The "Data Science" Specialization

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Week 1 Quiz

The due date for this quiz is Sun 11 Oct 2015 4:30 PM PDT.

In accordance with the Coursera Honor Code, I (Edward Ayres) certify that the answers here are my own work.
Thank you!

Question 1

The American Community Survey distributes downloadable data about United States communities. Download the 2006 microdata survey about housing for the state of Idaho using download.file() from here:

https://d396qusza40orc.cloudfront.net/getdata%2Fdata%2Fss06hid.csv

and load the data into R. The code book, describing the variable names is here:

https://d396qusza40orc.cloudfront.net/getdata%2Fdata%2FPUMSDataDict06.pdf

How many properties are worth \$1,000,000 or more?

- 0 31
- 53
- 0 25
- 0 2076

Question 2

Use the data you loaded from Question 1. Consider the variable FES in the code book. Which of the "tidy data" principles does this variable violate?

Tidy data has no missing values.

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- Each variable in a tidy data set has been transformed to be interpretable.
- Tidy data has one variable per column.
- Tidy data has one observation per row.

Question 3

Download the Excel spreadsheet on Natural Gas Aquisition Program here:

https://d396qusza40orc.cloudfront.net/getdata%2Fdata%2FDATA.gov_NGAP.xlsx

Read rows 18-23 and columns 7-15 into R and assign the result to a variable called:

dat

What is the value of:

sum(dat\$Zip*dat\$Ext,na.rm=T)

(original data source: http://catalog.data.gov/dataset/natural-gas-acquisition-program)

- 338924
- 36534720
- 0 184585
- 0

Question 4

Read the XML data on Baltimore restaurants from here:

https://d396qusza40orc.cloudfront.net/getdata%2Fdata%2Frestaurants.xml

How many restaurants have zipcode 21231?

- 0 181
- 0 17
- 127

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0 156

Question 5

The American Community Survey distributes downloadable data about United States communities. Download the 2006 microdata survey about housing for the state of Idaho using download.file() from here:

https://d396qusza40orc.cloudfront.net/getdata%2Fdata%2Fss06pid.csv

using the fread() command load the data into an R object

DT

Which of the following is the fastest way to calculate the average value of the variable

pwgtp15

broken down by sex using the data.table package?

- rowMeans(DT)[DT\$SEX==1]; rowMeans(DT)[DT\$SEX==2]
- sapply(split(DT\$pwgtp15,DT\$SEX),mean)
- DT[,mean(pwgtp15),by=SEX]
- mean(DT[DT\$SEX==1,]\$pwgtp15); mean(DT[DT\$SEX==2,]\$pwgtp15)
- mean(DT\$pwgtp15,by=DT\$SEX)
- tapply(DT\$pwgtp15,DT\$SEX,mean)
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 Thank you!

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