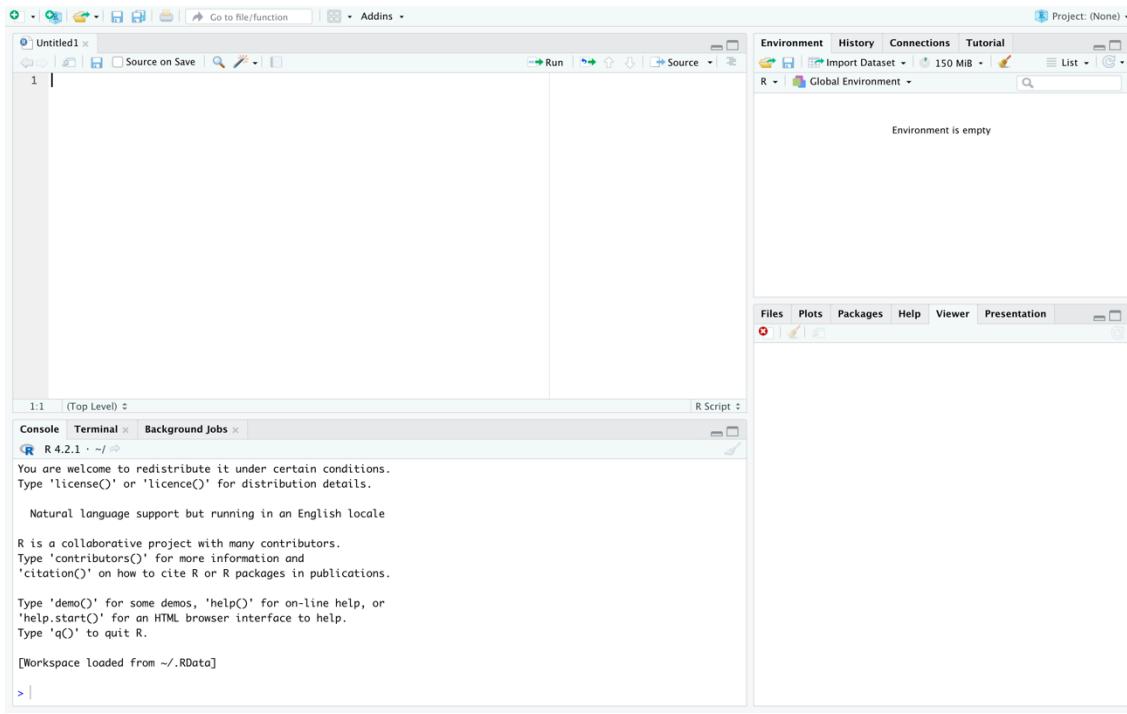
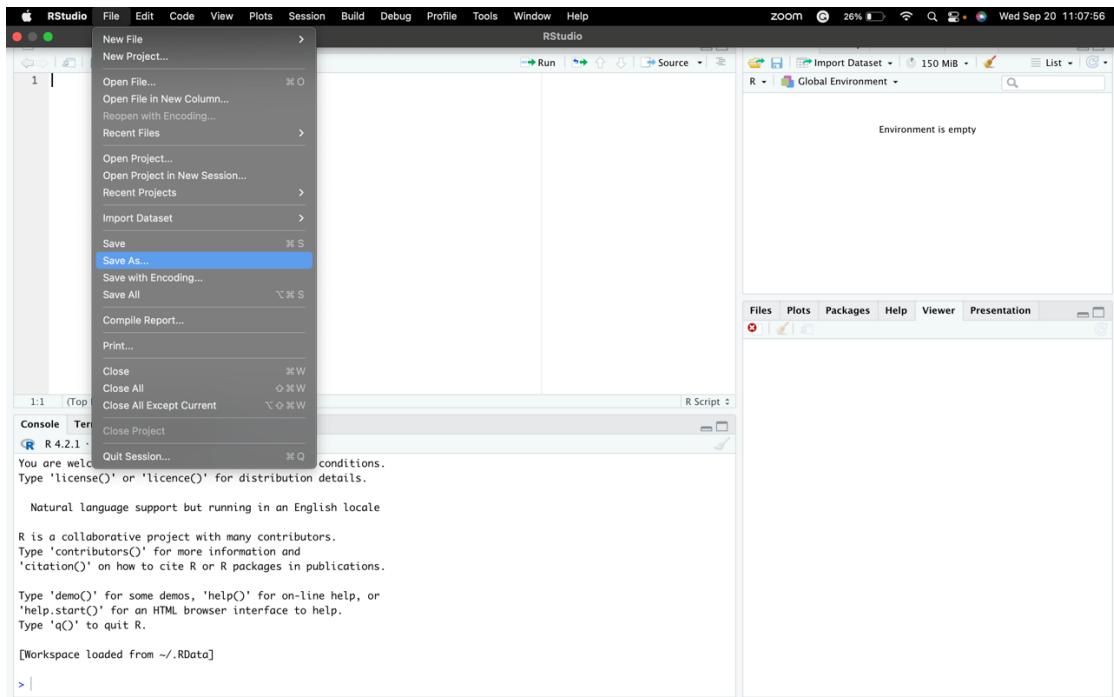


# KNITTING EXAMPLE

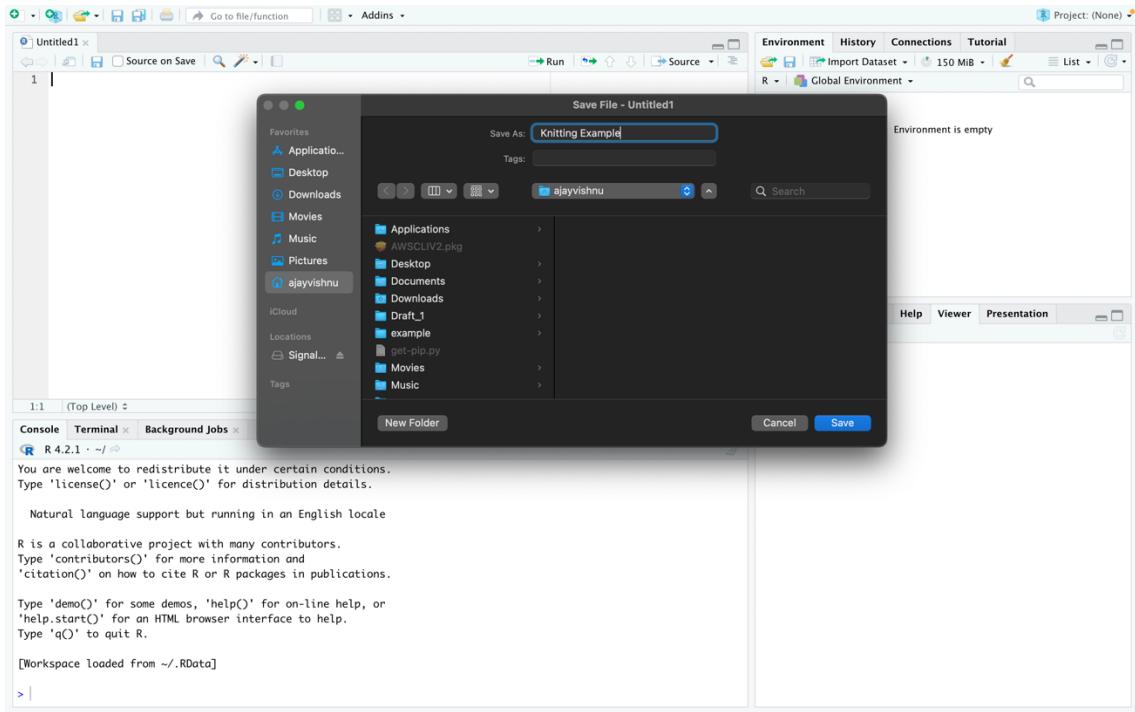
## 1. Open RStudio



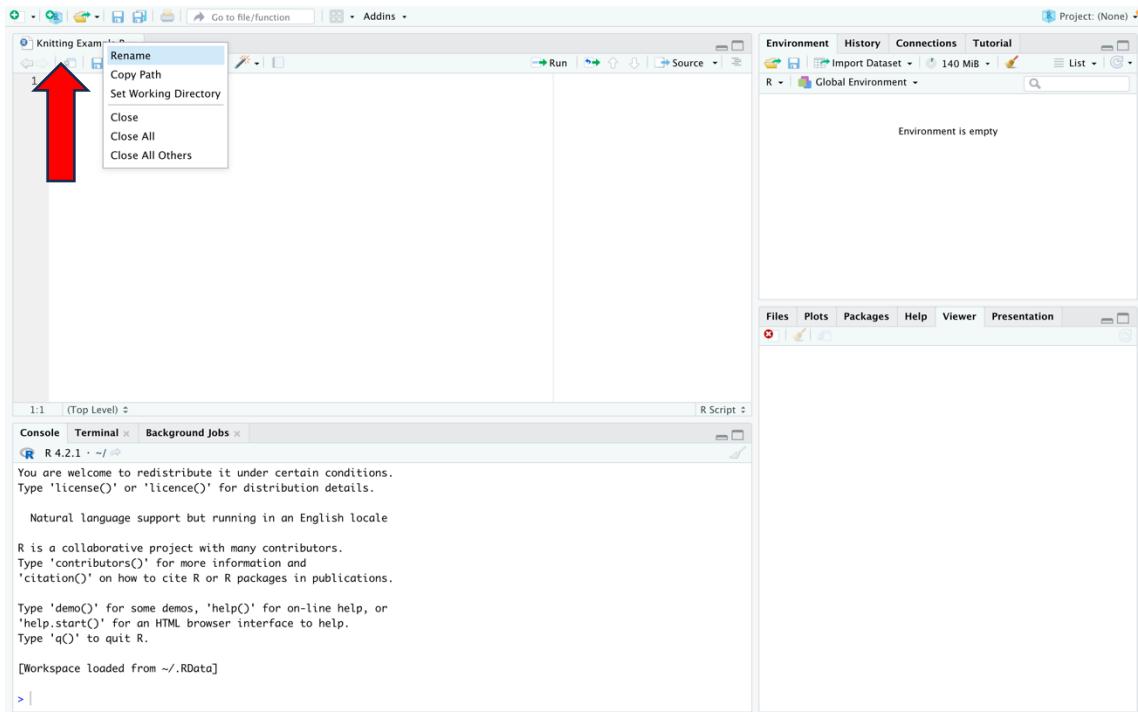
## 2. Save the File – File > Save/Save As



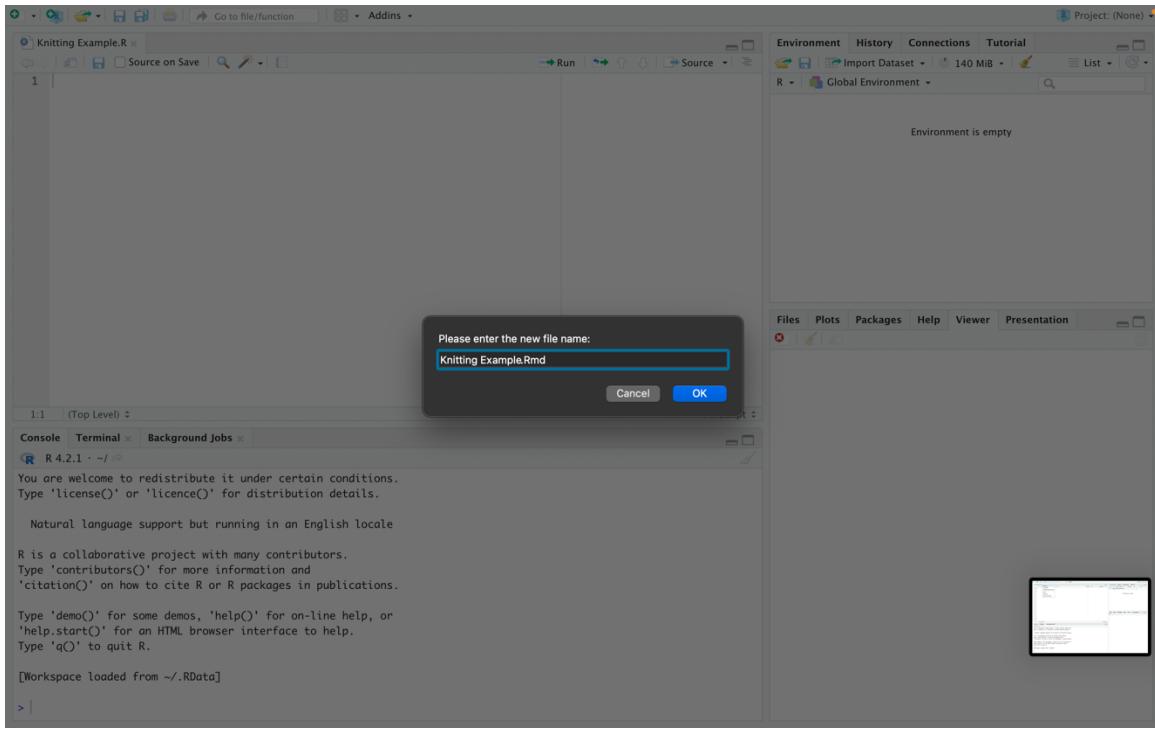
### 3. Remember the location/Give a proper destination.



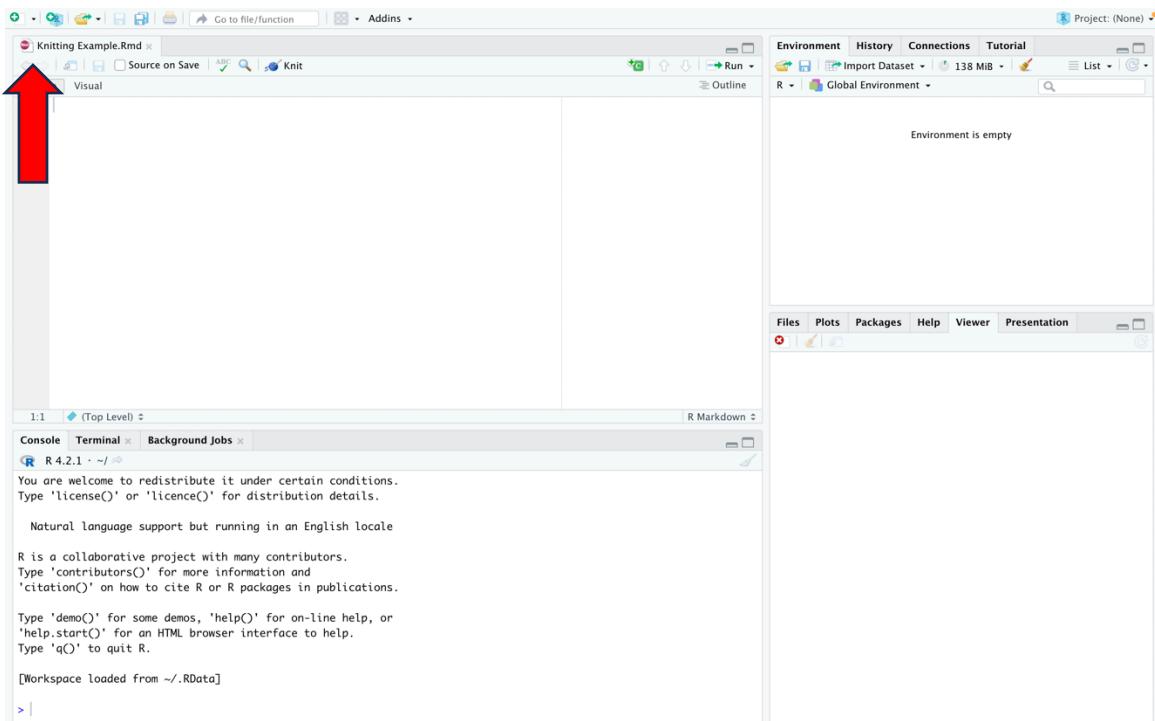
### 4. Rename the File – Right-click on the file name on top left



## 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]

> |

## 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]

> |

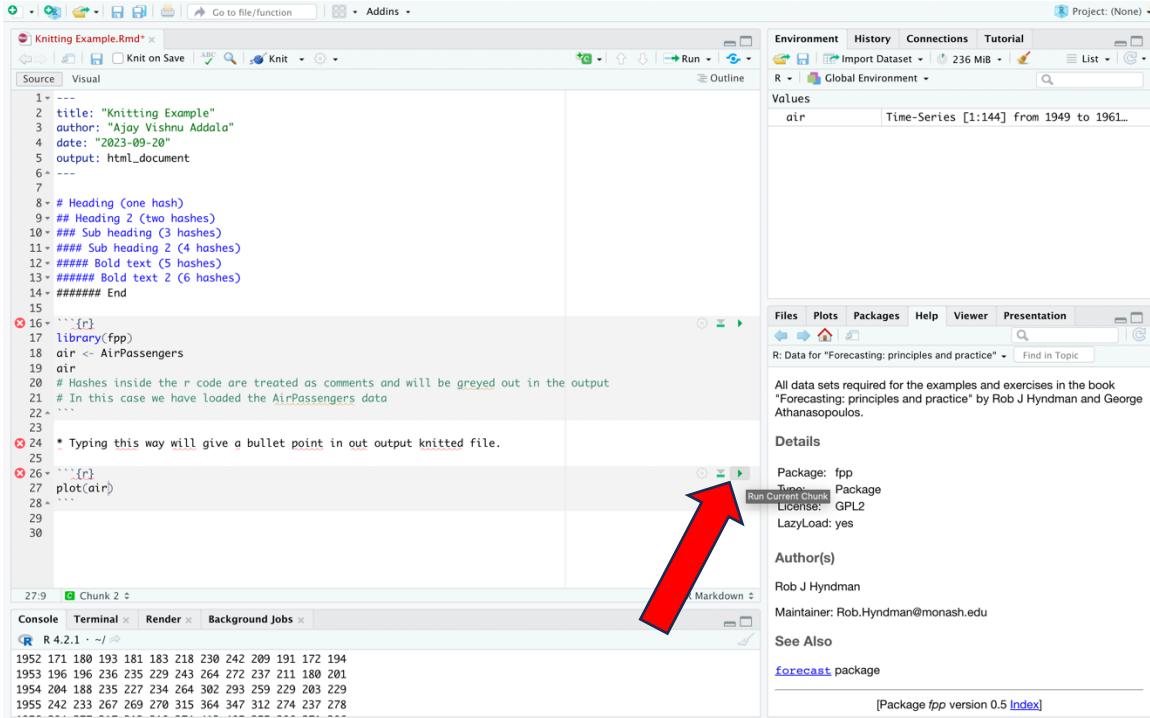
## 9. Adding headings and bold text – the number of hashes defines it – You can check this in the final output

```
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 320 310 323 328 325 325 325 325 325 325 325 325  
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]
```

## 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  
21  
22  
23  
24 * Typing this way will give a bullet point in out 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)

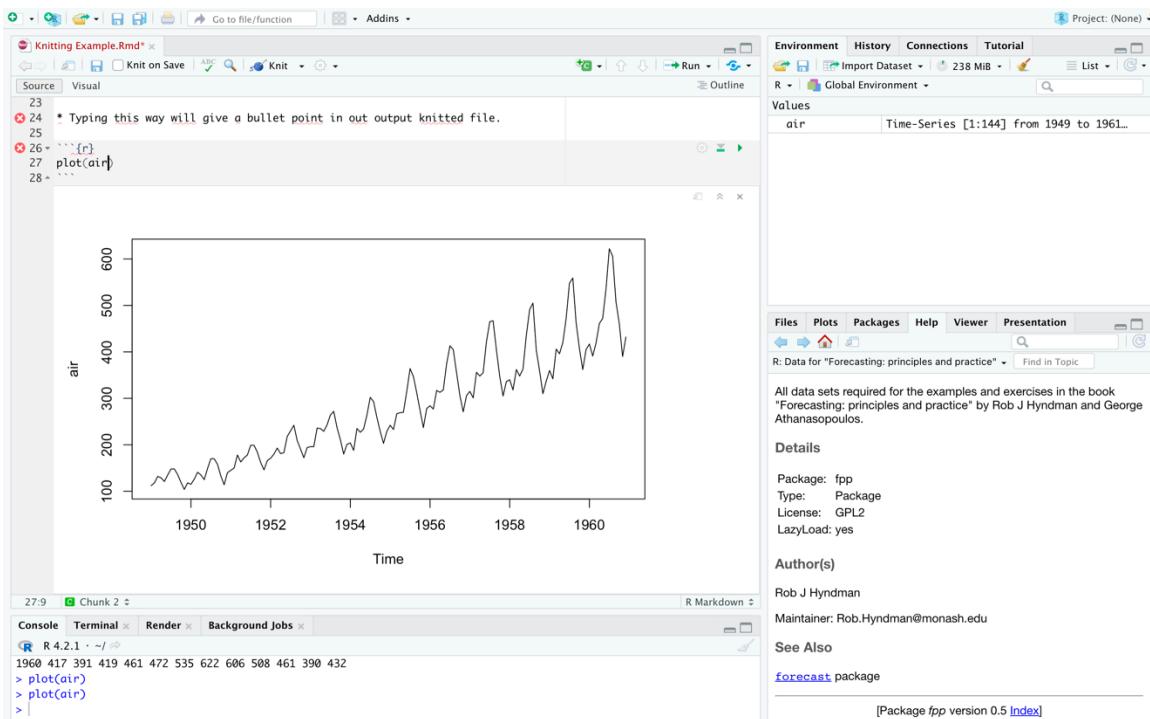
Rob J Hyndman Maintainer: Rob.Hyndman@monash.edu

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 out output knitted file.  
25  
26 `plot(air)`  
27  
28

1950 1952 1954 1956 1958 1960

Time

air

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)

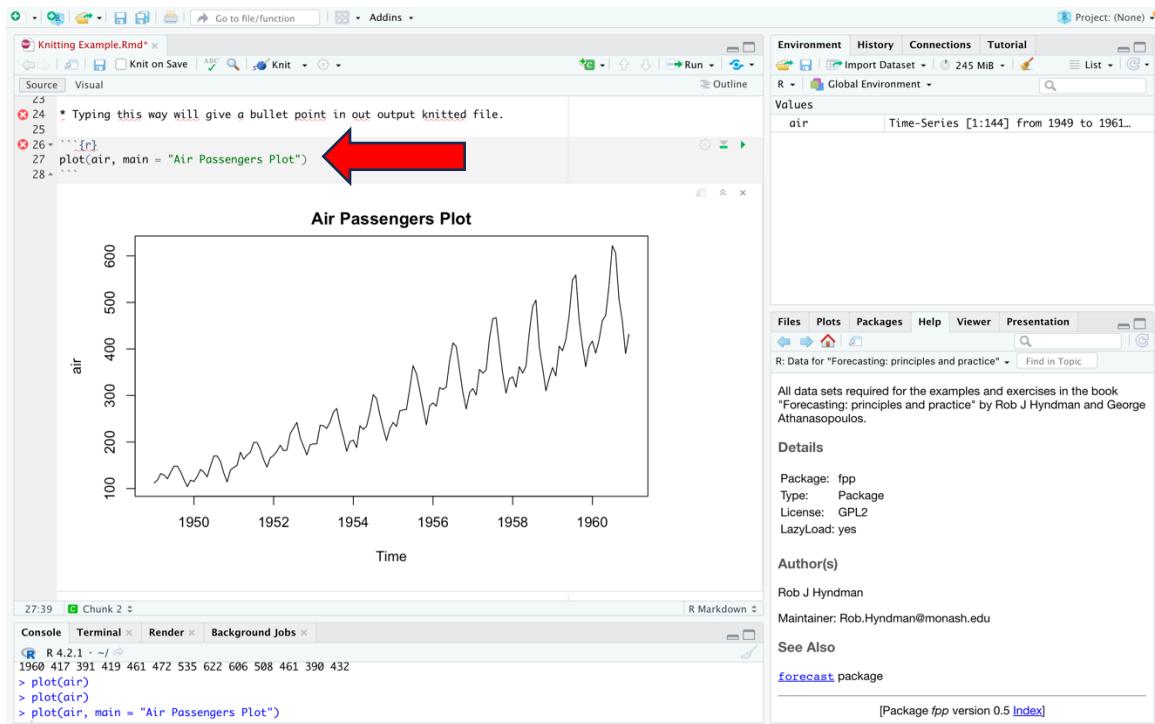
Rob J Hyndman Maintainer: Rob.Hyndman@monash.edu

See Also

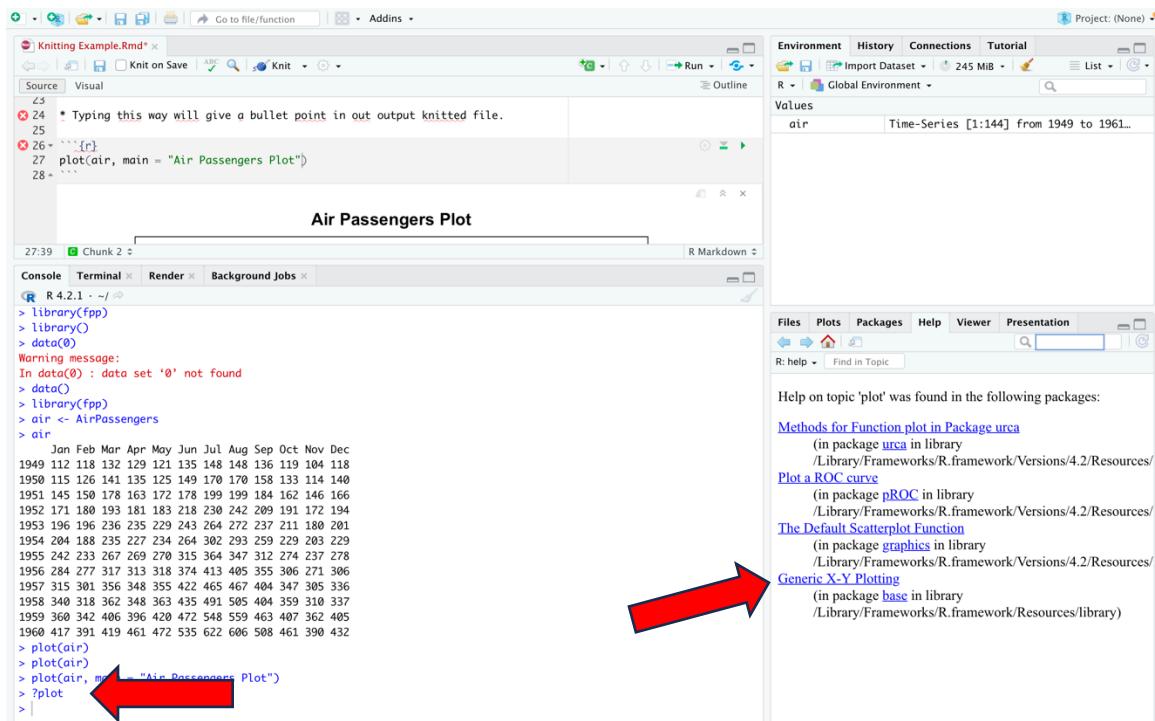
[forecast package](#)

[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. On the left, the 'Knitting Example.Rmd' file contains R code for plotting air passenger data. On the right, the 'Environment' tab shows the 'air' variable as a Time-Series from 1949 to 1961. A large red arrow points from the R code in the console to the 'Generic X-Y Plotting' section of the R Help browser, which provides detailed documentation for the 'plot' function.

```

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

```

**Air Passengers Plot**

Console Terminal Render Background Jobs

```

R 4.2.1 · ~ ⌂
> library(fpp)
> library()
> data(0)
Warning message:
In data(0) : data set '0' not found
> data()
> library(fpp)
> air <- AirPassengers
> air
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1949 112 118 132 129 121 135 148 146 136 119 104 118
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 315 301 356 348 355 422 465 467 404 347 305 336
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
> plot(air)
> plot(air)
> plot(air, main = "Air Passengers Plot")
> ?plot
> |

```

Project: (None)

Environment History Connections Tutorial

Values

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

Files Plots Packages Help Viewer Presentation

Generic X-Y Plotting

Description

Generic function for plotting of R objects.

For simple scatter plots, `plot.default` will be used. However, there are `plot` methods for many R objects, including `functions`, `data.frames`, `density` objects, etc. Use methods(`plot`) and the documentation for these. Most of these methods are implemented using traditional graphics (the `graphics` package), but this is not mandatory.

For more details about graphical parameter arguments used by traditional graphics, see `par`.

Usage

`plot(x, y, ...)`

## 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 the R Help browser open. A large red arrow points down the page, indicating where to scroll to see more options for the 'plot' function. The help page includes sections for 'Description', 'Usage', 'Details', and 'See Also'.

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

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

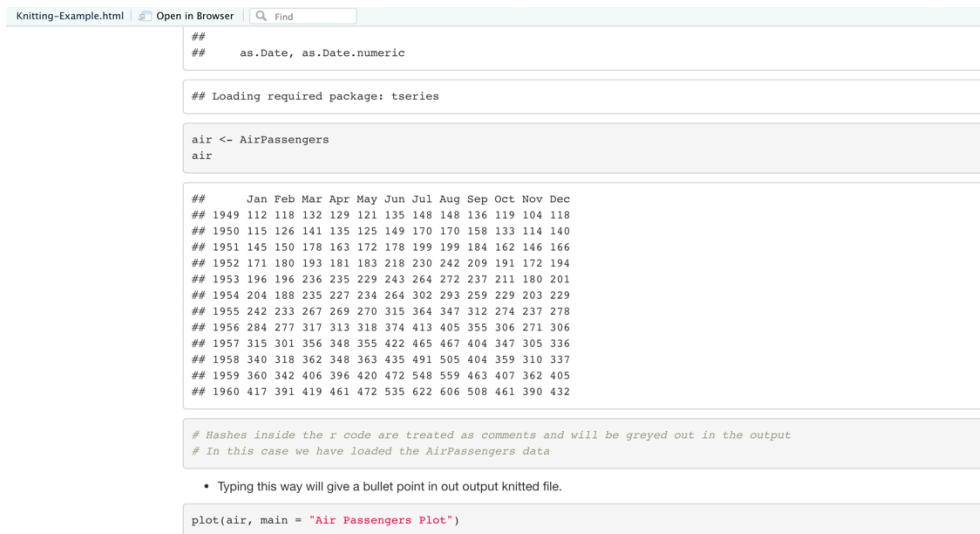
## 17. Knitting the file – Click on knit on the top

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 the 'Plots' tab, which contains a warning message about plot types. The 'Details' tab at the bottom provides information about the two-step types in the knitting process.

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

The screenshot shows the generated HTML output titled 'Knitting Example'. A large red arrow points from the previous knitting screenshot to this one. The HTML page displays various headings and sub-headings. The 'Heading (one hash)' is the largest, followed by 'Heading 2 (two hashes)', then 'Sub heading (3 hashes)', 'Sub heading 2 (4 hashes)', 'Bold text (5 hashes)', and 'Bold text 2 (6 hashes)'. Below these, there is a section labeled 'End' and a code block for 'library(fpp)'.

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



A screenshot of a web browser displaying an R Markdown document. The top navigation bar includes 'Knitting-Example.html', 'Open in Browser', 'Find', and a 'Publish' button. The main content area shows R code for loading the 'AirPassengers' dataset and creating a plot. A red arrow points from the right side of the browser window towards the plot area.

```
##  
## 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

