Finance Geeks
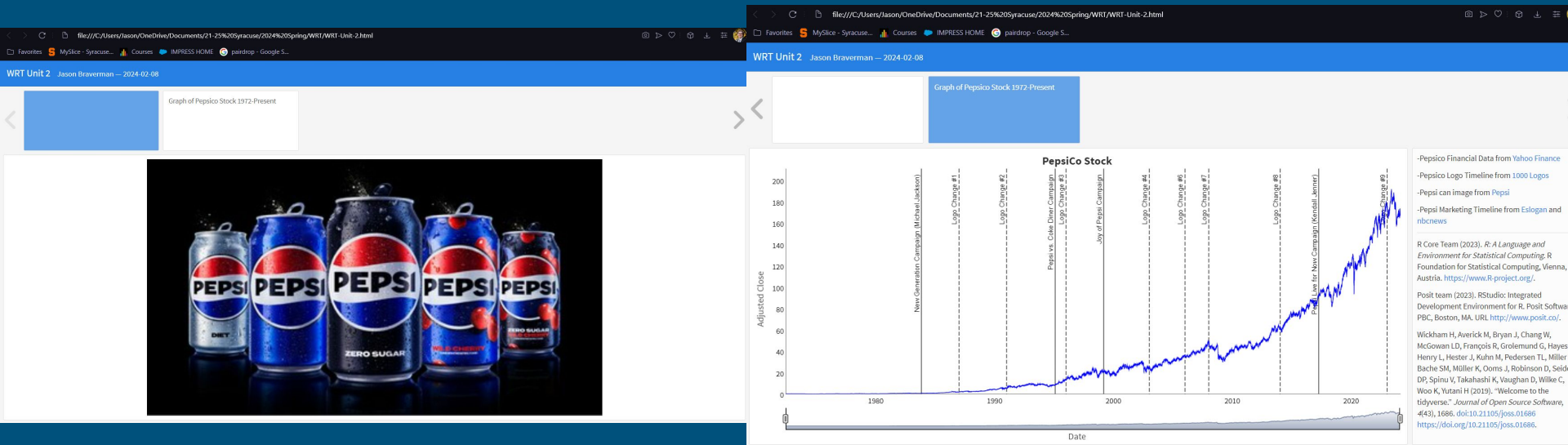
Abraham Yoon, Langston Taylor, Jason Baverman

Finished Deliverable

1

Download and install R and R Studio

Both can be found here
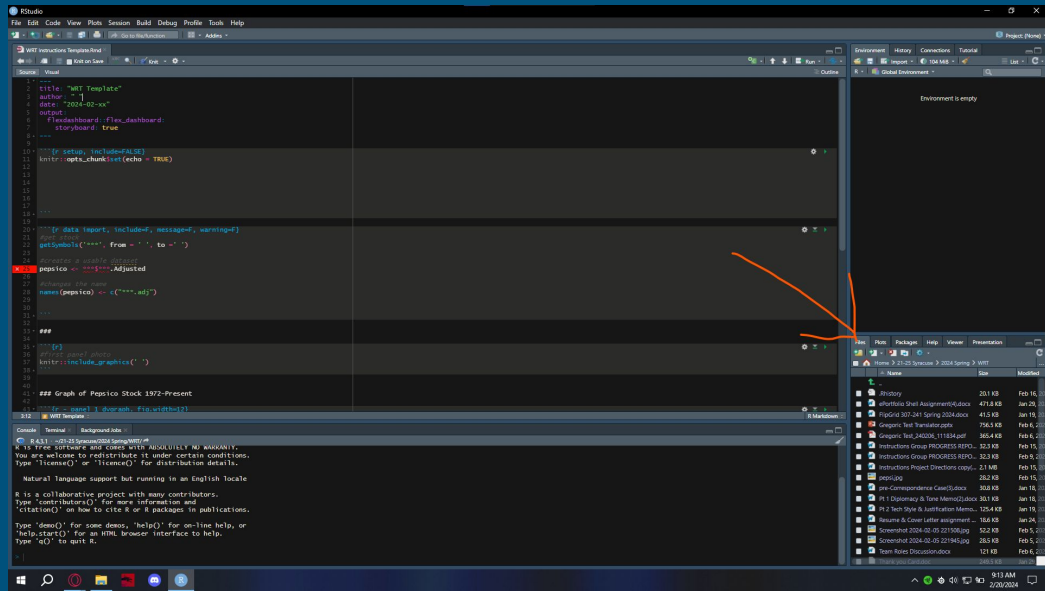
https://posit.co/download/rstudio-desktop/

2

Download jpg, template will be provided to you

https://mma.prnewswire.com/media/2041784/Pepsi_New_Cans.jpg?p=distribution

3

In the bottom right window within R Studio there is a file explorer, if it does not already show whichever folder you are working in, navigate to that
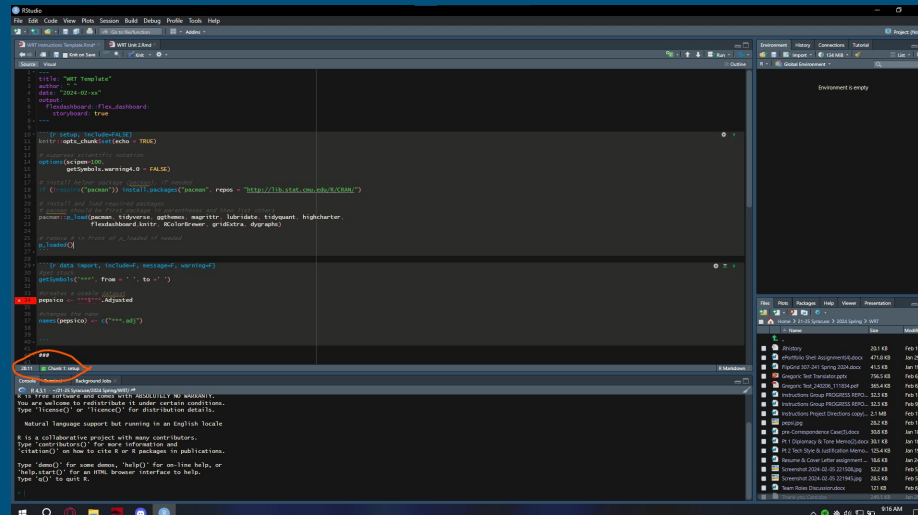
4

At the top of the file, add your name and change the date to today

5

Copy, paste the set up code into the first chunk from the next slide

To be certain what chunk you are in, at the bottom of the window above the console tab it will say

Setup Code

```
# suppress scientific notation
options(scipen=100,
        getSymbols.warning4.0 = FALSE)

# install helper package (pacman), if needed
if (!require("pacman")) install.packages("pacman", repos = "http://lib.stat.cmu.edu/R/CRAN/")

# install and load required packages
# pacman should be first package in parentheses and then list others
pacman::p_load(pacman, tidyverse, ggthemes, magrittr, lubridate, tidyquant, highcharter,
               flexdashboard,knitr, RColorBrewer, gridExtra, dygraphs)

# remove # in front of p_loaded if needed
p_loaded()
```

6

Go ahead and run the chunk by pressing the green play button on the top right of where the text is. It may take a while because it has to install all the packages
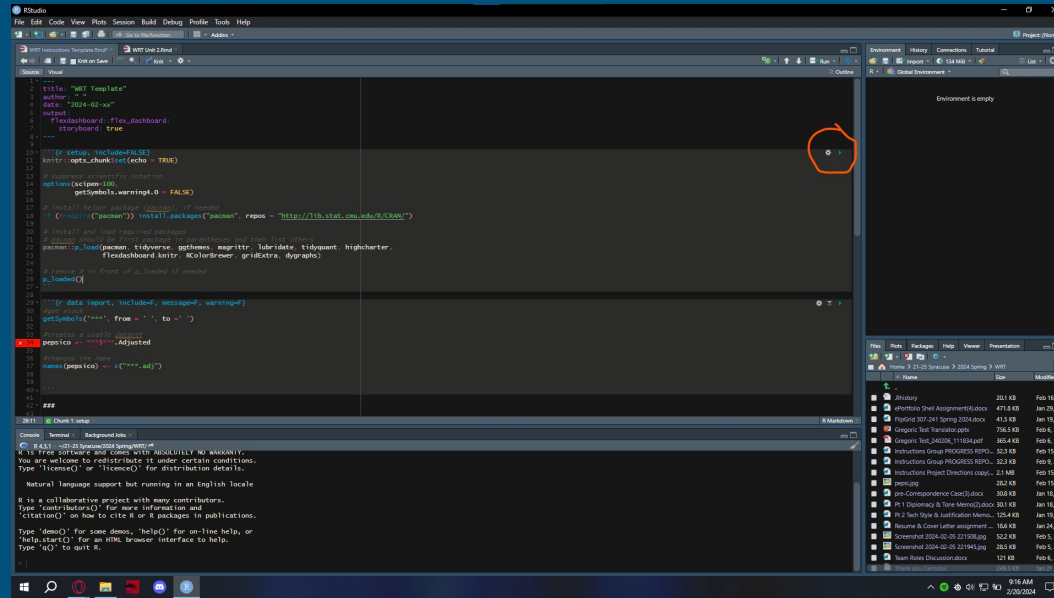
7

Go to yahoo finance and find pepsico ticker name

8

Insert ticker name where the asterisks are in chunks 2 and 4

9

From the yahoo finance page, insert the years that pepsi has been publicly traded where it says from and to in chunk 2

Use Jan 1 for beginning year and Dec 31 for ending year

Use format YYYY-MM-DD

10

Go ahead and run chunk 2 at this point by pressing the green play button on the top right of where the text is

11

In chunk 3 between the apostrophes, add the name of the jpg you downloaded in step 2

```r
knitr::include_graphics('pepsi.jpg')
```

12

Go ahead and run chunk 3 by pressing the green play button on the top right of where the text is

13

In chunk 4, in the quotes after main write the title of the plot

PepsiCo Stock

```
dy <- dygraph(pepsico, main="PepsiCo Stock") |>
```

14

Below that in the quotes after label, write what the line will be called

PepsiCo

```
dySeries("PEP.adj", label="PepsiCo", color=
dvRangeSelector()
```

15

Where it says color, put whatever color you want to make the line in the graph.

For this example blue will be used because it is Pepsi's main color

```
pepsico, main="PepsiCo Stock") |>
P.adj", label="PepsiCo", color='blue') |>
tor()
```

16

The first is given as example, and the '|>' operator is used for the next line. Use January 1 for the date for ease of use.

Add in the following 7 events into the plot for each time pepsi changed their logo

1991   2008
1996   2014
2003   2023
2006

17

The finished logo events should look like this

```
(dy <- dy |>
  dyEvent("1987-01-01", label= "Logo Change #1", labelLoc = "top") |>
  dyEvent("1991-01-01", label= "Logo Change #2", labelLoc = "top") |>
  dyEvent("1996-01-01", label= "Logo Change #3", labelLoc = "top") |>
  dyEvent("2003-01-01", label= "Logo Change #4", labelLoc = "top") |>
  dyEvent("2006-01-01", label= "Logo Change #5", labelLoc = "top") |>
  dyEvent("2008-01-01", label= "Logo Change #6", labelLoc = "top") |>
  dyEvent("2014-01-01", label= "Logo Change #7", labelLoc = "top") |>
  dyEvent("2023-01-01", label= "Logo Change #8", labelLoc = "top") |>
```

18

Now you will add the 4 marketing campaigns onto the graph, the first is given as example but this time the line will be solid . Omit the final '|>' operator because we are done with the plot code.

February 1st 1995 - Pepsi vs. Coke Diner Campaign
March 1st 1999 - Joy of Pepsi Campaign
November 1st 1983 - New Generation Campaign (Michael Jackson)
April 1st 2017 - Pepsi Live for Now Campaign (Kendall Jenner)

19

The finished code for the events should look like this

```
#add marketing changes events
(dy <- dy |>
  dyEvent("1987-01-01", label= "Logo Change #1", labelLoc = "top") |>
  dyEvent("1991-01-01", label= "Logo Change #2", labelLoc = "top") |>
  dyEvent("1996-01-01", label= "Logo Change #3", labelLoc = "top") |>
  dyEvent("2003-01-01", label= "Logo Change #4", labelLoc = "top") |>
  dyEvent("2006-01-01", label= "Logo Change #6", labelLoc = "top") |>
  dyEvent("2008-01-01", label= "Logo Change #7", labelLoc = "top") |>
  dyEvent("2014-01-01", label= "Logo Change #8", labelLoc = "top") |>
  dyEvent("2023-01-01", label= "Logo Change #9", labelLoc = "top") |>
  dyEvent("1999-03-01", label= "Joy of Pepsi Campaign", labelLoc = "top", strokePattern="solid") |>
  dyEvent("1995-02-01", label= "Pepsi vs. Coke Diner Campaign", labelLoc = "top", strokePattern="solid") |>
  dyEvent("1983-11-01", label= "New Generation Campaign (Michael Jackson)", labelLoc = "top", strokePattern="solid") |>
  dyEvent("2017-04-01", label= "Pepsi Live for Now Campaign (Kendall Jenner)", labelLoc = "top", strokePattern="solid"))
```

20

Copy, paste the citations in from the next slide, the data goes after the first line of asterisks

The packages goes in after the second line

Citations (data is left, packages is right)

-Pepsico Financial Data from [Yahoo Finance](https://finance.yahoo.com/quote/PEP)

-Pepsico Logo Timeline from [1000 Logos](https://1000logos.net/pepsi-logo/)

-Pepsi can image from [Pepsi](https://www.pepsico.com/our-stories/press-release/pepsi-unveils-a-new-logo-and-visual-identity-marking-the-iconic-brands-next-era03282023)

-Pepsi Marketing Timeline from [Eslogan](https://en.esloganmagazine.com/best-advertising-campaigns-of-pepsi/) and [nbcnews](https://www.nbcnews.com/news/nbcblk/pepsi-ad-kendall-jenner-echoes-black-lives-matter-sparks-anger-n742811)

R Core Team (2023). _R: A Language and Environment for Statistical Computing_. R Foundation for Statistical Computing, Vienna, Austria.

 <https://www.R-project.org/>.

Posit team (2023). RStudio: Integrated Development Environment for R. Posit Software, PBC, Boston, MA. URL http://www.posit.co/.

Wickham H, Averick M, Bryan J, Chang W, McGowan LD, François R, Grolemund G, Hayes A, Henry L, Hester J, Kuhn M, Pedersen TL, Miller E, Bache

 SM, Müller K, Ooms J, Robinson D, Seidel DP, Spinu V, Takahashi K, Vaughan D, Wilke C, Woo K, Yutani H (2019). "Welcome to the tidyverse."

 Journal of Open Source Software, *4*(43), 1686. doi:10.21105/joss.01686 <https://doi.org/10.21105/joss.01686>.
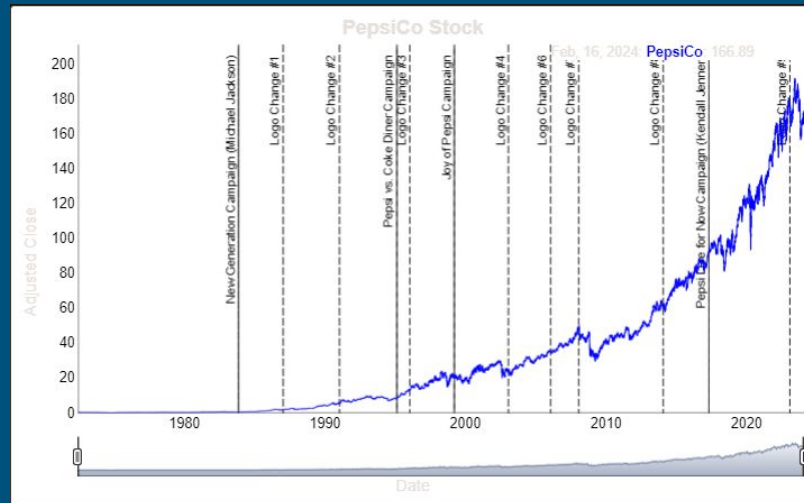
21

Now remember to save and run all the chunks at this point to make sure there are no errors

22

Congratulations! You have now built a dygraph successfully in R Studio

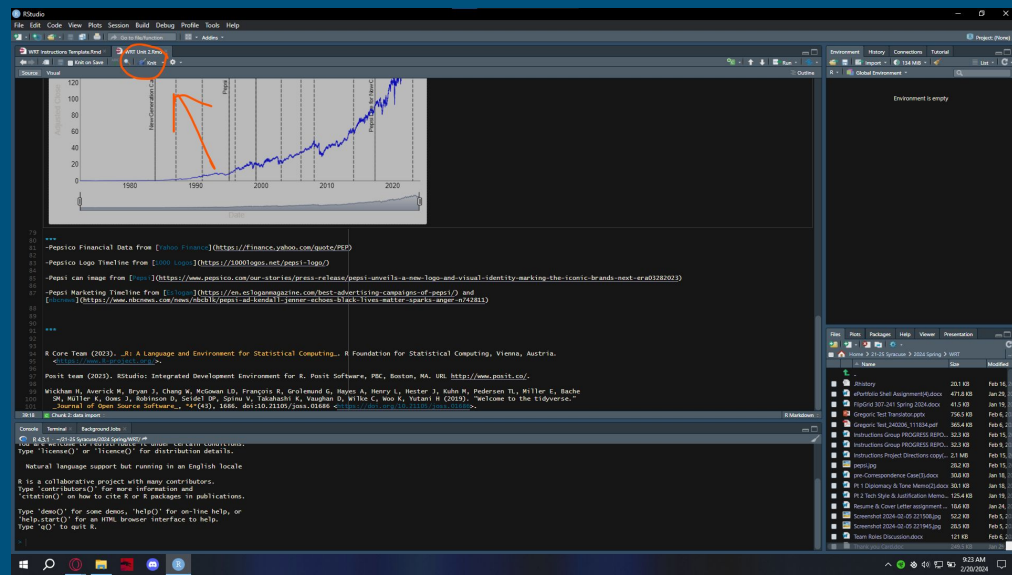If you have done it correctly, the graph should look like this

23

One final step relating to code. In the first line of code, line 12 overall; where it says 'install.packages("knitr")' put a pound sign (#) in the front to omit that line.

24

Last step, at the top in the toolbar, under the name of the file, click the knit button to send the picture and graph to a flexdashboard html document

25

If you see a pop up tab appear, that is the document and you are finished!

Feel free to close out all the tabs now as everything is saved.