RStudio

File Edit Code View Plots Session Build Debug Profile Tools Help

Go to file/function | Addins | Project: (None)

Console | Terminal

~/Rozenn2019/MyCode/Rmarkdown/Assignment ST3010/

```
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'help.start()' for an HTML browser interface to help.
Type 'q()' to quit R.

>
```

Environment | History | Connections

Import Dataset | List

Global Environment

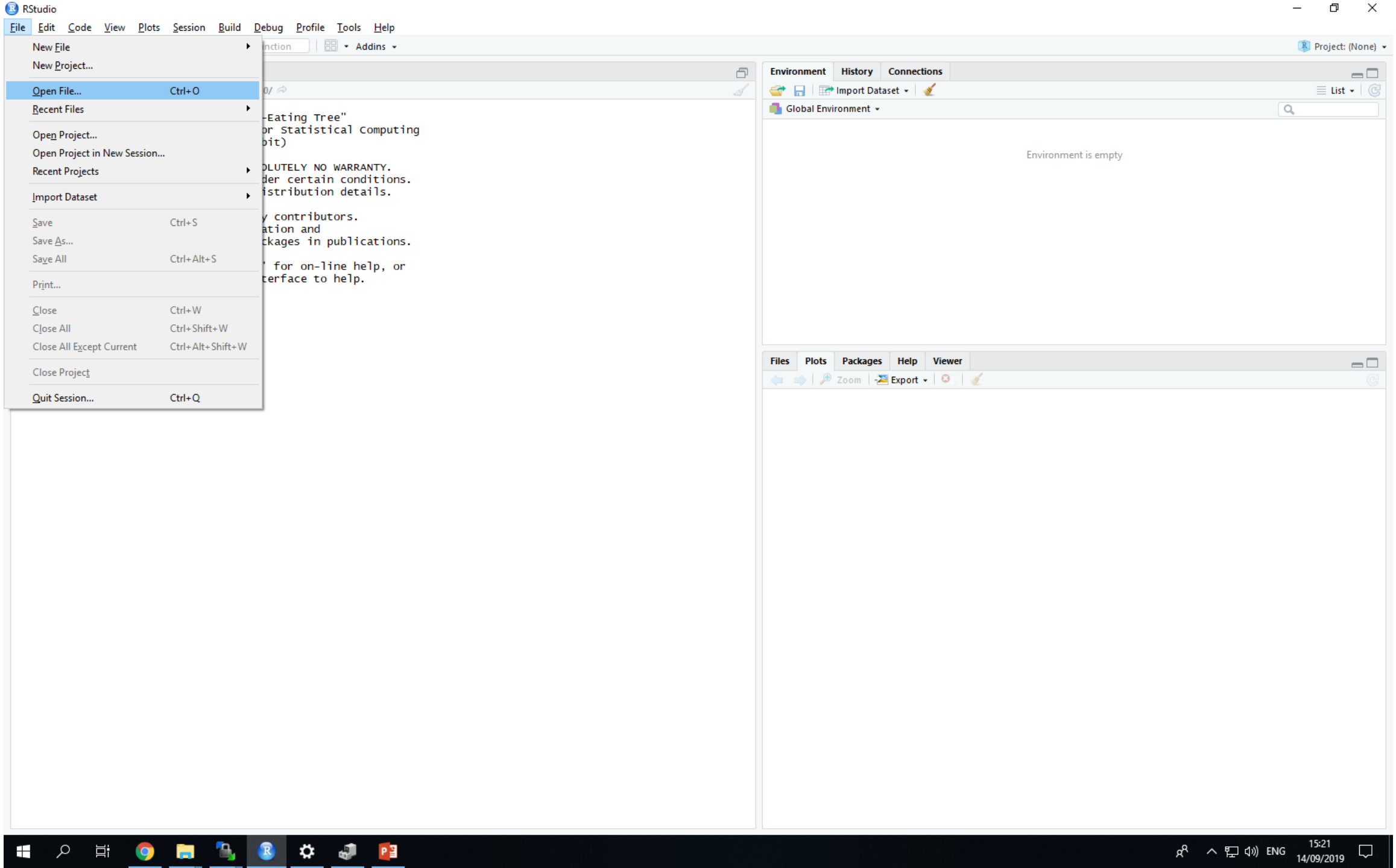
Environment is empty

Open RStudio

Files | Plots | Packages | Help | Viewer

Zoom | Export

ENG 15:21 14/09/2019


RStudio
File Edit Code View Plots Session Build Debug Profile Tools Help
New File
New Project...
Open File... Ctrl+O
Recent Files
Open Project...
Open Project in New Session...
Recent Projects
Import Dataset
Save Ctrl+S
Save As...
Save All Ctrl+Alt+S
Print...
Close Ctrl+W
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Close Project
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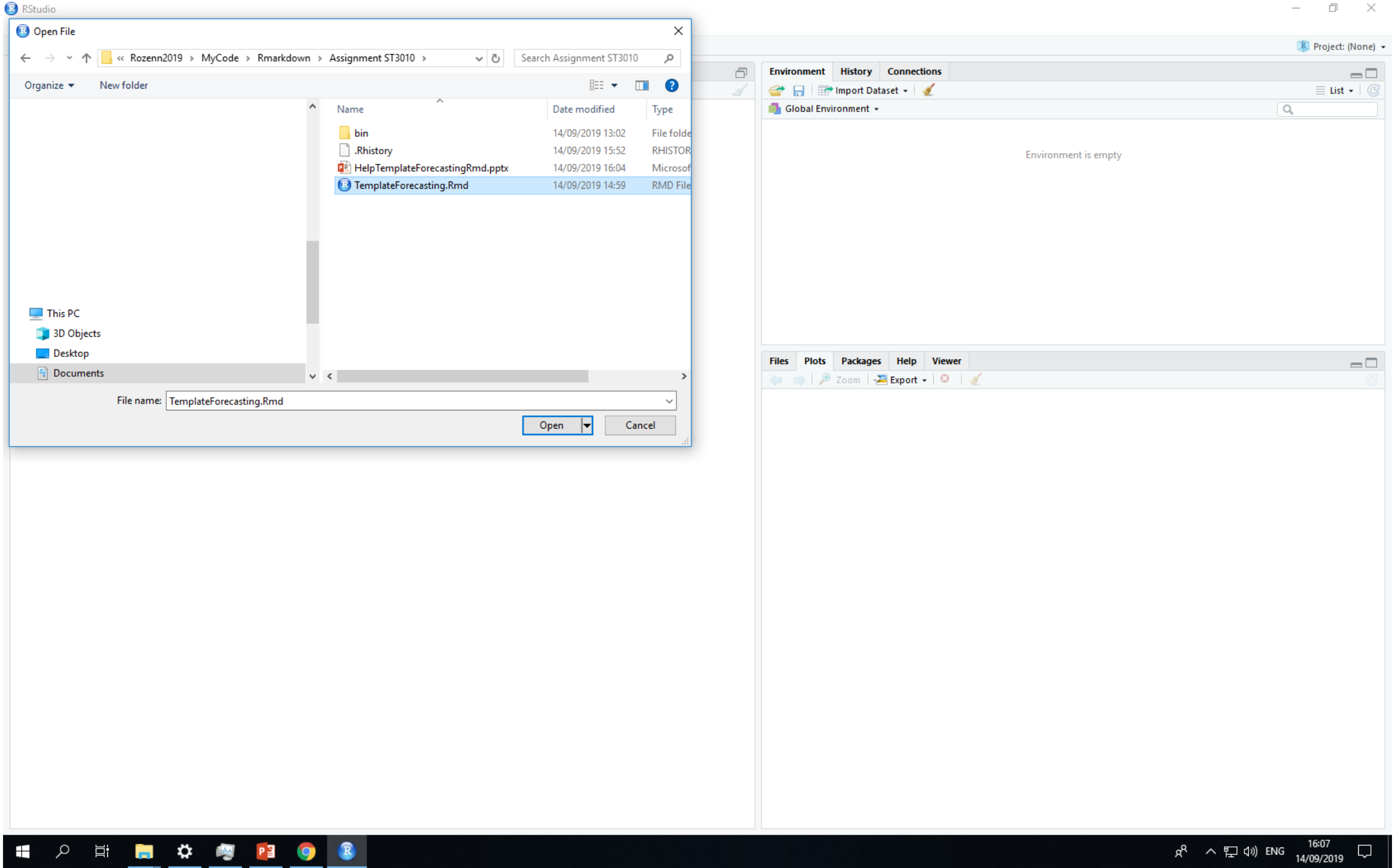
Environment History Connections
Import Dataset
List
Global Environment
Environment is empty
Files Plots Packages Help Viewer
Zoom
Export
ENG
15:21
14/09/2019


RStudio
Open File
Rozenn2019 › MyCode › Rmarkdown › Assignment ST3010 ›
Search Assignment ST3010
Organize
New folder
Name
Date modified
Type
bin
14/09/2019 13:02
File folde
.Rhistory
14/09/2019 15:52
RHISTOR
HelpTemplateForecastingRmd.pptx
14/09/2019 16:04
Microsof
TemplateForecasting.Rmd
14/09/2019 14:59
RMD File
This PC
3D Objects
Desktop
Documents
File name:
TemplateForecasting.Rmd
Open
Cancel
Project: (None)
Environment
History
Connections
Import Dataset
List
Global Environment
Environment is empty
Files
Plots
Packages
Help
Viewer
Zoom
Export
ENG
16:07
14/09/2019

RStudio

File Edit Code View Plots Session Build Debug Profile Tools Help

Go to file/function | Addins | Project: (None)

TemplateForecasting.Rmd

Knit | Insert | Run

```
45 tsdisplay(beer,lag.max=70)
46 ```
47
48 Other packages exist for visualisation.  For instance you may prefer
49 using packages *ggplot2*
50
51
52 ```{r message=FALSE}
53 # make sure to type in Rstudio console: install.packages("ggplot2")
54 require(ggplot2)
55 ggtsdisplay(beer,lag.max = 70)
56 ```
57
58 The timeplot shows seasonality, no real trend and some noise.
59 For the time series *beer*, the ACF displays maxima at lags 12, 24, 36 (...) characteristic of
   seasonality with a period of 12 months (as it is  monthly data).
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66:1 | Time plot with ACF and PACF | R Markdown

Console Terminal

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Environment History Connections

Import Dataset | List

Global Environment

Environment is empty

If the Rmd file appears blank, re-open it
with the correct encoding (see final slides of this doc)

Files Plots Packages Help Viewer

Zoom | Export

ENG 15:23 14/09/2019

RStudio

File Edit Code View Plots Session Build Debug Profile Tools Help

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66:1 | Time plot with ACF and PACF | R Markdown

Console | Terminal | R Markdown

.../Assignment ST3010/TemplateForecasting.Rmd

Environment | History | Connections

Import Dataset | List

Global Environment

Environment is empty

Click on Knit

Files | Plots | Packages | Help | Viewer

Zoom | Export

ENG 15:25 14/09/2019

RStudio

File Edit Code View Plots Session Build

TemplateForecasting.Rmd

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55  ggtsdisplay(beer,lag.max =
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58  The timeplot shows seasonal
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    seasonality with a period o
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66:1 Time plot with ACF and PACF

Console Terminal R Markdown

~/Rozenn2019/MyCode/Rmarkdown/Assignment S

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'help.start()' for an HTML browser
Type 'q()' to quit R.

>
```

~/Rozenn2019/MyCode/Rmarkdown/Assignment ST3010/TemplateForecasting.html

TemplateForecasting.html | Open in Browser | Find | Publish

Time series *beer* with Holt-Winters algorithms

Rozenn Dahyot - https://www.scss.tcd.ie/Rozenn.Dahyot/

2019

The time series *beer* is in the fma package:

```
# make sure to type in Rstudio console: install.packages("fma")
require("fma")
beer
```

```
##      Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
## 1991 164 148 152 144 155 125 153 146 138 190 192 192
## 1992 147 133 163 150 129 131 145 137 138 168 176 188
## 1993 139 143 150 154 137 129 128 140 143 151 177 184
## 1994 151 134 164 126 131 125 127 143 143 160 190 182
## 1995 138 136 152 127 151 130 119 153
```

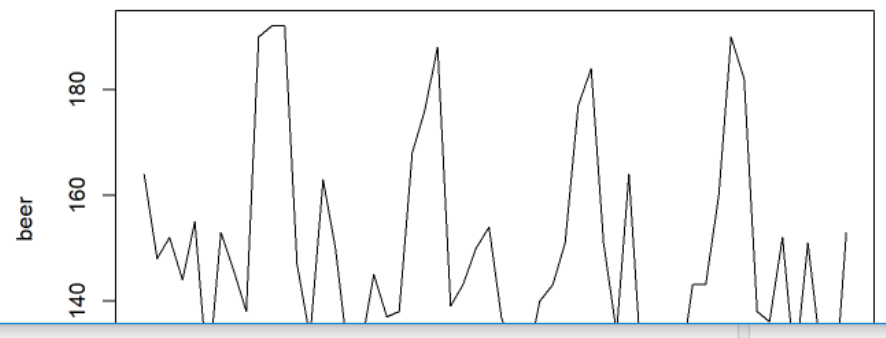
Description of beer: Monthly Australian beer production: Jan 1991 to Aug 1995.

Visualisation of time series

Time plot

You can also embed plots, for example the time plot:

```
plot(beer)
```



The html output is created. You can open this html report in internet explorer!

ENG 15:26 14/09/2019

If the Rmd file does not ‘knit’ correctly, some packages may need to be installed

```
install.packages("knitr")
```

Some more information can be found at
https://github.com/pistac/R-ladies_RMarkdown

If the Rmd File appears blank in R studio

Re-open it with specific encoding …

RStudio

File Edit Code View Plots Session Build Debug Profile Tools Help

New File
New Project...
Open File... Ctrl+O
Reopen with Encoding...
Recent Files
Open Project...
Open Project in New Session...
Recent Projects
Import Dataset
Save Ctrl+S
Save As...
Save with Encoding...
Save All Ctrl+Alt+S
Knit Document Ctrl+Shift+K
Publish...
Print...
Close Ctrl+W
Close All Ctrl+Shift+W
Close All Except Current Ctrl+Alt+Shift+W
Close Project
Quit Session... Ctrl+Q

Addins

Project: (None)

Insert Run

```
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console: install.packages("ggplot2")

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R Markdown

Environment History Connections

Import Dataset List

Global Environment

Environment is empty

Files Plots Packages Help Viewer

Zoom Export

Console Terminal

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RStudio

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>
```

Environment | History | Connections

Import Dataset | List

Global Environment

Environment is empty

ckages | Help | Viewer

Export

Choose Encoding

- ISO-8859-1 (System default)
- ASCII
- BIG5
- GB18030
- GB2312
- ISO-2022-JP
- ISO-2022-KR
- ISO-8859-2
- ISO-8859-7
- SHIFT-JIS
- UTF-8
- WINDOWS-1252

Show all encodings

Set as default encoding for source files

OK | Cancel

ENG 15:24 14/09/2019