

## # 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) 32 11
```

1. (Q4) *Make a scatterplot of hwy vs cyl.* The code below is a way of making scatterplot of hwy vs cyl in R as I was doing this it was difficult 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 achieve 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](https://colab.research.google.com/drive/1BPsadF-9uhV7Ns__ucojvZaBkeobIHpt?usp=sharing)

Tableau

Sales in the South



Sum of Profit for each Sub-Category broken down by Order Date Year and Category vs. Region. Colour shows sum of Profit. The view is filtered on Order Date Year, Sub-Category and Region. The Order Date Year filter keeps 2020. The Sub-Category filter keeps 17 of 17 members. The Region filter keeps East and 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 pressed the blue play button there was a lot of detailed about the weather information and as soon I pressed the blue button it gave me a dense version or a shortened version 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 become 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.

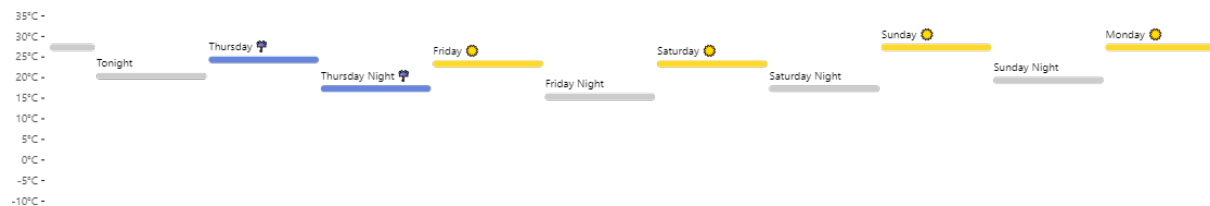


Figure 1: Weather Chart

### Charting with Vega-Lite

`markCircle()`

1. Pass an option of `{ size: 200 }` to `markCircle()`.
2. Try `markSquare` instead of `markCircle`.
3. Try `markPoint({ shape: 'diamond' })`.

`vl.x().fieldQ("Horsepower"), ...`

1. Change *Horsepower* to *Acceleration*
2. Swap what fields are displayed on the x- and y-axis

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

1. Change *Name* to *Origin*.

Another example, `count()`

1. Remove the `vl.y().fieldN("Origin")` line.
2. Replace `count()` with `average("Miles_per_Gallon")`.

## 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://www.example.com>
- Insert Reference 2, <https://www.example.com/reallyreallyreally-extra-long-URI/>