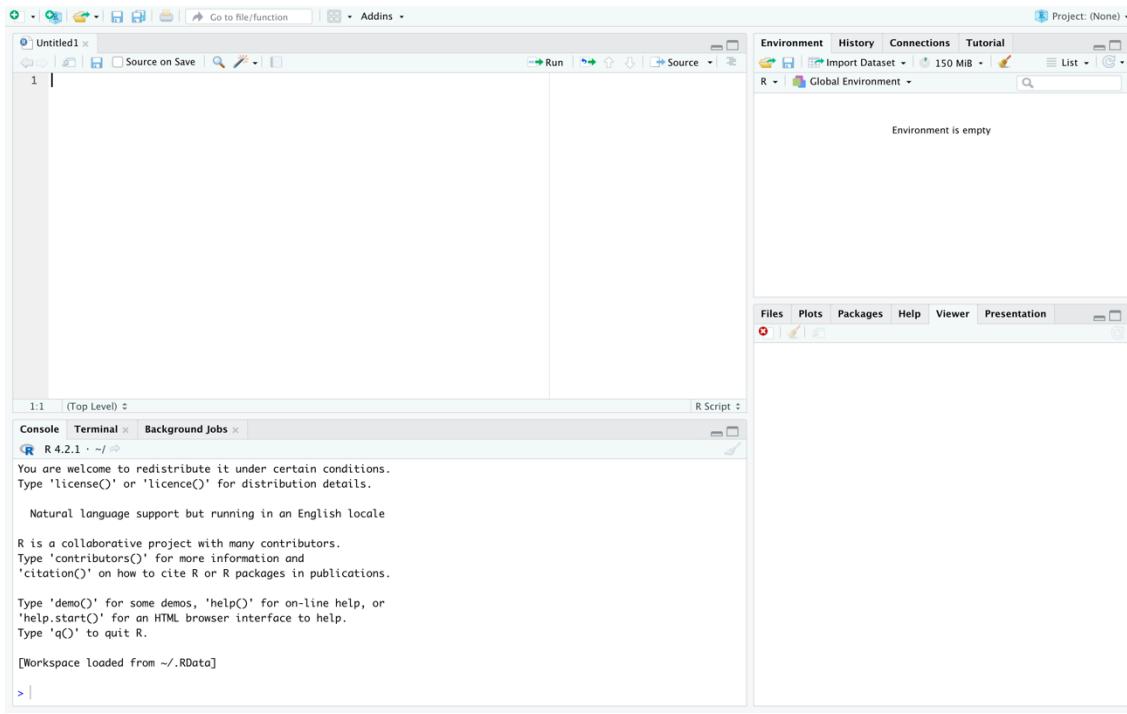
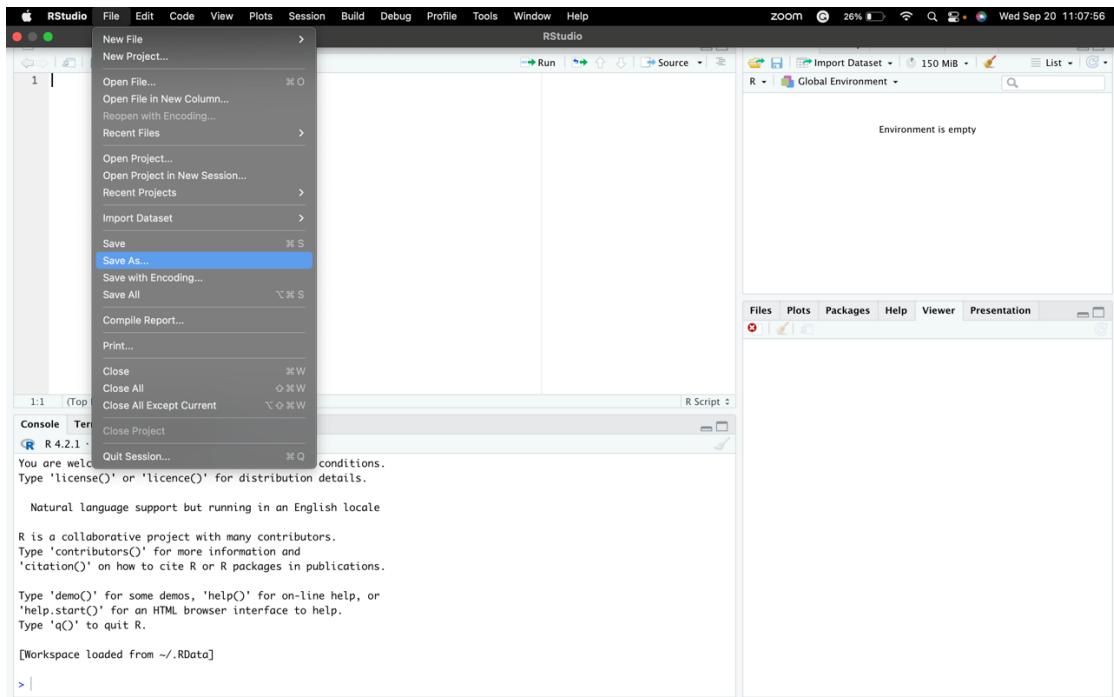


KNITTING EXAMPLE

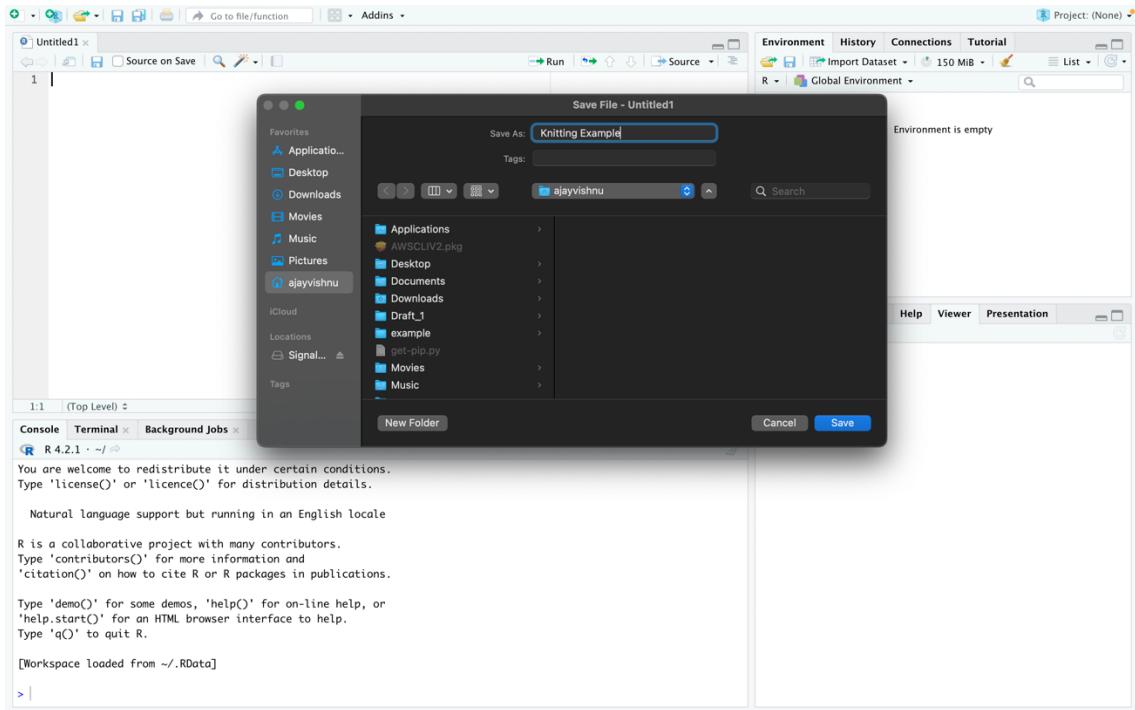
1. Open RStudio



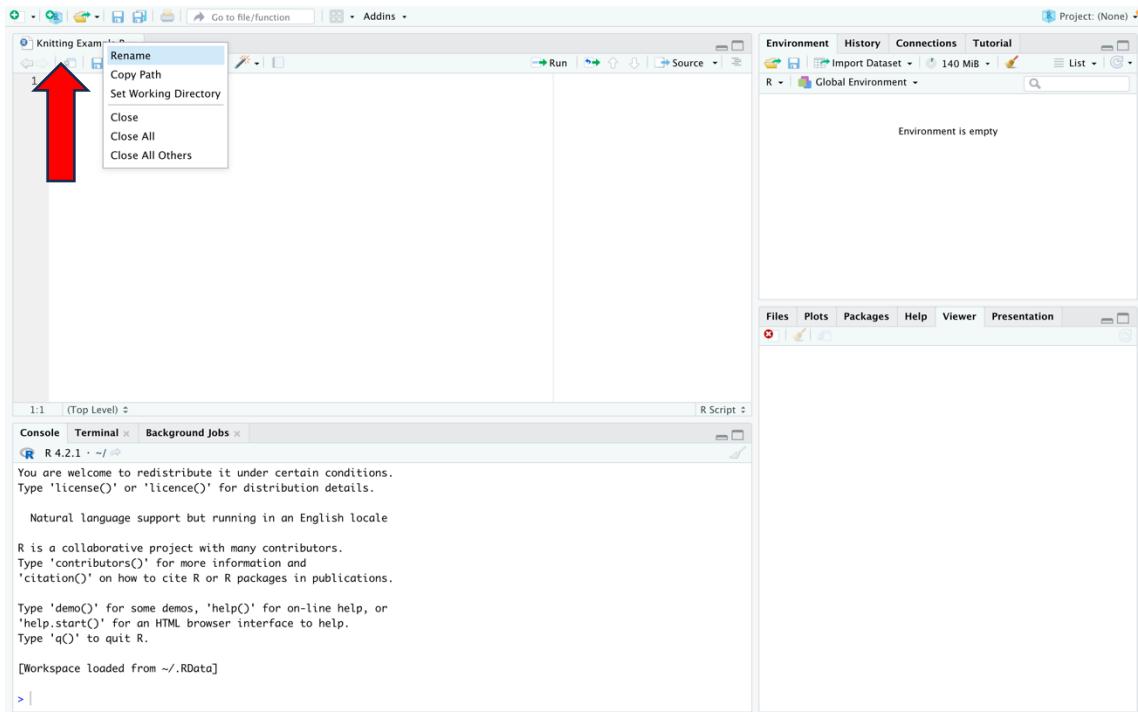
2. Save the File – File > Save/Save As



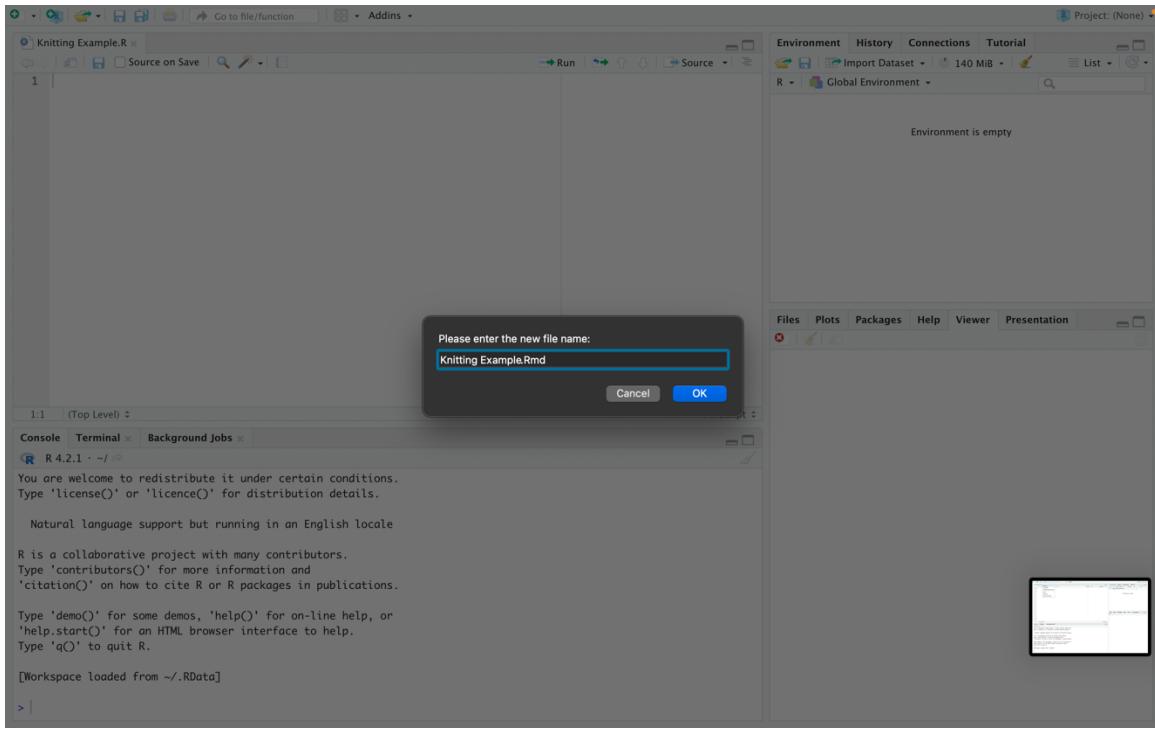
3. Remember the location/Give a proper destination.



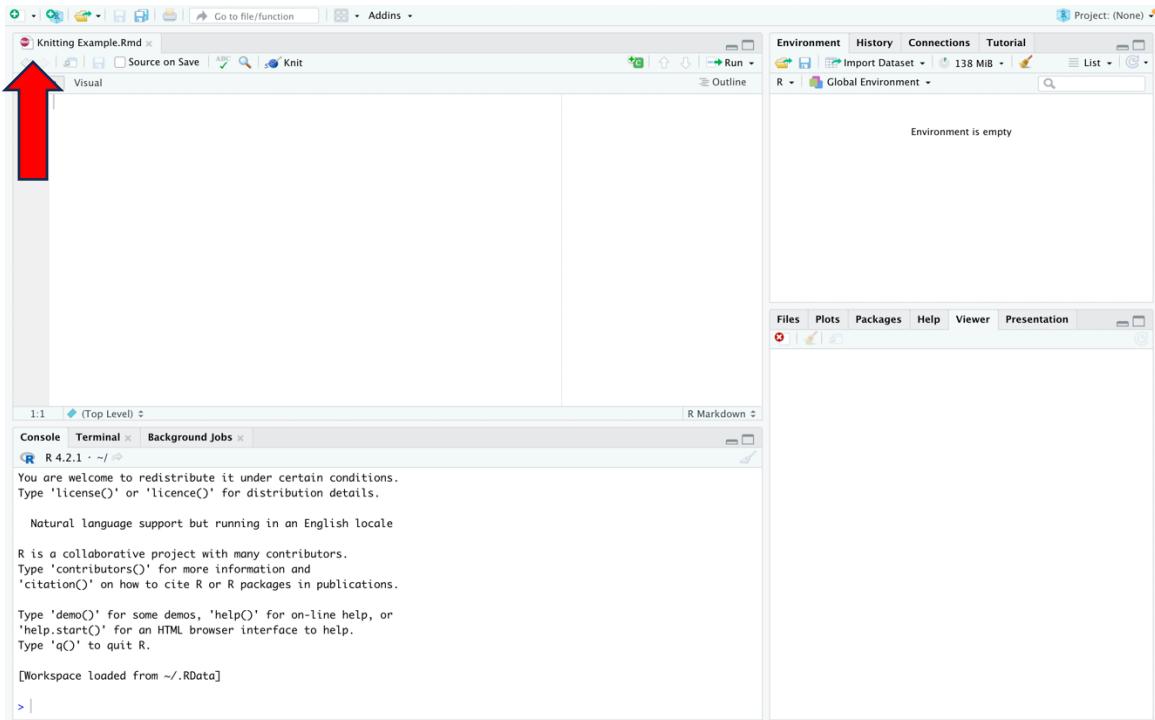
4. Rename the File – Right-click on the file name on top left



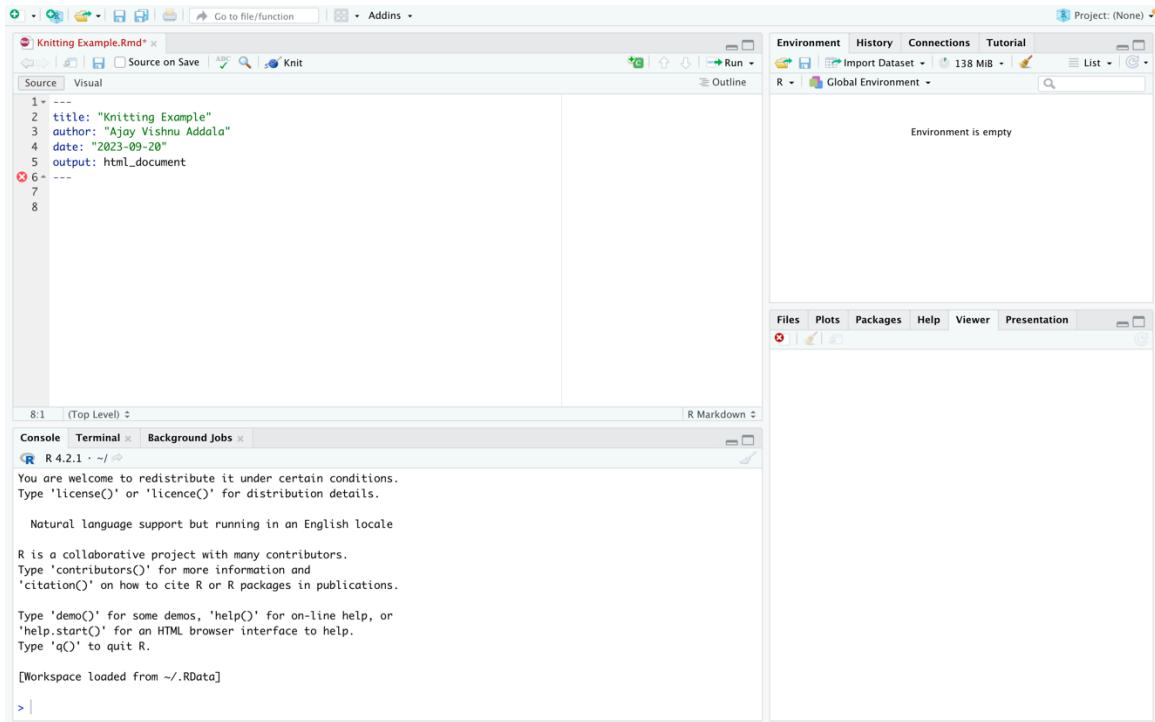
5. Change name to Rmd – Add “md” at the end of the file name



6. You can now see that the file name on top left changed to a red circle with Rmd instead of a blue circle



7. Adding a title and output file type – We can check this output at the end



```
1 - ---  
2 title: "Knitting Example"  
3 author: "Ajay Vishnu Addala"  
4 date: "2023-09-20"  
5 output: html_document  
6 ---  
7  
8
```

8.1 (Top Level) R Markdown

Console Terminal Background Jobs

R 4.2.1 · ~/

You are welcome to redistribute it under certain conditions.
Type 'license()' or 'licence()' for distribution details.

Natural language support but running in an English locale

R is a collaborative project with many contributors.
Type 'contributors()' for more information and
'citation()' on how to cite R or R packages in publications.

Type 'demo()' for some demos, 'help()' for on-line help, or
'help.start()' for an HTML browser interface to help.
Type 'q()' to quit R.

[Workspace loaded from ~/.RData]

> |

Project: (None)

Environment History Connections Tutorial

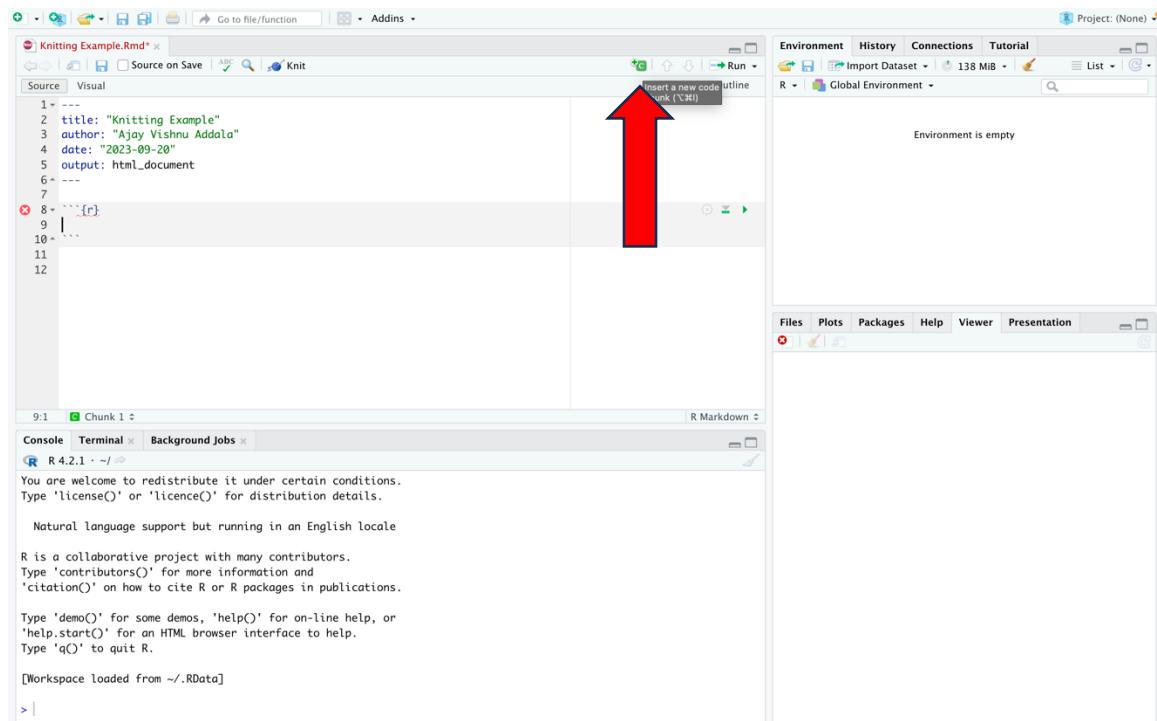
Import Dataset 138 MB List

Global Environment

Environment is empty

Files Plots Packages Help Viewer Presentation

8. Adding a new code line – Click on the option highlighted



```
1 - ---  
2 title: "Knitting Example"  
3 author: "Ajay Vishnu Addala"  
4 date: "2023-09-20"  
5 output: html_document  
6 ---  
7  
8 r  
9 | ...  
10  
11  
12
```

9.1 Chunk 1 R Markdown

Console Terminal Background Jobs

R 4.2.1 · ~/

You are welcome to redistribute it under certain conditions.
Type 'license()' or 'licence()' for distribution details.

Natural language support but running in an English locale

R is a collaborative project with many contributors.
Type 'contributors()' for more information and
'citation()' on how to cite R or R packages in publications.

Type 'demo()' for some demos, 'help()' for on-line help, or
'help.start()' for an HTML browser interface to help.
Type 'q()' to quit R.

[Workspace loaded from ~/.RData]

> |

Project: (None)

Environment History Connections Tutorial

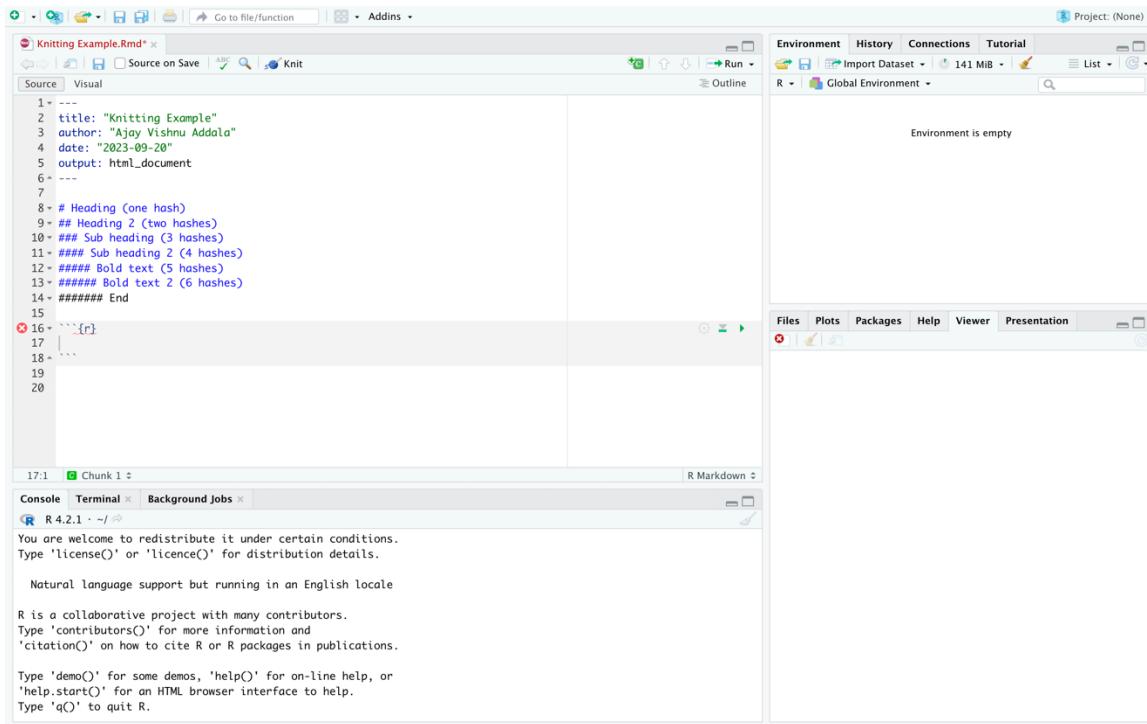
Import Dataset 138 MB List

Global Environment

Environment is empty

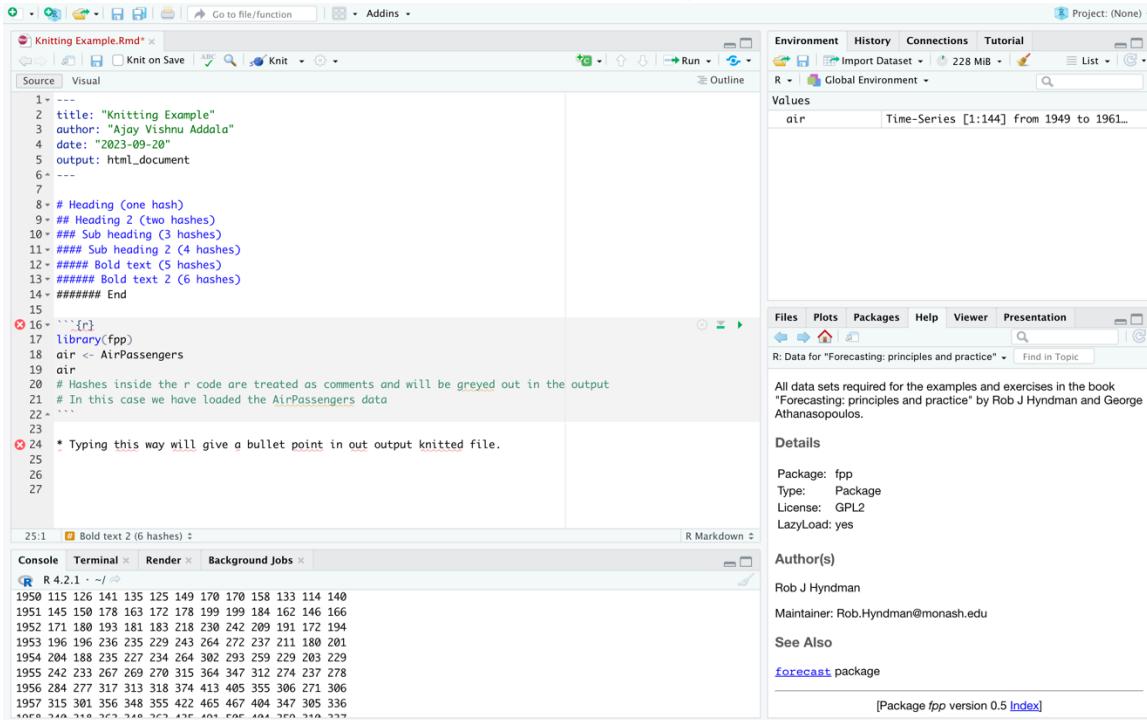
Files Plots Packages Help Viewer Presentation

9. Adding headings and bold text – the number of hashes defines it – You can check this in the final output



```
1 ---  
2 title: "Knitting Example"  
3 author: "Ajay Vishnu Addala"  
4 date: "2023-09-20"  
5 output: html_document  
6 ---  
7  
8 # Heading (one hash)  
9 ## Heading 2 (two hashes)  
10 ### Sub heading (3 hashes)  
11 #### Sub heading 2 (4 hashes)  
12 ##### Bold text (5 hashes)  
13 ##### Bold text 2 (6 hashes)  
14 ##### End  
15  
16 ````{r}  
17 |  
18 ...  
19  
20  
17:1 □ Chunk 1 □ R Markdown □  
Console Terminal □ Background Jobs □  
R 4.2.1 - ~/  
You are welcome to redistribute it under certain conditions.  
Type 'license()' or 'licence()' for distribution details.  
Natural language support but running in an English locale  
R is a collaborative project with many contributors.  
Type 'contributors()' for more information and  
'citation()' on how to cite R or R packages in publications.  
Type 'demo()' for some demos, 'help()' for on-line help, or  
'help.start()' for an HTML browser interface to help.  
Type 'q()' to quit R.
```

10. Adding hash inside R code and adding bullets



```
1 ---  
2 title: "Knitting Example"  
3 author: "Ajay Vishnu Addala"  
4 date: "2023-09-20"  
5 output: html_document  
6 ---  
7  
8 # Heading (one hash)  
9 ## Heading 2 (two hashes)  
10 ### Sub heading (3 hashes)  
11 #### Sub heading 2 (4 hashes)  
12 ##### Bold text (5 hashes)  
13 ##### Bold text 2 (6 hashes)  
14 ##### End  
15  
16 ````{r}  
17 library(fpp)  
18 air <- AirPassengers  
19 air  
20 # Hashes inside the r code are treated as comments and will be greyed out in the output  
21 # In this case we have loaded the AirPassengers data  
22 ...  
23  
24 * Typing this way will give a bullet point in our output knitted file.  
25  
26  
27  
25:1 □ Bold text 2 (6 hashes) □ R Markdown □  
Console Terminal □ Render □ Background Jobs □  
R 4.2.1 - ~/  
1950 115 126 141 135 125 149 170 170 158 133 114 140  
1951 145 150 178 163 172 178 199 199 184 162 146 166  
1952 171 180 193 181 183 218 230 242 209 191 172 194  
1953 196 196 236 235 229 243 264 272 237 211 180 201  
1954 204 188 235 227 234 264 302 293 259 229 203 229  
1955 242 233 267 269 270 315 364 347 312 274 237 278  
1956 284 277 317 313 318 374 413 405 355 306 271 306  
1957 315 301 356 348 355 422 465 467 404 347 305 336  
1958 320 310 323 328 325 345 381 374 335 306 271 337
```

11. Run within the console gives you an option to check the individual chunk output before knitting the complete file



```
1---  
2 title: "Knitting Example"  
3 author: "Ajay Vishnu Addala"  
4 date: "2023-09-20"  
5 output: html_document  
6---  
7  
8 # Heading (one hash)  
9 ## Heading 2 (two hashes)  
10 ### Sub heading (3 hashes)  
11 #### Sub heading 2 (4 hashes)  
12 ##### Bold text (5 hashes)  
13 ##### Bold text 2 (6 hashes)  
14 ##### End  
15  
16 library(fpp)  
17 air <- AirPassengers  
18 air  
19 # Hashes inside the r code are treated as comments and will be greyed out in the output  
20 # In this case we have loaded the AirPassengers data  
22  
23  
24 * Typing this way will give a bullet point in our output knitted file.  
25  
26 plot(air)  
27  
28  
29  
30
```

27.9 Chunk 2

Console Terminal Render Background Jobs

R 4.2.1 - ~/

1952 171 180 193 181 183 218 230 242 209 191 172 194
1953 191 196 236 235 229 243 264 272 237 211 180 201
1954 204 188 235 227 234 264 302 293 259 229 203 229
1955 242 233 267 269 270 315 364 347 312 274 237 278

Project: (None)

Environment History Connections Tutorial

Import Dataset 236 MB List

Global Environment

Values air Time-Series [1:144] from 1949 to 1961...

Files Plots Packages Help Viewer Presentation

R: Data for "Forecasting: principles and practice" Find in Topic

All data sets required for the examples and exercises in the book "Forecasting: principles and practice" by Rob J Hyndman and George Athanasopoulos.

Details

Package: fpp Type: Package License: GPL2 LazyLoad: yes

Author(s)

Rob J Hyndman Maintainer: Rob.Hyndman@monash.edu

See Also

[forecast package](#)

[Package fpp version 0.5 [Index](#)]

12. Sample output within console



```
23  
24 * Typing this way will give a bullet point in our output knitted file.  
25  
26 plot(air)  
27  
28
```

27.9 Chunk 2

Console Terminal Render Background Jobs

R 4.2.1 - ~/

1960 417 391 419 461 472 535 622 606 508 461 390 432
> `plot(air)`
> `plot(air)`
> |

Project: (None)

Environment History Connections Tutorial

Import Dataset 238 MB List

Global Environment

Values air Time-Series [1:144] from 1949 to 1961...

Files Plots Packages Help Viewer Presentation

R: Data for "Forecasting: principles and practice" Find in Topic

All data sets required for the examples and exercises in the book "Forecasting: principles and practice" by Rob J Hyndman and George Athanasopoulos.

Details

Package: fpp Type: Package License: GPL2 LazyLoad: yes

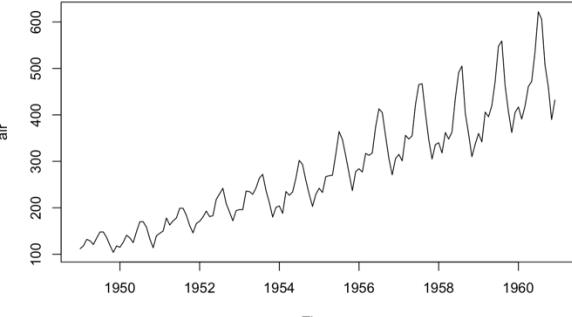
Author(s)

Rob J Hyndman Maintainer: Rob.Hyndman@monash.edu

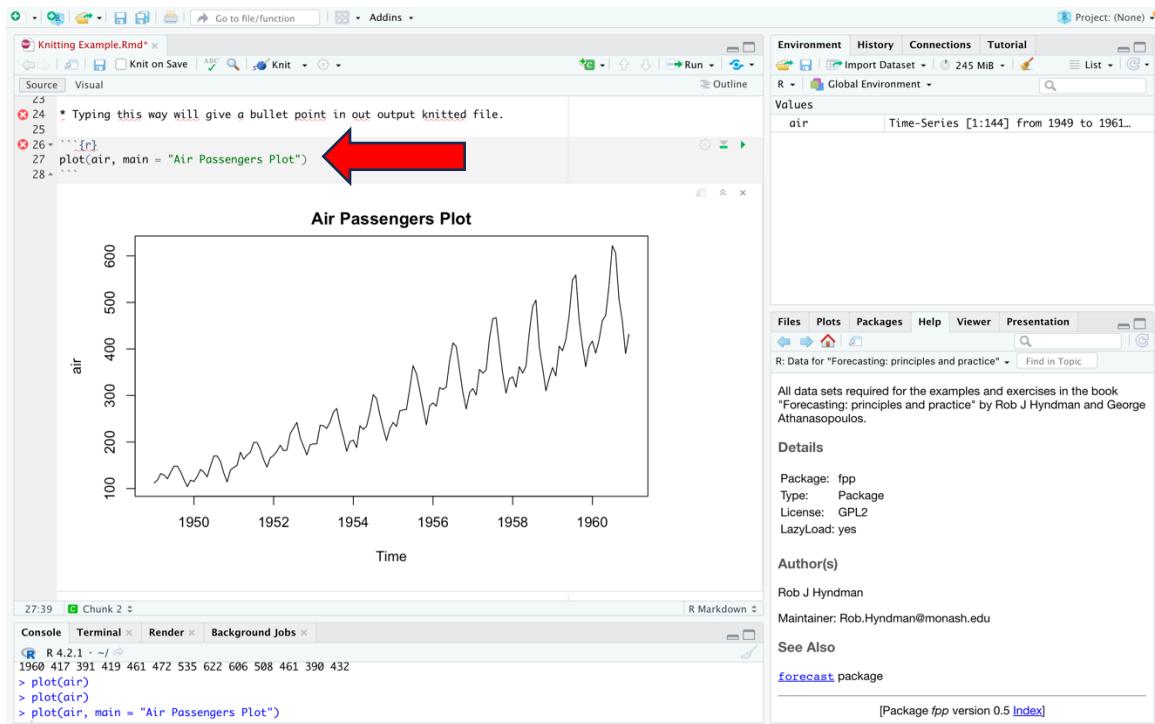
See Also

[forecast package](#)

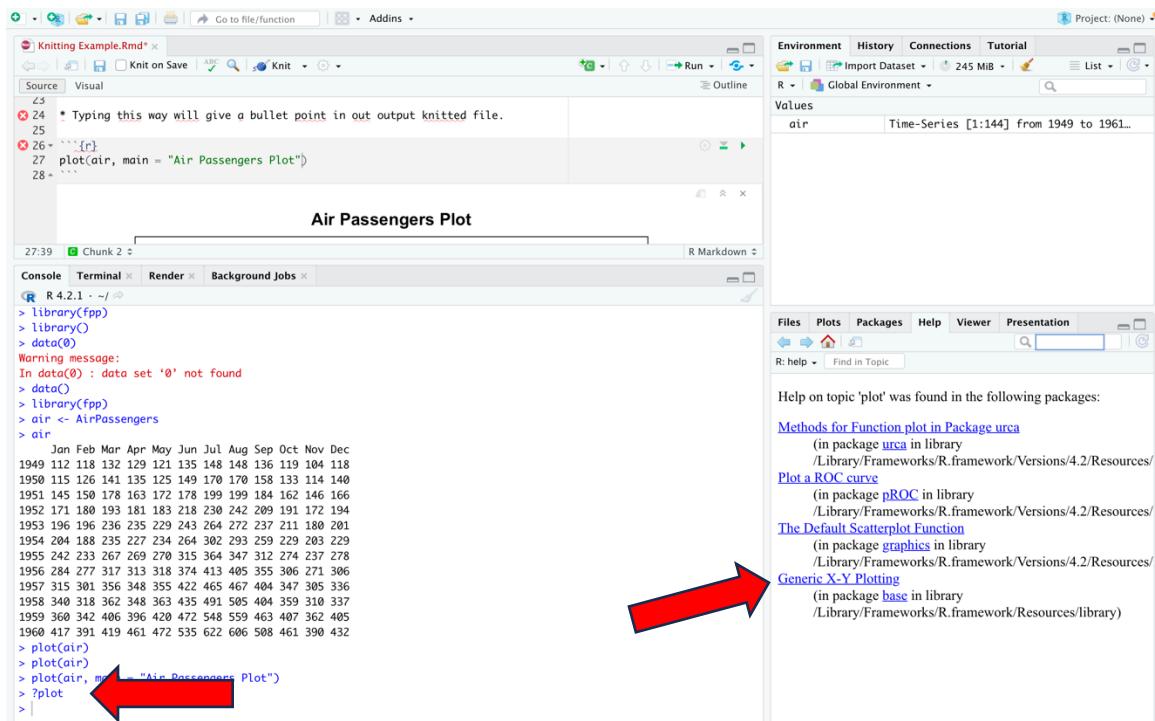
[Package fpp version 0.5 [Index](#)]



13. Adding a heading to the plot – Include “main” inside the plot command



14. "?<function>" – Gives you details about the function



15. Multiple options for the plot – In our case, we choose a Generic plot – This gives a detailed explanation of the function

The screenshot shows the RStudio interface with a Knitting Example.Rmd file open. The code chunk 2 contains the following R code:

```

L5
④ 24 * Typing this way will give a bullet point in out output knitted file.
25
④ 26 ``{r}
27 plot(air, main = "Air Passengers Plot")
28 ```

```

The plot command is highlighted with a red arrow pointing to the 'Generic X-Y Plotting' documentation page in the Help tab.

16. Scroll down to see what all you can use within the function and what each of them can do

The screenshot shows the RStudio interface with a Knitting Example.Rmd file open. The code chunk 2 contains the same R code as before. A red arrow points from the 'Details' section of the 'R: Generic X-Y Plotting' documentation page back to the RStudio interface, specifically highlighting the 'Details' section.

The 'Details' section of the documentation page includes the following text:

All other types give a warning or an error; using, e.g., type = "punkte" being equivalent to type = "p". S compatibility. Note that some methods, e.g., `plot.factor`, do not accept this.

main
an overall title for the plot: see `title`.

sub
a subtitle for the plot: see `title`.

xlab
a title for the x axis: see `title`.

ylab
a title for the y axis: see `title`.

asp
the y/x aspect ratio, see `plot.window`.

Details

The two step types differ in their x-y preference: Going from (x_1, y_1) to (x_2, y_2) with $x_1 < x_2$, type = "s" moves first horizontal, then

17. Knitting the file – Click on knit on the top

The screenshot shows the RStudio interface during the knitting process. On the left, the code editor displays an R Markdown file named 'Knitting Example.Rmd'. A red arrow points to the 'Knit' button in the toolbar at the top. The right side of the interface shows the 'Environment' tab with a global environment containing a time-series object 'air'. Below it is a 'Help' panel for 'R: Generic X-Y Plotting'. The bottom section shows the 'Console' output, which details the knitting process, including the command used and the generated HTML file.

```
1+ ---  
2 title: "Knitting Example"  
3 author: "Ajay Vishnu Addala"  
4 date: "2023-09-20"  
5 output: html_document  
6 ---  
7  
8 # Heading (one hash)  
9 ## Heading 2 (two hashes)  
10 ### Sub heading 3 (three hashes)  
11 #### Sub heading 2 (four hashes)  
12 ##### Bold text (five hashes)  
13 ##### Bold text 2 (six hashes)  
14 ##### End  
15  
16 `r`  
17 library(fpp)  
18 air <- AirPassengers  
19 air  
20 # Hashes inside the r code are treated as comments and will be greyed out in the output  
21 # In this case we have loaded the AirPassengers data  
22 ...  
23  
27-39 [ ] Chunk 2
```

Console Terminal × Render × Background Jobs ×

processing file: Knitting-Example.Rmd

output file: Knitting-Example.knit.md

/Users/ajayvishnu/Desktop/RStudio.app/Contents/MacOS/quarto/bin/tools/pandoc +RTS -K512m -RTS Knitting-Example.knit.md --to html4 --from markdown+autolink_bare_uris+tex_math_single_backslash --output Knitting-Example.html --lua-filter /Library/Frameworks/R.framework/Versions/4.2/Resources/library/markdown/rmarkdown/lua/pagebreak.lua --lua-filter /Library/Frameworks/R.framework/Versions/4.2/Resources/library/markdown/rmarkdown/lua/latex-div.lua --self-contained --variable bs3=TRUE --section-divs --template /Library/Frameworks/R.framework/Versions/4.2/Resources/library/rmarkdown/rmd/h/default.html --no-highlight --variable highlightjs=1 --variable theme=bootstrap --mathjax --variable 'mathjax-url=https://mathjax.rstudio.com/latest/MathJax.js?config=TeX-AMS-MML_HTMLorMML' --include-in-header /var/folder/rs/fy/hzb58j3s10j5wx68xcb0wh8000gn/T//Rtmp88kMMS/rmarkdown-str7f6c3dff7cf8.html

Output created: Knitting-Example.html

Project: (None)

Environment History Connections Tutorial

Values air Time-Series [1:144] from 1949 to 1961...

Files Plots Packages Help Viewer Presentation

R: Generic X-Y Plotting Find in Topic

All other types give a warning or an error; using, e.g., type = "punkte" being equivalent to type = "p" for S compatibility. Note that some methods, e.g. plot.factor, do not accept this.

main an overall title for the plot: see title.

sub a subtitle for the plot: see title.

xlab a title for the x axis: see title.

ylab a title for the y axis: see title.

asp the y/x aspect ratio, see plot.window.

Details

The two step types differ in their x-y preference: Going from (x1, y1) to (x2, y2) with x1 < x2, type = "s" moves first horizontal, then

18. Output Html – Check the sizes of each heading – Proportional to the number of hashes we used earlier

The screenshot shows the generated HTML file 'Knitting-Example.html' in a browser. A large red arrow points to the heading 'Heading 2 (two hashes)' in the content. The page contains the following text:

Knitting Example

Ajay Vishnu Addala
2023-09-20

Heading (one hash)

Heading 2 (two hashes)

Sub heading (3 hashes)

Sub heading 2 (4 hashes)

Bold text (5 hashes)

Bold text 2 (6 hashes)

End

```
library(fpp)

## Loading required package: forecast

## Registered S3 method overwritten by 'quantmod':
##   method           from
##   as.zoo.data.frame zoo

## Loading required package: fma

## Loading required package: expsmooth

## Loading required package: lmtest

## Loading required package: zoo

##
```

19. Check the output HTML – How the hashes inside the R code are visible and how the bullets are visible

The screenshot shows a browser window with the following content:

```
##  
##   as.Date, as.Date.numeric  
  
## Loading required package: tseries  
  
air <- AirPassengers  
air  
  
## Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
## 1949 112 118 132 129 121 135 148 148 136 119 104 118  
## 1950 115 126 141 135 125 149 170 170 158 133 114 140  
## 1951 145 150 178 163 172 178 199 199 184 162 146 166  
## 1952 171 180 193 181 183 218 230 242 209 191 172 194  
## 1953 196 196 236 235 229 243 264 272 237 211 180 201  
## 1954 204 188 235 227 234 264 302 293 259 229 203 229  
## 1955 242 233 267 269 270 315 364 347 312 274 237 278  
## 1956 284 277 317 313 318 374 413 405 355 306 271 306  
## 1957 315 301 356 348 348 355 422 465 467 404 347 305 336  
## 1958 340 318 362 348 363 435 491 505 404 359 310 337  
## 1959 360 342 406 396 420 472 548 559 463 407 362 405  
## 1960 417 391 419 461 472 535 622 606 508 461 390 432
```

Hashes inside the r code are treated as comments and will be greyed out in the output
In this case we have loaded the AirPassengers data

- Typing this way will give a bullet point in our output knitted file.

```
plot(air, main = "Air Passengers Plot")
```

Air Passengers Plot

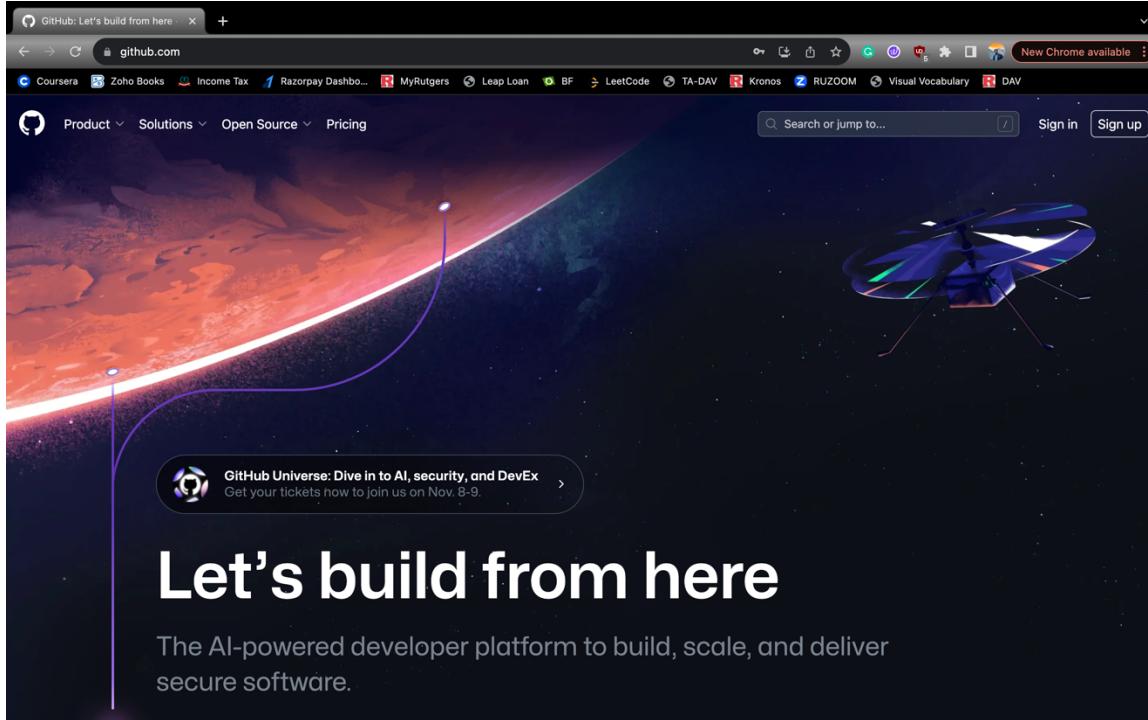
20. The HTML file will be saved in the same location that you saved your Rmd File

The screenshot shows a Mac Finder window with the following contents:

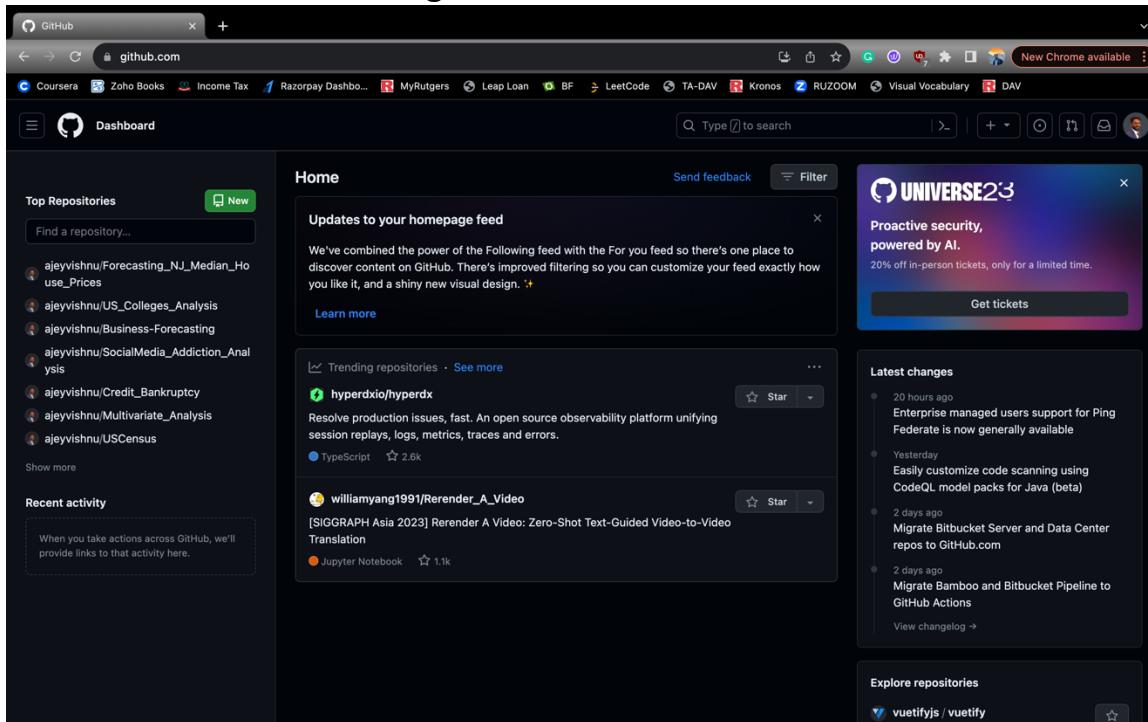
Name	Date Modified	Size	Kind
Applications	Dec 1, 2022 at 13:23	--	Folder
AWSCLIV2.pkg	Sep 13, 2023 at 00:56	38.1 MB	Installable Package
Downloads	Today at 08:06	--	Folder
Draft_1	Mar 20, 2023 at 15:01	--	Folder
example	Today at 09:36	--	Folder
get-pip.py	Dec 1, 2022 at 13:31	2.6 MB	Python Script
Knitting Example.Rmd	Today at 11:21	594 bytes	R Markdown File
Knitting-Example.html	Today at 11:21	754 KB	HTML text
Movies	May 17, 2022 at 02:42	--	Folder
Music	May 23, 2022 at 22:36	--	Folder
opt	Jan 20, 2023 at 16:41	--	Folder
Pictures	May 15, 2022 at 09:30	--	Folder
Practice_1	Apr 13, 2023 at 11:48	--	Folder
Practice_101	Apr 13, 2023 at 11:54	--	Folder
Practice_102	Apr 13, 2023 at 11:59	--	Folder
Public	May 15, 2022 at 09:29	--	Folder
scikit_learn_data	Apr 2, 2023 at 11:14	--	Folder
Sites	Nov 25, 2022 at 21:36	--	Folder
test1	Mar 13, 2023 at 16:16	--	Folder
Test2	Mar 20, 2023 at 12:43	--	Folder

UPLOADING HOMEWORK IN GITHUB

1. Open Github: <https://github.com/>



2. Create an account and log in



3. Create a New Repository

The screenshot shows the GitHub Home page. A modal dialog titled "New repository" is open in the top right corner. The dialog contains options like "Import repository", "New codespace", "New gist", "New organization", and "New project". The main content area displays a feed of trending repositories, including "hyperdix/hyperdx" and "williamyang1991/Rerender_A_Video". On the left, there's a sidebar for "Top Repositories" and "Recent activity". The URL in the address bar is <https://github.com/new>.

4. Name the repository, give a description, and leave it PUBLIC

The screenshot shows the "Create a new repository" form. The "Repository name" field is filled with "BusinessForecastingFall23". The "Owner" dropdown is set to "ajeyvishnu". The "Public" radio button is selected. Under "Initialize this repository with:", the "Add a README file" checkbox is checked. At the bottom, there are sections for ".gitignore" and "Choose a license", both currently set to "None". The URL in the address bar is <https://github.com/new>.

5. Create Repository

The screenshot shows the GitHub 'New repository' creation interface. The 'Owner' dropdown is set to 'ajeyvishnu'. The 'Repository name' field contains 'BusinessForecastingFall'. A note below says 'BusinessForecastingFall23 is available.' The 'Description' field contains 'Repository for Knitting and Github examples'. The 'Public' radio button is selected, with a note: 'Anyone on the internet can see this repository. You choose who can commit.' The 'Private' radio button is also present. Under 'Initialize this repository with:', the 'Add a README file' checkbox is checked, with a note: 'This is where you can write a long description for your project. Learn more about READMEs.' Below it, the 'Add .gitignore' section shows '.gitignore template: None'. A note says: 'Choose which files not to track from a list of templates. Learn more about ignoring files.' Under 'Choose a license', the 'License: None' dropdown is selected. A note says: 'A license tells others what they can and can't do with your code. Learn more about licenses.' At the bottom right is a green 'Create repository' button.

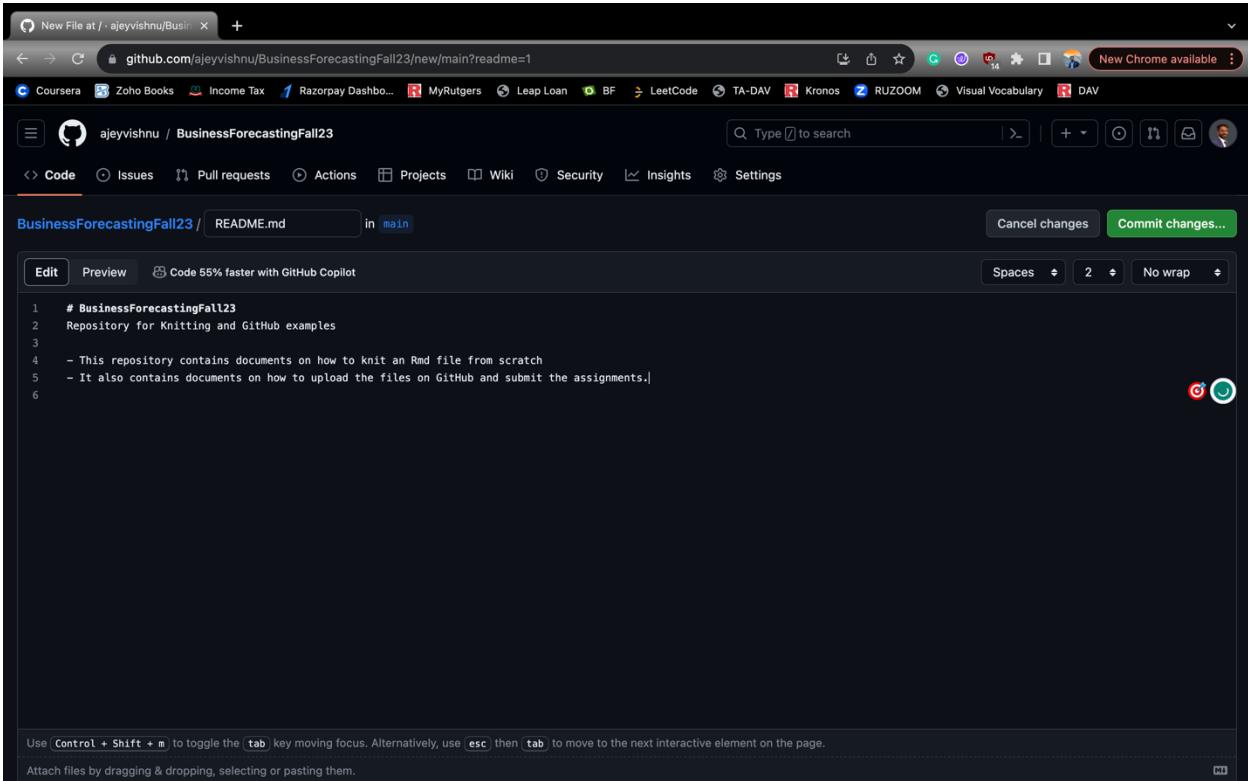
6. Add ReadMe file

The screenshot shows the GitHub repository page for 'BusinessForecastingFall23'. The repository is public. On the left, there are two cards: 'Set up GitHub Copilot' (with a note: 'Use GitHub's AI pair programmer to autocomplete suggestions as you code.') and 'Add collaborators to this repository' (with a note: 'Search for people using their GitHub username or email address.'). Below these is a dark blue box containing 'Quick setup — if you've done this kind of thing before' with instructions: 'Get started by creating a new file or uploading an existing file. We recommend every repository include a README, LICENSE, and .gitignore.' It also shows how to 'Set up in Desktop' or 'HTTPS / SSH' with the URL 'https://github.com/ajeyvishnu/BusinessForecastingFall23.git'. Below this is another section: '...or create a new repository on the command line' with a code block:

```
echo "# BusinessForecastingFall23" >> README.md
git init
git add README.md
git commit -m "first commit"
git branch -M main
git remote add origin https://github.com/ajeyvishnu/BusinessForecastingFall23.git
git push -u origin main
```

At the very bottom is the URL 'https://github.com/ajeyvishnu/BusinessForecastingFall23/new/main?readme=1'

7. Add details about the repository

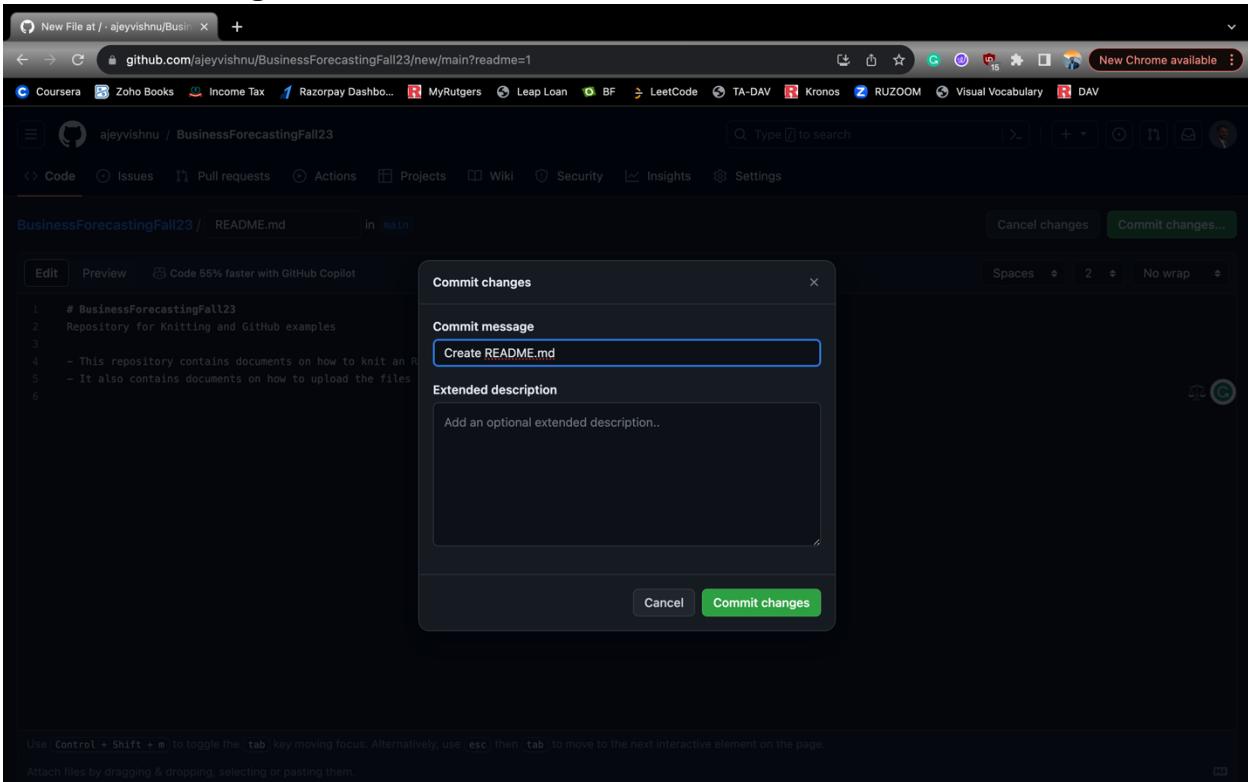


A screenshot of a GitHub repository page for 'BusinessForecastingFall23'. The user is editing the 'README.md' file. The code editor shows the following content:

```
1 # BusinessForecastingFall23
2 Repository for Knitting and GitHub examples
3
4 - This repository contains documents on how to knit an Rmd file from scratch
5 - It also contains documents on how to upload the files on GitHub and submit the assignments.
```

The GitHub Copilot logo is visible in the top right corner of the code editor. At the bottom of the editor, there is a note: "Use `Control + Shift + m` to toggle the `tab` key moving focus. Alternatively, use `esc` then `tab` to move to the next interactive element on the page." There is also a note: "Attach files by dragging & dropping, selecting or pasting them."

8. Commit Changes



A screenshot of the GitHub commit changes dialog. The 'Commit message' field contains the text 'Create README.md'. The 'Extended description' field has the placeholder 'Add an optional extended description..'. At the bottom of the dialog are 'Cancel' and 'Commit changes' buttons.

9. It should look something like this now

The screenshot shows a GitHub repository page for 'BusinessForecastingFall23'. The repository was created by 'ajeyvishnu' and has one file, 'README.md'. The README contains the following text:

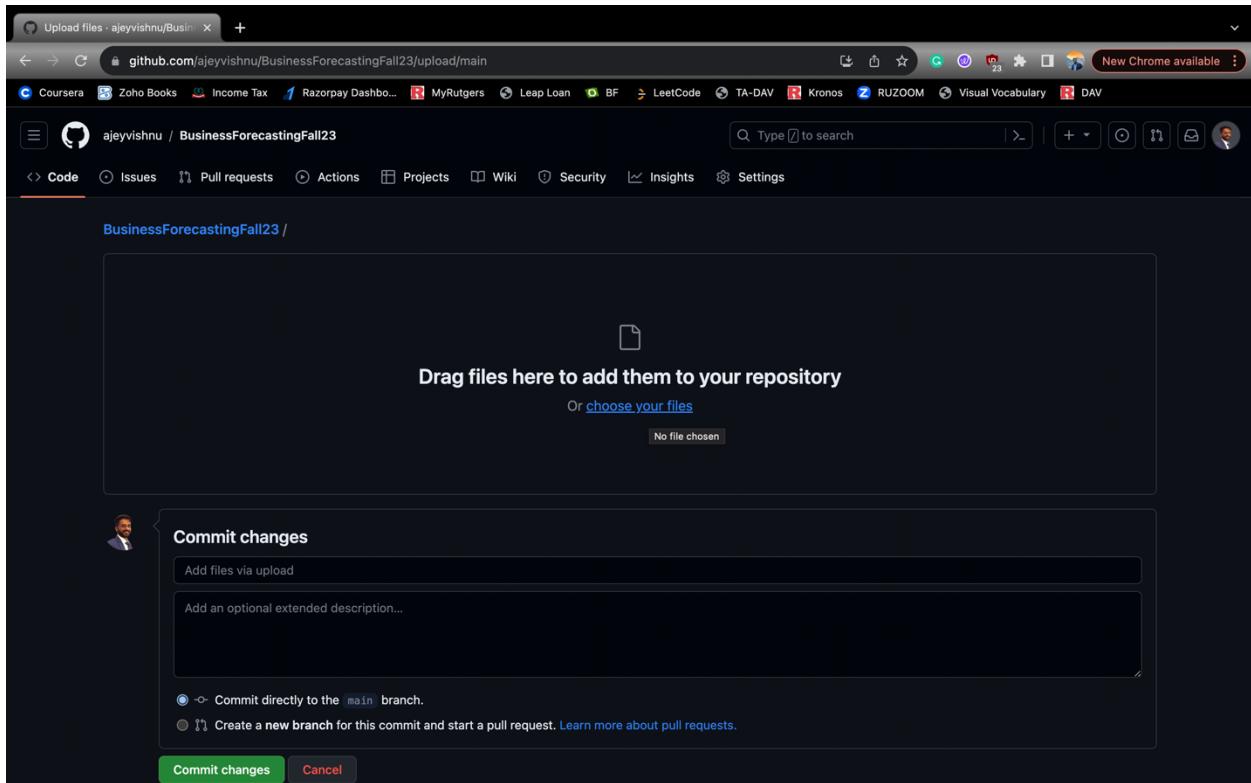
```
BusinessForecastingFall23
Repository for Knitting and GitHub examples
• This repository contains documents on how to knit an Rmd file from scratch
• It also contains documents on how to upload the files on GitHub and submit the assignments.
```

10. Uploading files

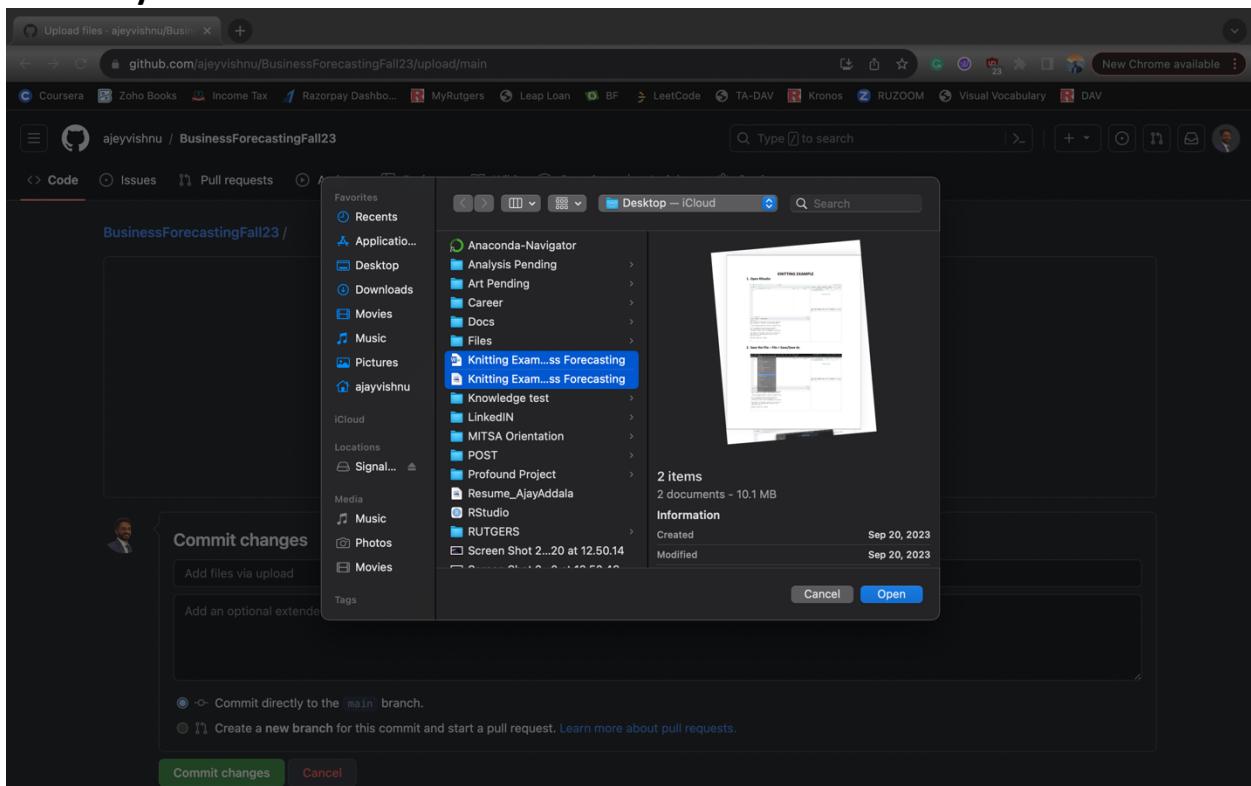
The screenshot shows the same GitHub repository page as above, but with a tooltip highlighting the 'Upload files' button in the 'Add file' dropdown menu. The repository structure and README content remain the same.

https://github.com/ajeyvishnu/BusinessForecastingFall23/upload/main

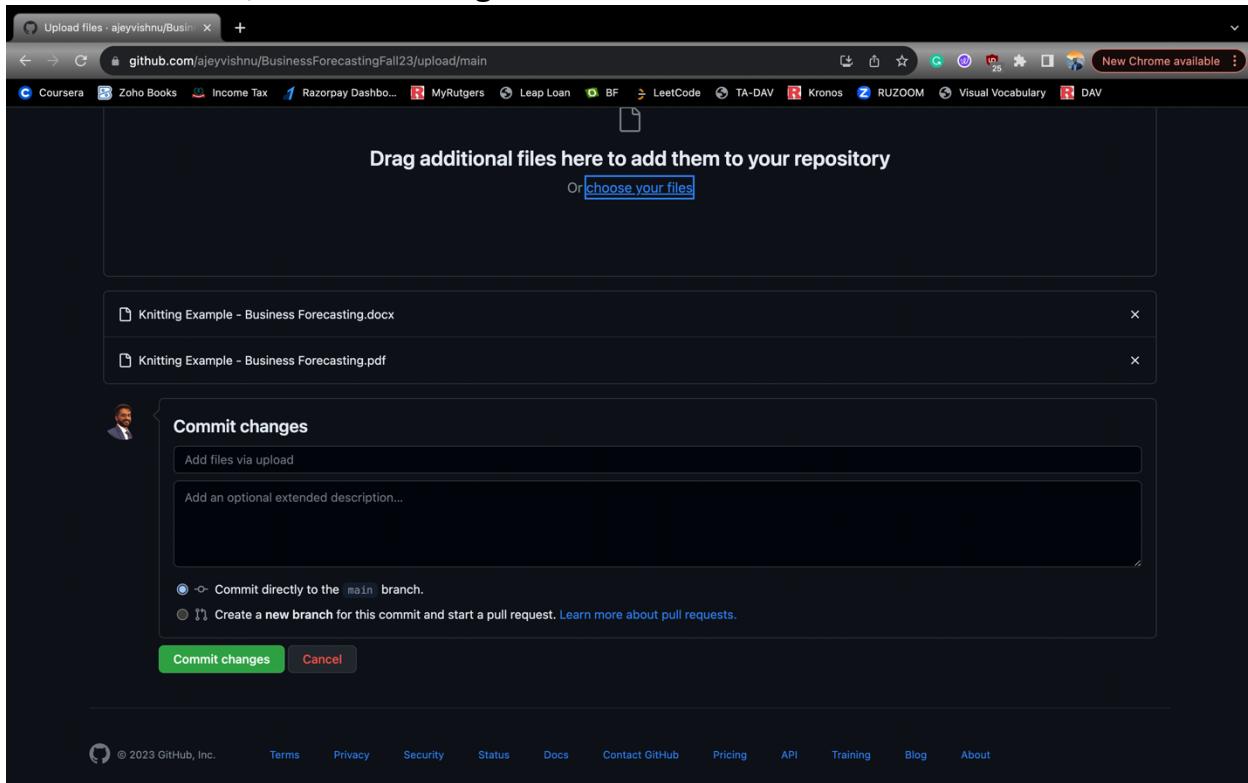
11. Choose Files



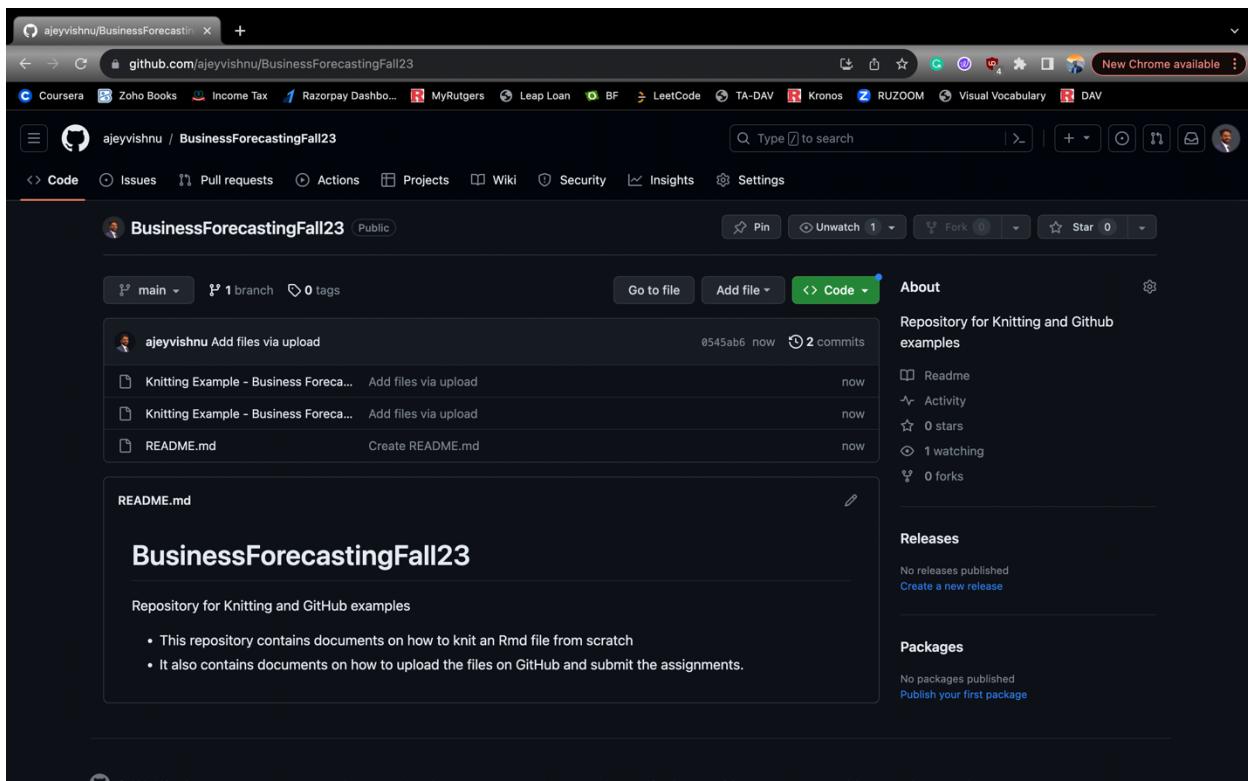
12. Add your files



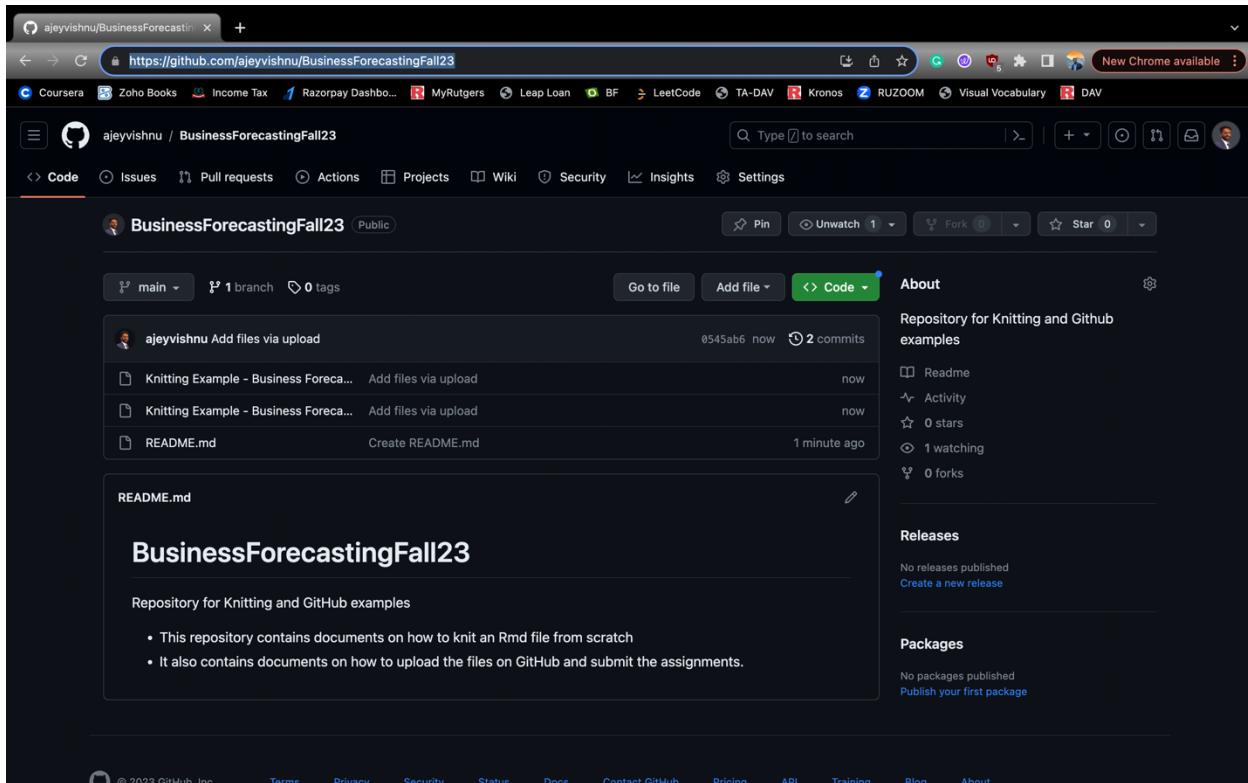
13. Once added, Commit Changes



14. Final check



15. Submission Link



- Please copy the link (looking like this: <https://github.com/ajeyvishnu/BusinessForecastingFall23>) and submit it as your assignment submission.
- You can copy your repository link and double-check if it opens in an incognito tab before submitting.

TIP: Create new repositories for each of your homework so that you can come back to them later, work on them, and use them to make proper analysis reports that you can publish on GitHub and LinkedIn.