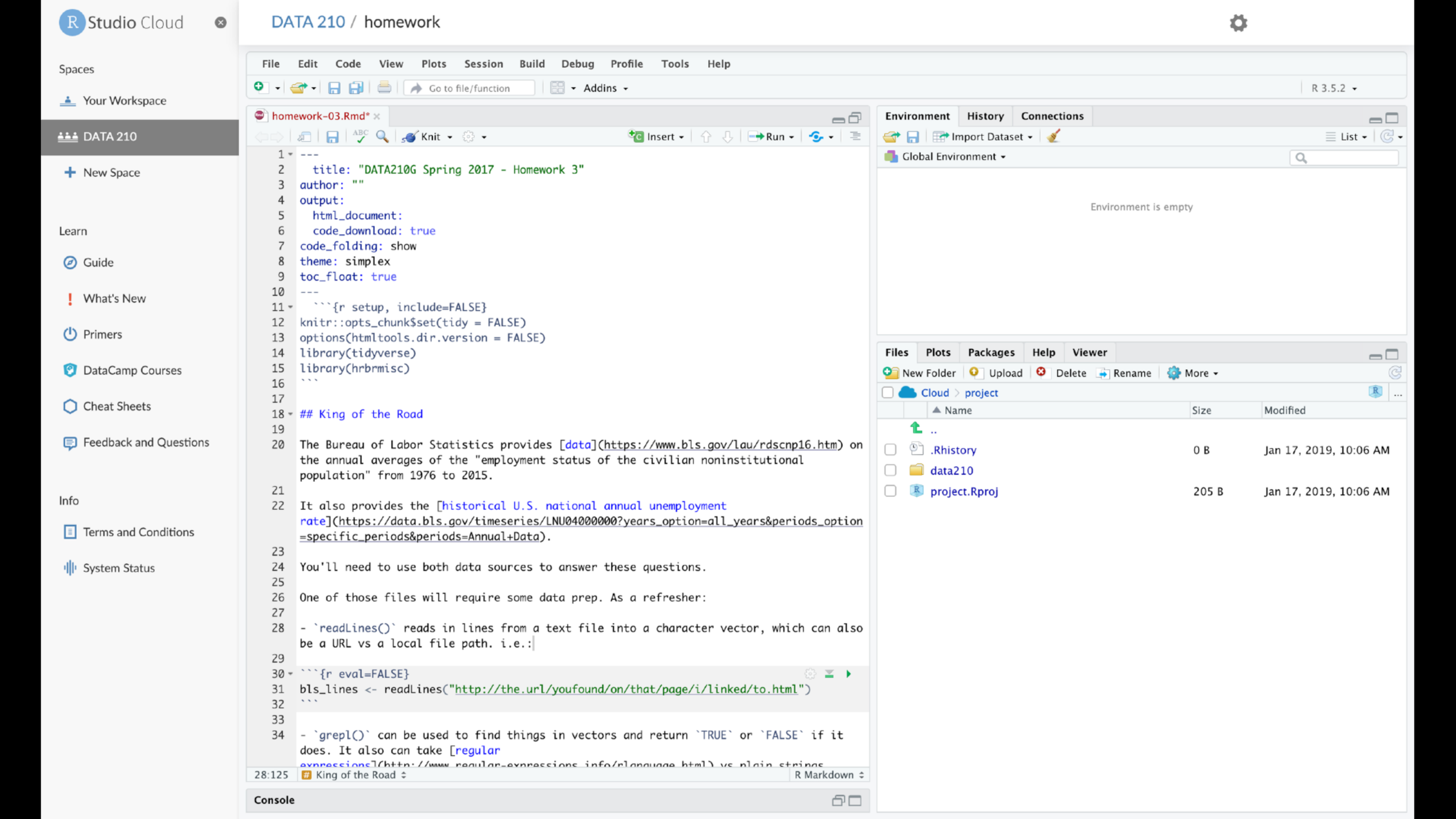
Studio Cloud
DATA 210 / homework
Spaces
Your Workspace
DATA 210
New Space
Learn
Guide
What's New
Primers
DataCamp Courses
Cheat Sheets
Feedback and Questions
Info
Terms and Conditions
System Status
File Edit Code View Plots Session Build Debug Profile Tools Help
Go to file/function
Addins
R 3.5.2
homework-03.Rmd*
Knit
Insert
Run
1 ---
2 title: "DATA210G Spring 2017 - Homework 3"
3 author: ""
4 output:
5 html_document:
6 code_download: true
7 code_folding: show
8 theme: simplex
9 toc_float: true
10 ---
11 ```{r setup, include=FALSE}
12 knitr::opts_chunk$set(tidy = FALSE)
13 options(htmltools.dir.version = FALSE)
14 library(tidyverse)
15 library(hrbrmisc)
16 ```
17
18 ## King of the Road
19
20 The Bureau of Labor Statistics provides [data](https://www.bls.gov/lau/rdscnp16.htm) on the annual averages of the "employment status of the civilian noninstitutional population" from 1976 to 2015.
21
22 It also provides the [historical U.S. national annual unemployment rate](https://data.bls.gov/timeseries/LNU04000000?years_option=all_years&periods_option=specific_periods&periods=Annual+Data).
23
24 You'll need to use both data sources to answer these questions.
25
26 One of those files will require some data prep. As a refresher:
27
28 - `readLines()` reads in lines from a text file into a character vector, which can also be a URL vs a local file path. i.e.:
29
30 ```{r eval=FALSE}
31 bls_lines <- readLines("http://the.url/youfound/on/that/page/i/linked/to.html")
32 ```
33
34 - `grepl()` can be used to find things in vectors and return `TRUE` or `FALSE` if it does. It also can take [regular
28:125
King of the Road
R Markdown
Console
Environment
History
Connections
Import Dataset
List
Global Environment
Environment is empty
Files
Plots
Packages
Help
Viewer
New Folder
Upload
Delete
Rename
More
Cloud
project
Name
Size
Modified
..
.Rhistory
0 B
Jan 17, 2019, 10:06 AM
data210
project.Rproj
205 B
Jan 17, 2019, 10:06 AM

What *is* Learning?

Example – Elevators

Suppose an elevator has a maximum capacity of 16 passengers with a total weight of 2500 lb.

Assuming a worst case scenario in which the passengers are all male, what are the chances the elevator is overloaded?

Assume male weights follow a normal distribution with a mean of 182.9 lb and a standard deviation of 40.8 lb.

a. Find the probability that 1 randomly selected male has a weight greater than 156.25 lb.

b. Find the probability that a sample of 16 males have a mean weight greater than 156.25 lb (which puts the total weight at 2500 lb, exceeding the maximum capacity).