report.md

title: “HW 1, CS 625, Fall 2021” author: “Prachi Patel” date: Sep 9, 2021 output: rmarkdown::github_document —

`{r setup, include=FALSE} knitr::opts_chunk$set(echo = TRUE)` To access my report.md (the result of Knitting your R Markdown) here is the link: https://github.com/PrachiPatelCS/report.md.git

Git, GitHub

1. *What is your GitHub username?* https://github.com/PrachiPatelCS
2. *What is the URL of your remote GitHub repo (created through Mr. Kennedy's exercises)?*

https://github.com/PrachiPatelCS/Prachi-Patel---Mr.-Thomas-Kennedy-.git

R

The command below will load the tidyverse package. If you have installed R, RStudio, and the tidyverse package, it should display a list of loaded packages and their versions.

```
library(tidyverse)
```

R Markdown

1. *Create a bulleted list with at least 3 items*

Today's shopping list:

- Milk
- Cereal
- Fruit

2. *Write a single paragraph that demonstrates the use of italics, bold, bold italics, code, and includes a link. The paragraph does not have to make sense.* ### Paragraph

- or _ can be used to note emphasis

** or ___ can be used to bold text

Run to markdown!

Run to *cat* in the barn!

Host a **dinner** party!

How are **you!**

Run ***faster*** than the wind!

Time to ***learn*** some markdown!

How will ***time*** pass today!

Who is at the door!

Link

I'm an inline-style link

Code

```
library(tidyverse)
```

```
var s = "JavaScript syntax highlighting";
alert(s);
```

```
s = "Python syntax highlighting"
print s
```

3. *Create a level 3 heading* ### Example of Level 3 Heading

R

Data Visualization Exercises

1. (Q2) *How many rows are in mpg? How many columns?*

dim(mtcars) 234 11

1. (Q4) *Make a scatterplot of hwy vs cyl.* The code below is a way of making scattterplot of hwy vs cyl in R as I was doing this it was dificult for me to work with them because R is a fairly new tool for me and I had look at my youtube video as well as the basic step to achive this scatterplot. While I was trying to run this I did get into a lot of and I m still getting stuck since this is new for me.

```
ggplot(data = mpg) + geom_point(mapping = aes(x = displ, y = hwy))
```

Workflow: basics Exercises

1. (Q2) *Tweak each of the following R commands so that they run correctly (`library(tidyverse)` is correct):*

```
library(tidyverse)
ggplot(dota = mpg) +
  geom_point(mapping = aes(x = displ, y = hwy))
fliter(mpg, cyl = 8)
filter(diamond, carat > 3)
```

library(tidyverse)

ggplot(data = mpg) + geom_point(mapping = aes(x = displ, y = hwy))

filter(mpg, cyl == 8) filter(diamonds, carat > 3)

Google Colab

Link to the google colab that had to make changes to - https://colab.research.google.com/drive/1XTBPU9RnwjcWnzHXIXtDlxLj8Uxxbccu?usp=sharing

1. *What are the URLs of your Google Colab notebooks (both Python and R)?*

https://colab.research.google.com/drive/1BPsadF-9uhV7Ns___ucojvZaBkeobIHPt?usp=sharing

Tableau

Sum of Profit for each Sub-Category broken down by Order Date YearandCategory vs. Region. Colour shows sum of Profit.The view is filtered on Order Date Year,Sub-CategoryandRegion.The Order Date Year filter keeps 2020.The Sub-Category filter keeps 17 of 17 members.The Region filter keeps EastandSouth.

Insert your the image of your final bar chart here

Sales in the South

1. *What conclusions can you draw from the chart?*

Observable and Vega-Lite

A Taste of Observable

1. *In the "New York City weather forecast" section, try replacing* `Forecast: detailedForecast` *with* `Forecast: shortForecast`*. Then press the blue play button or use Shift-Return to run your change. What happens?*

   What I observed was that before I pleased the blue play button there was a lot of detail about the weather information and as soon I pressed the blue button it gave me a dense version or a shorten verion of it with just the important points.

2. *Under the scatterplot of temperature vs. name, try replacing* `markCircle()` *with* `markSquare()`*. Then press the blue play button or use Shift-Return to run your change. What happens? How about* `markPoint()`*?*

   As soon as we change `markCircle()` with `markSquare()` we see the point that were circle on the scattered plot have now became into squares. As for when we change it to `markPoint()` this represents the pixel area of the mark and changes it to default which is a circle.

3. *Under "Pick a location, see the weather forecast", pick a location on the map. Where was the point you picked near?*

   Looks like I picked a place near "Four Oaks, NC". Now, the data is showing me the weatherStation's forecast URL to retrieve the current forecast for Four Oaks, NC.

4. *The last visualization on this page is a "fancy" weather chart embedded from another notebook. Click on the 3 dots next to that chart and choose 'Download PNG'. Insert the PNG into your report.*

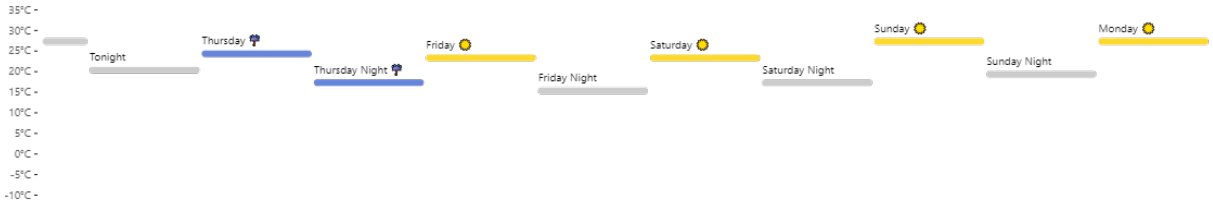

Figure 1: Weather Chart

Charting with Vega-Lite

`markCircle()`

1. *Pass an option of* `{ size: 200 }` *to* `markCircle()`*.* When I do the size of the markCircle(200) it just makes the point on the chart bigger.

2. *Try* `markSquare` *instead of* `markCircle`*.* When I change the markCircle to markSquare it chages the scatterplot point on the graph from circle to square.

3. *Try* `markPoint({ shape: 'diamond' })`*.* It changes the shape of the point on the graph from square to diamond shaped. `vl.x().fieldQ("Horsepower")`, ...

4. *Change* `Horsepower` *to* `Acceleration` It shifts the graph to the right hand side with the scattered plot shiftting its points.

5. *Swap what fields are displayed on the x- and y-axis* It shifted the X and the y axis on the graph.

`vl.tooltip().fieldN("Name")`

1. *Change* `Name` *to* `Origin`*.* It did not change anything for me.

Another example, `count()`

1. *Remove the* `vl.y().fieldN("Origin")` *line.* It turned the graph into a singal bar line that extends to 400.
2. *Replace* `count()` *with* `average("Miles_per_Gallon")`*.* I see average gas mileage by country.

References

Every report must list the references that you consulted while completing the assignment. If you consulted a webpage, you must include the URL.

- Insert Reference 1, https://observablehq.com/@observablehq/vega-lite
- Insert Reference 2, https://colab.research.google.com/drive/1XTBPU9RnwjcWnzHXIXtDlxLj8Uxxbccu?usp=sharing
- Insert Reference 3, https://colab.research.google.com/drive/1BPsadF-9uhV7Ns___ucojvZaBkeobIHPt?usp=sharing