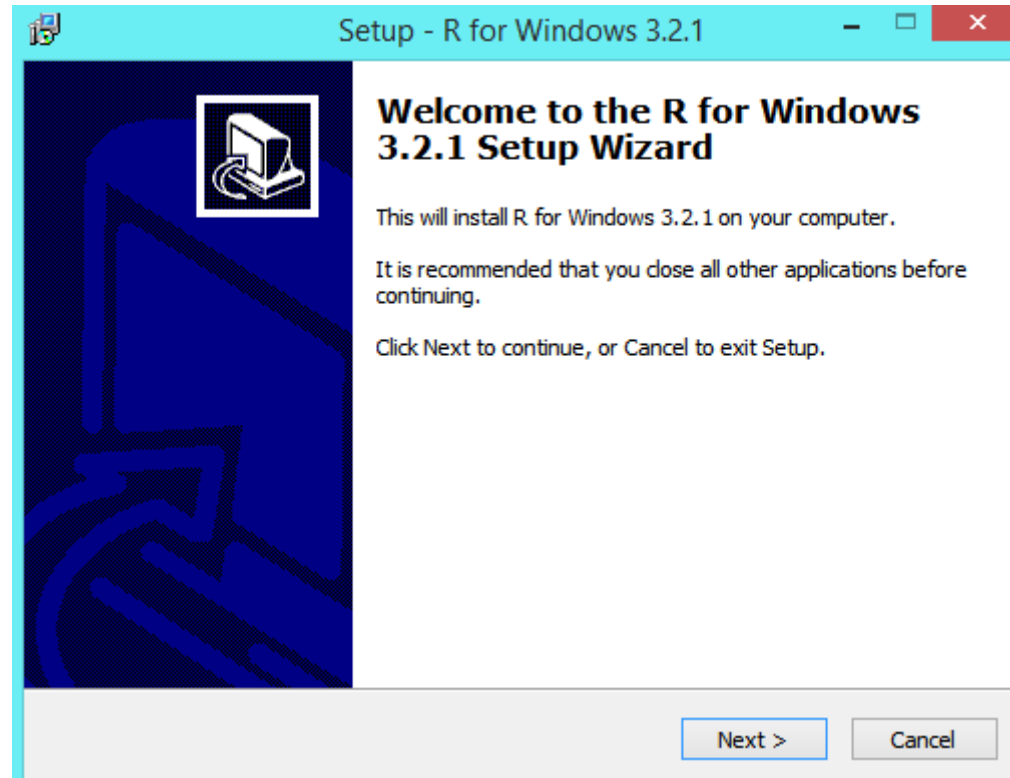
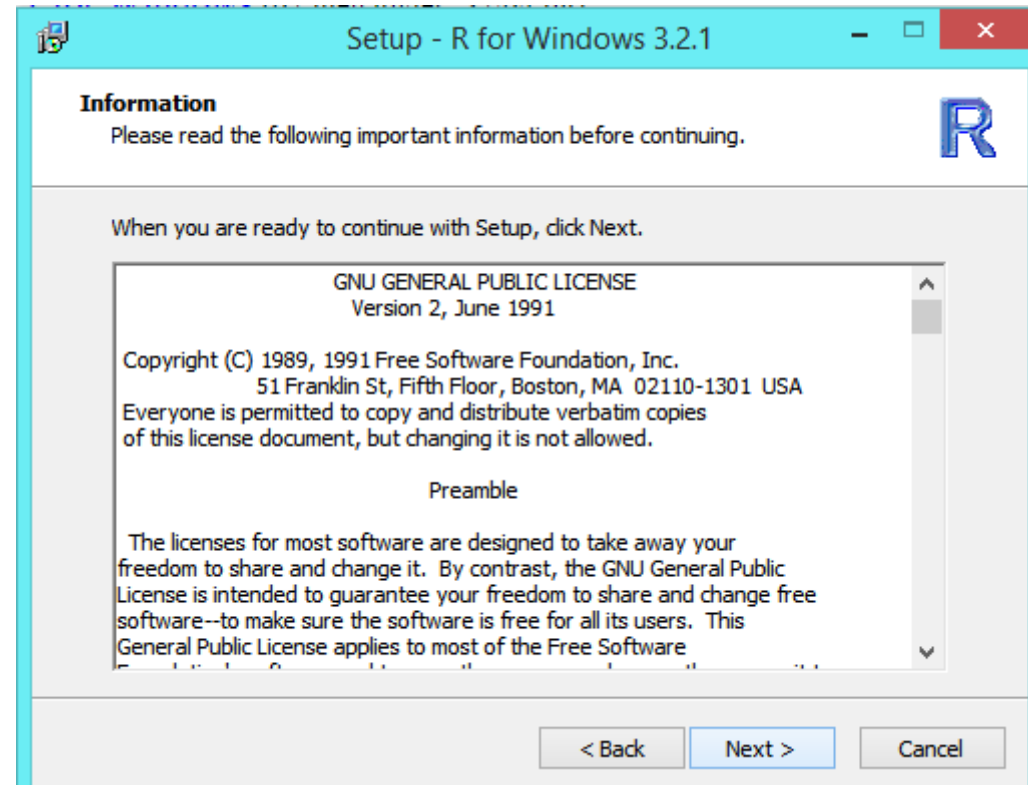
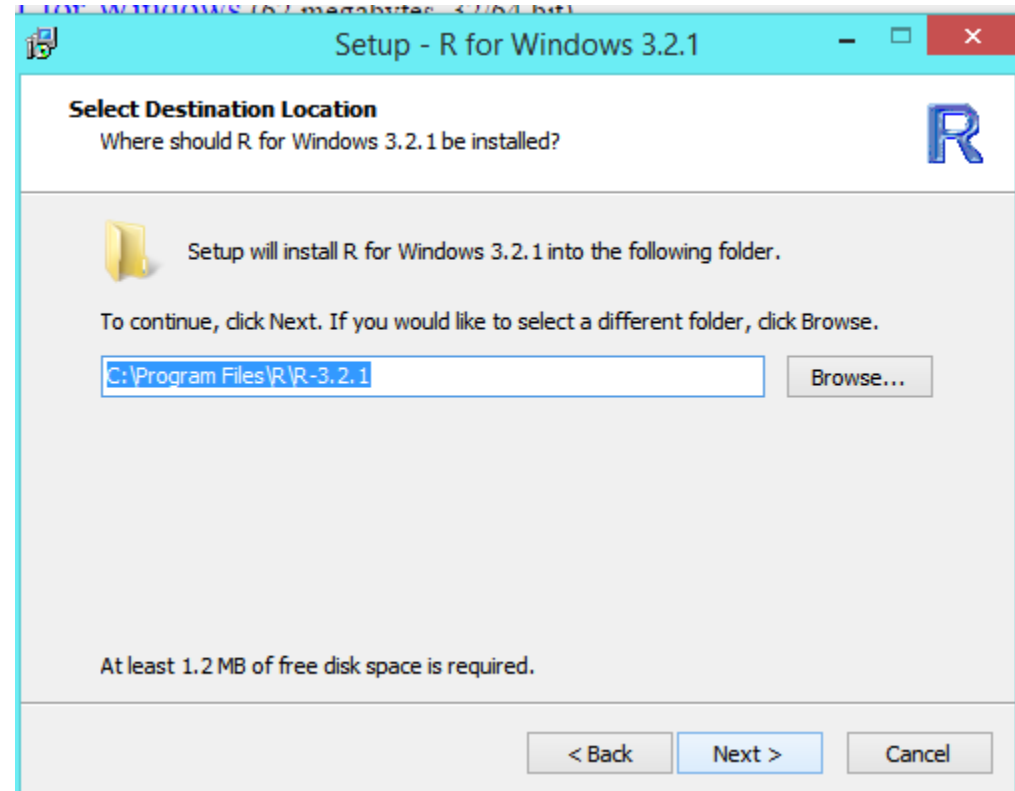


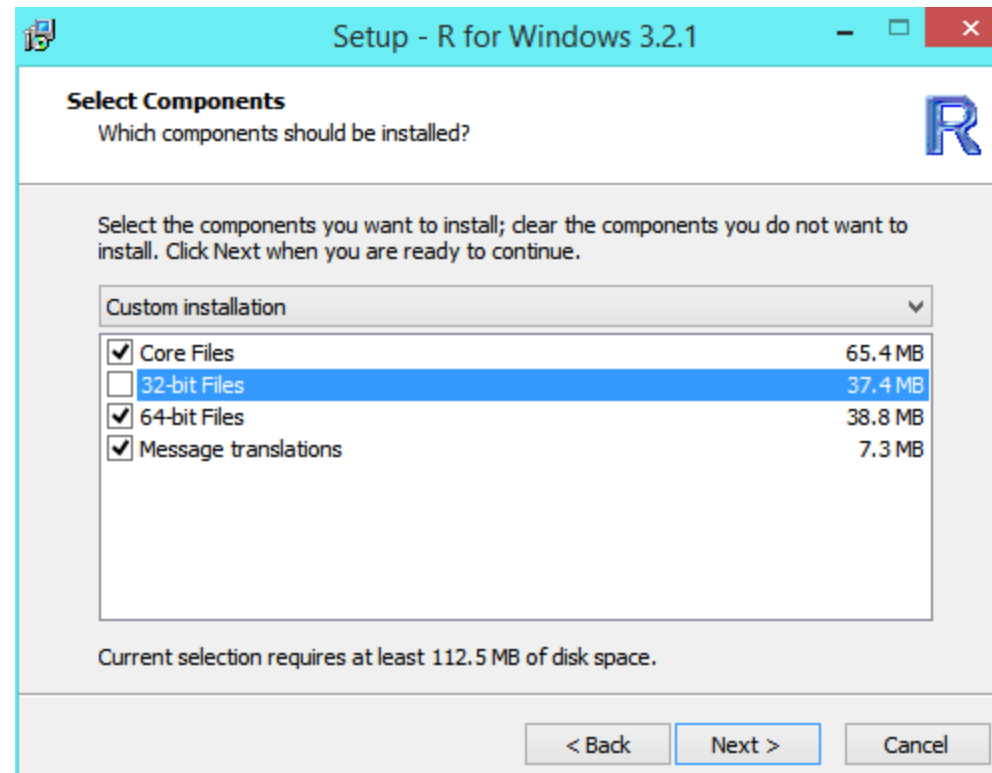
Step by Step Installation of R and related components for use in Tableau

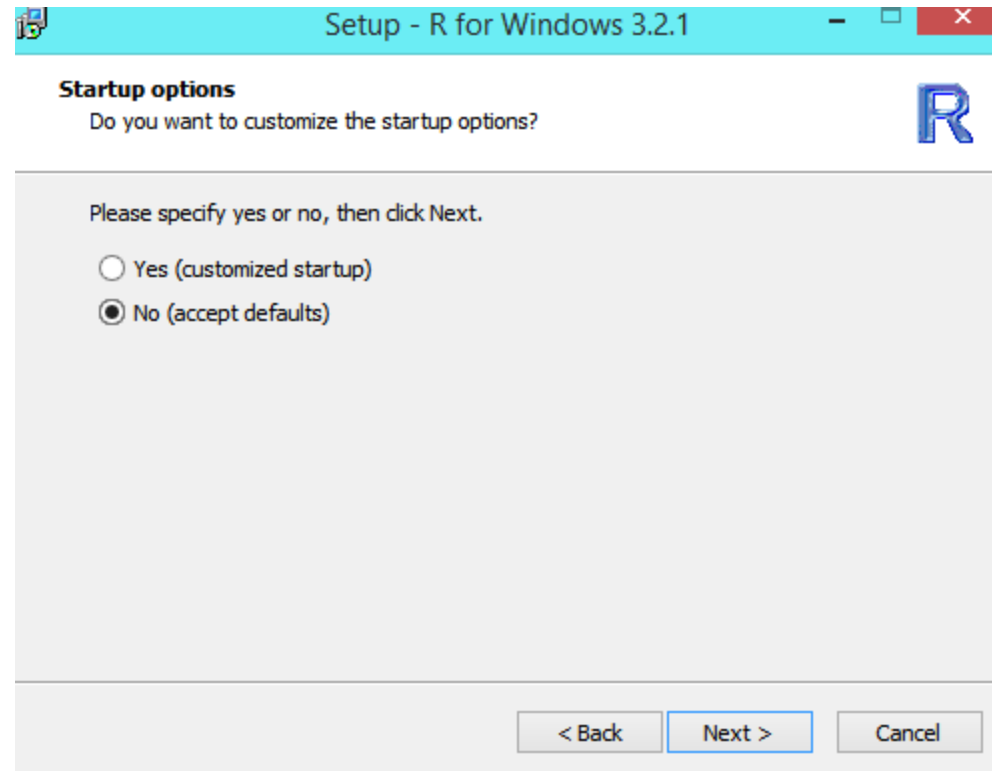
Note: If you have already installed R, proceed to slide number 11

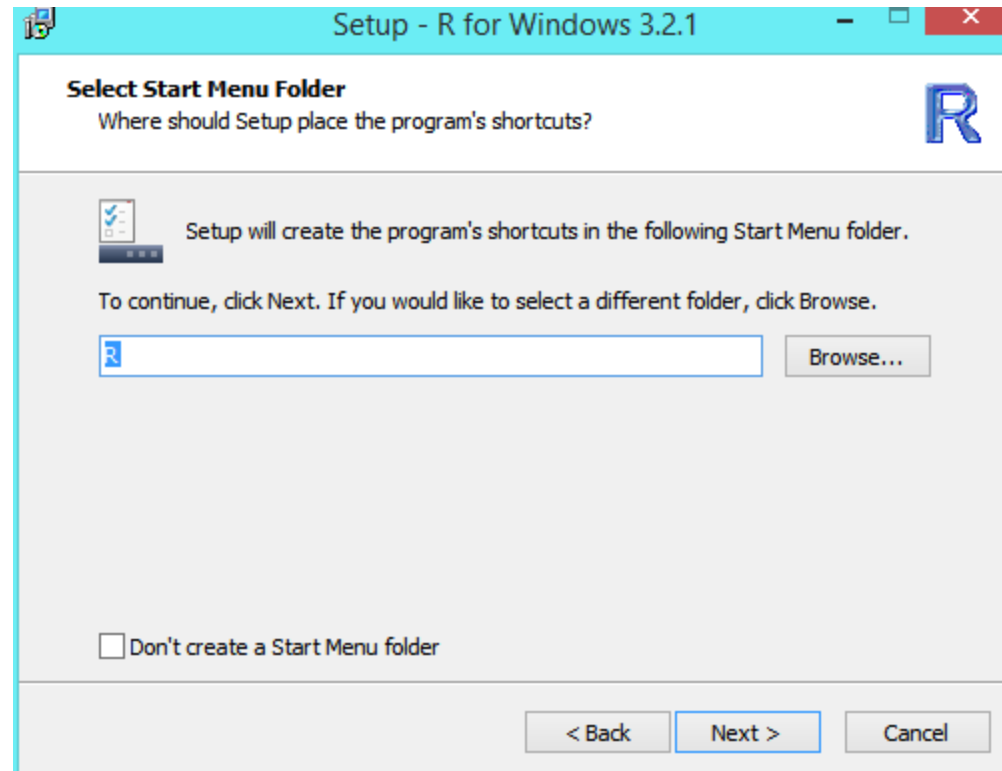


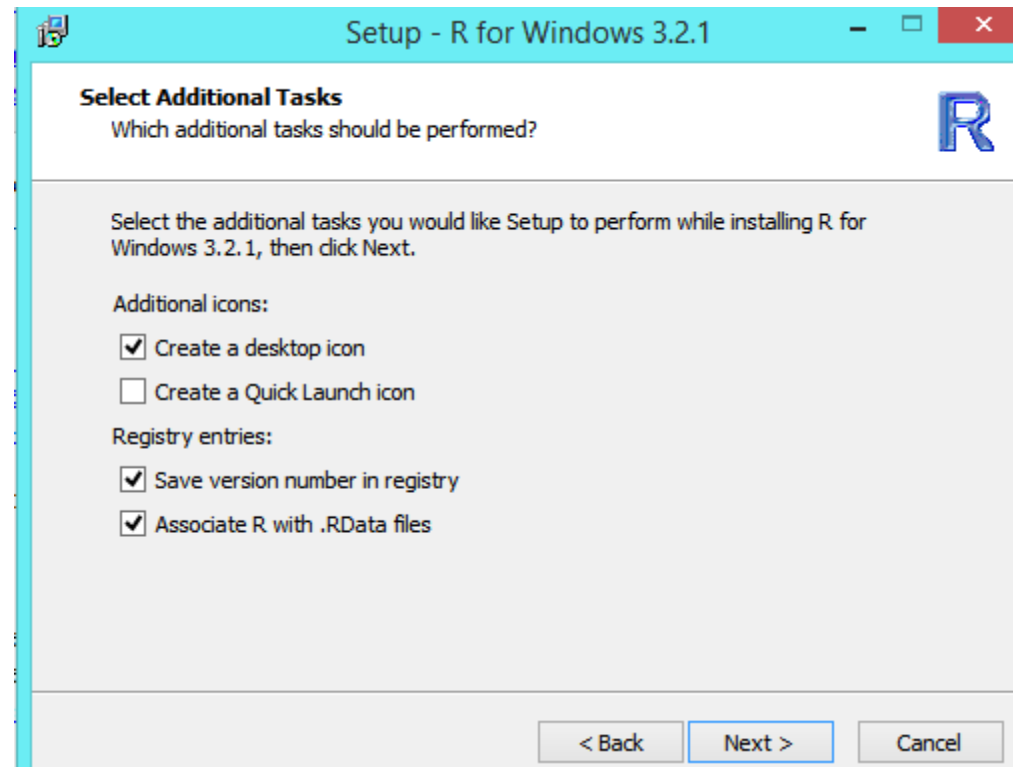


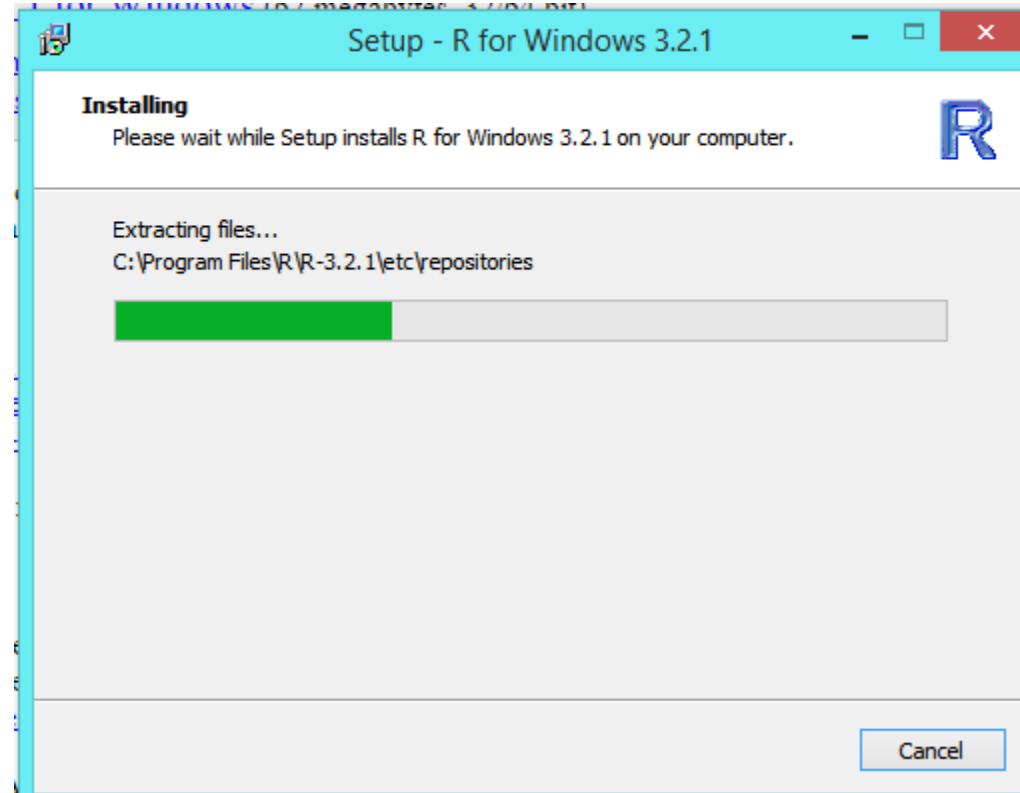


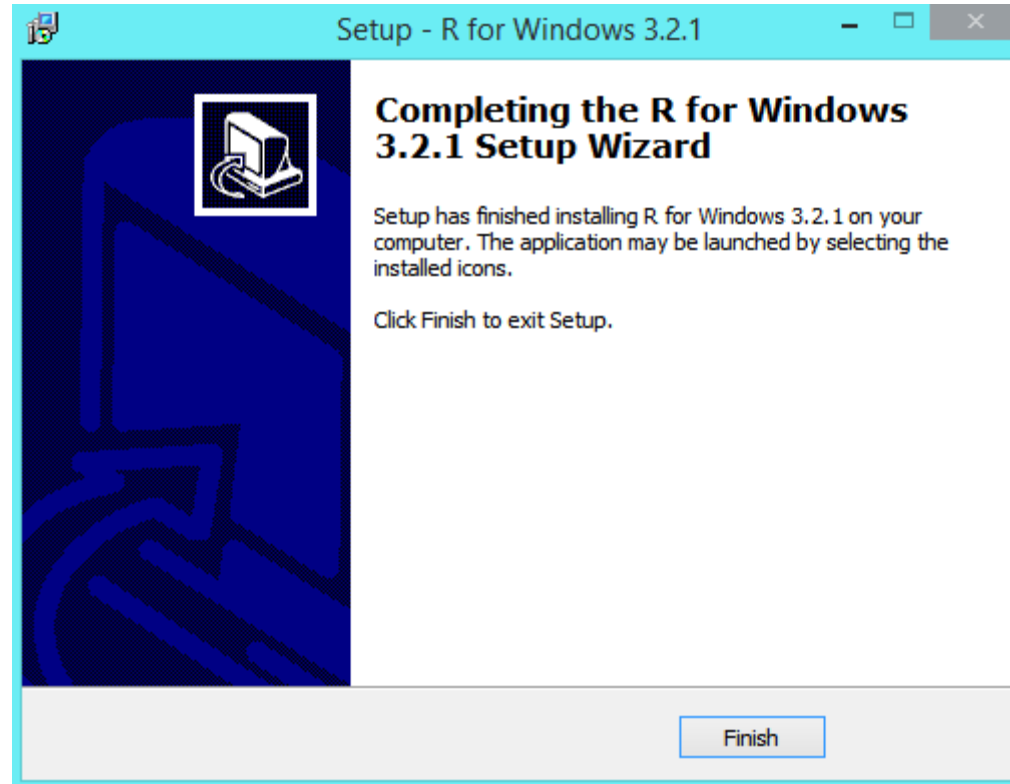


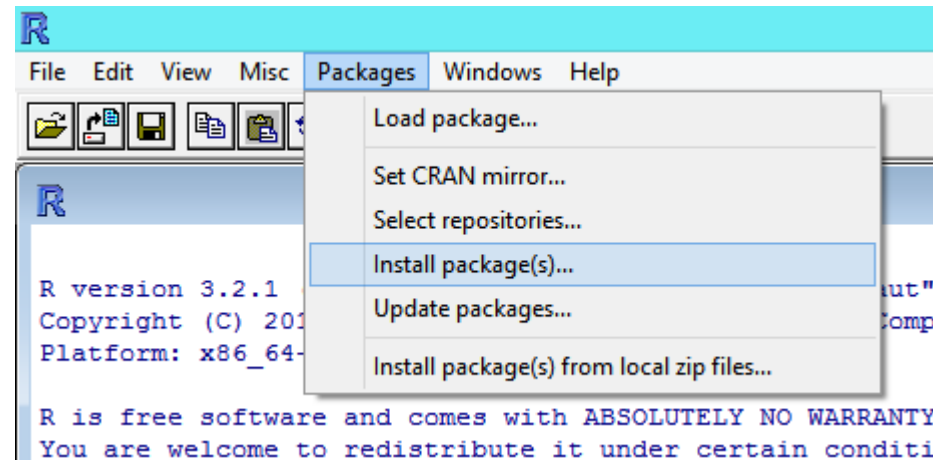
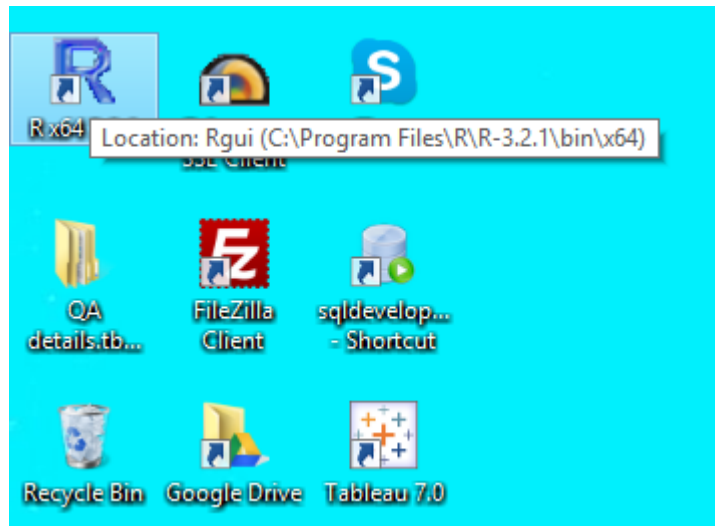


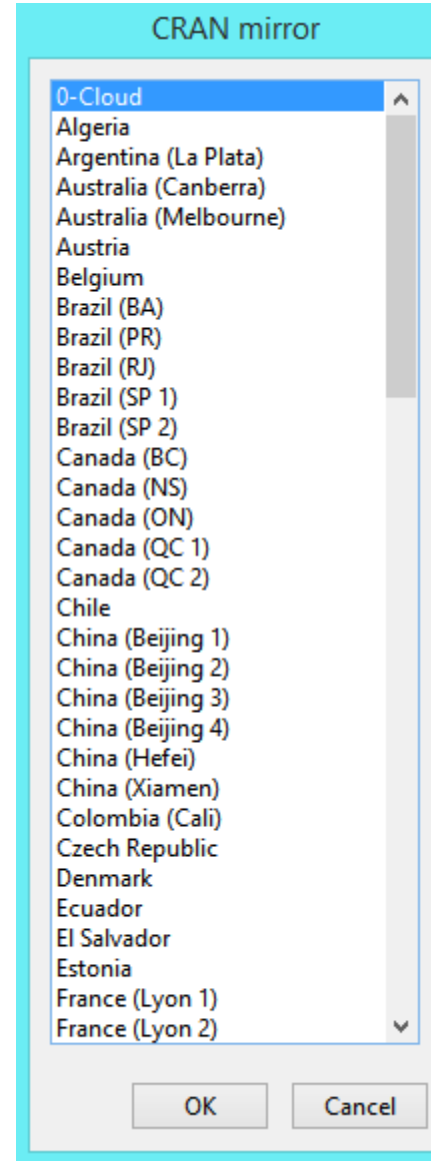


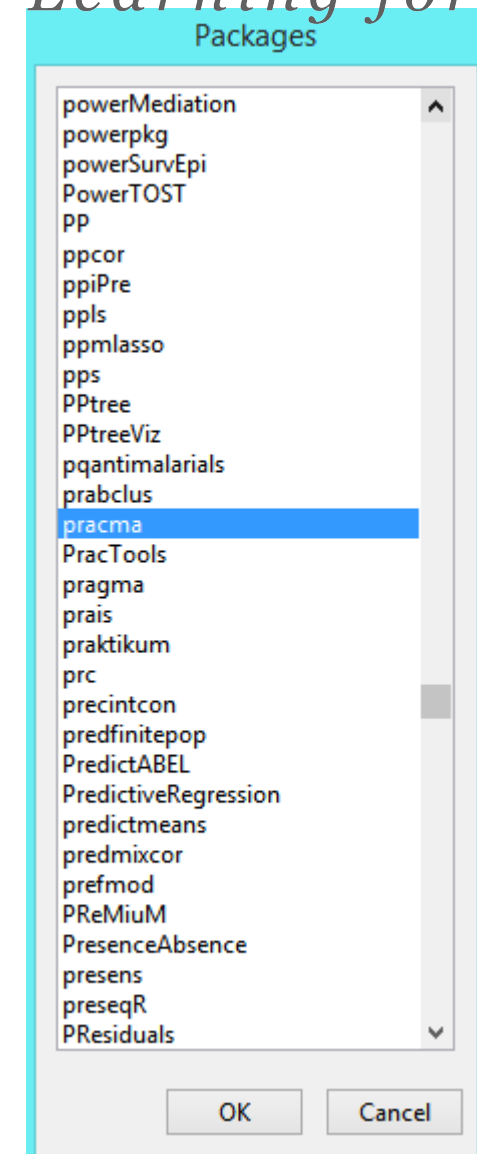
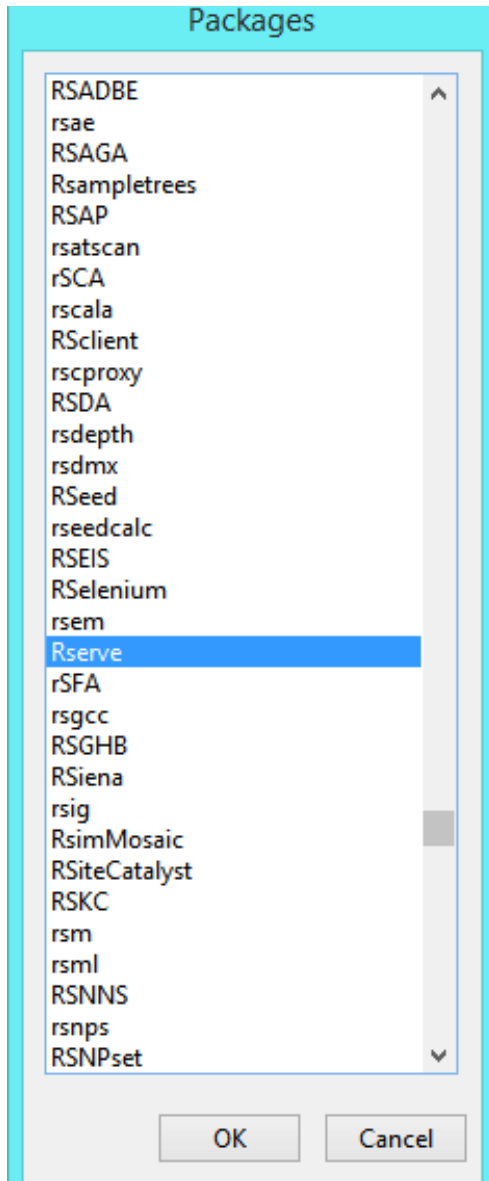


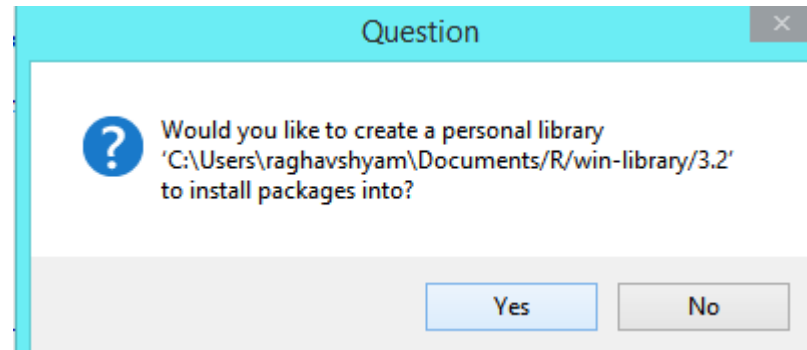
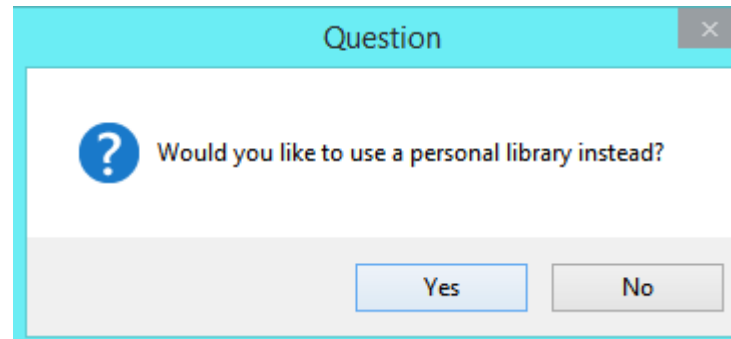


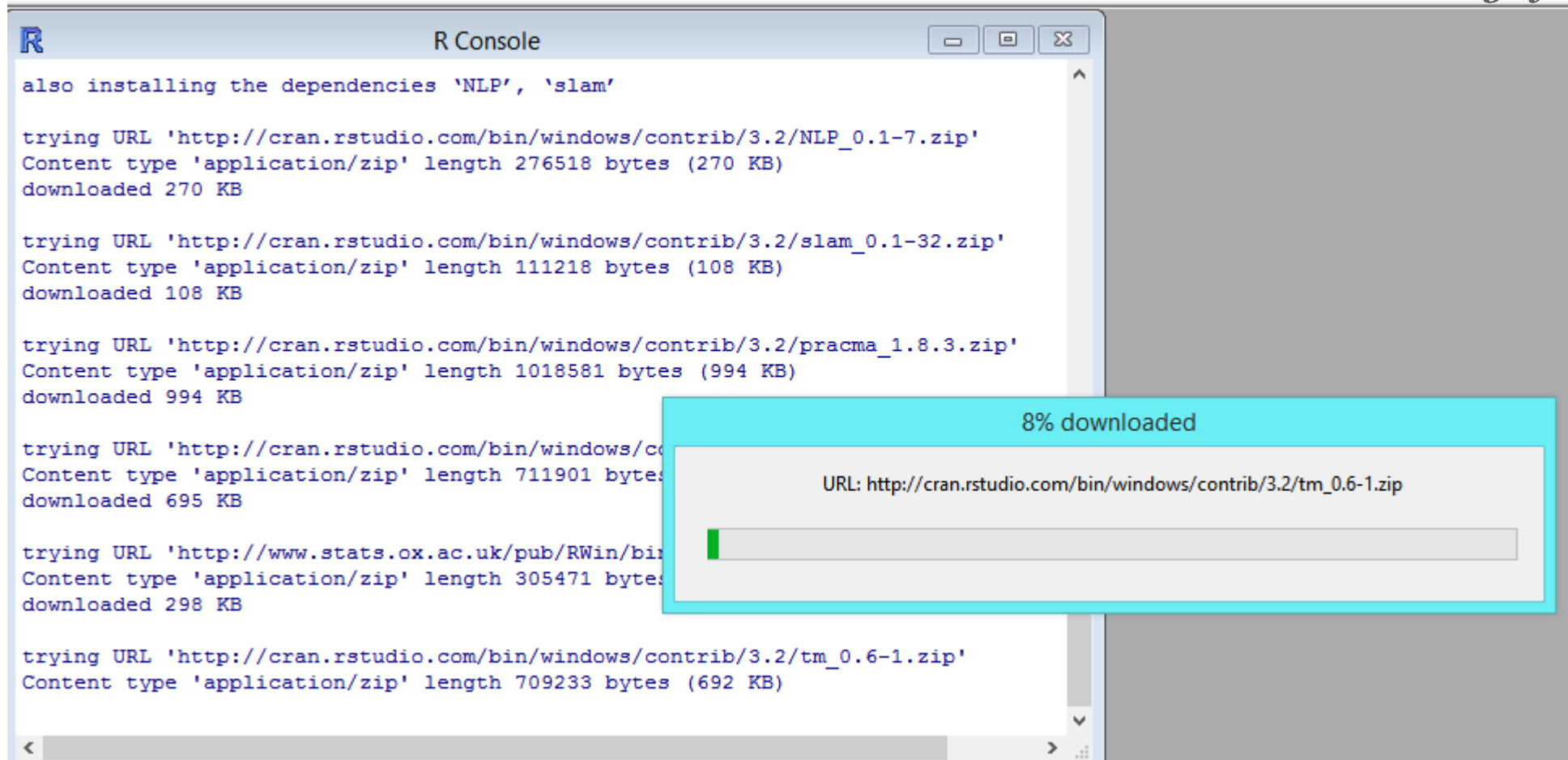












```
R Console

also installing the dependencies 'NLP', 'slam'

trying URL 'http://cran.rstudio.com/bin/windows/contrib/3.2/NLP_0.1-7.zip'
Content type 'application/zip' length 276518 bytes (270 KB)
downloaded 270 KB

trying URL 'http://cran.rstudio.com/bin/windows/contrib/3.2/slam_0.1-32.zip'
Content type 'application/zip' length 111218 bytes (108 KB)
downloaded 108 KB

trying URL 'http://cran.rstudio.com/bin/windows/contrib/3.2/pracma_1.8.3.zip'
Content type 'application/zip' length 1018581 bytes (994 KB)
downloaded 994 KB

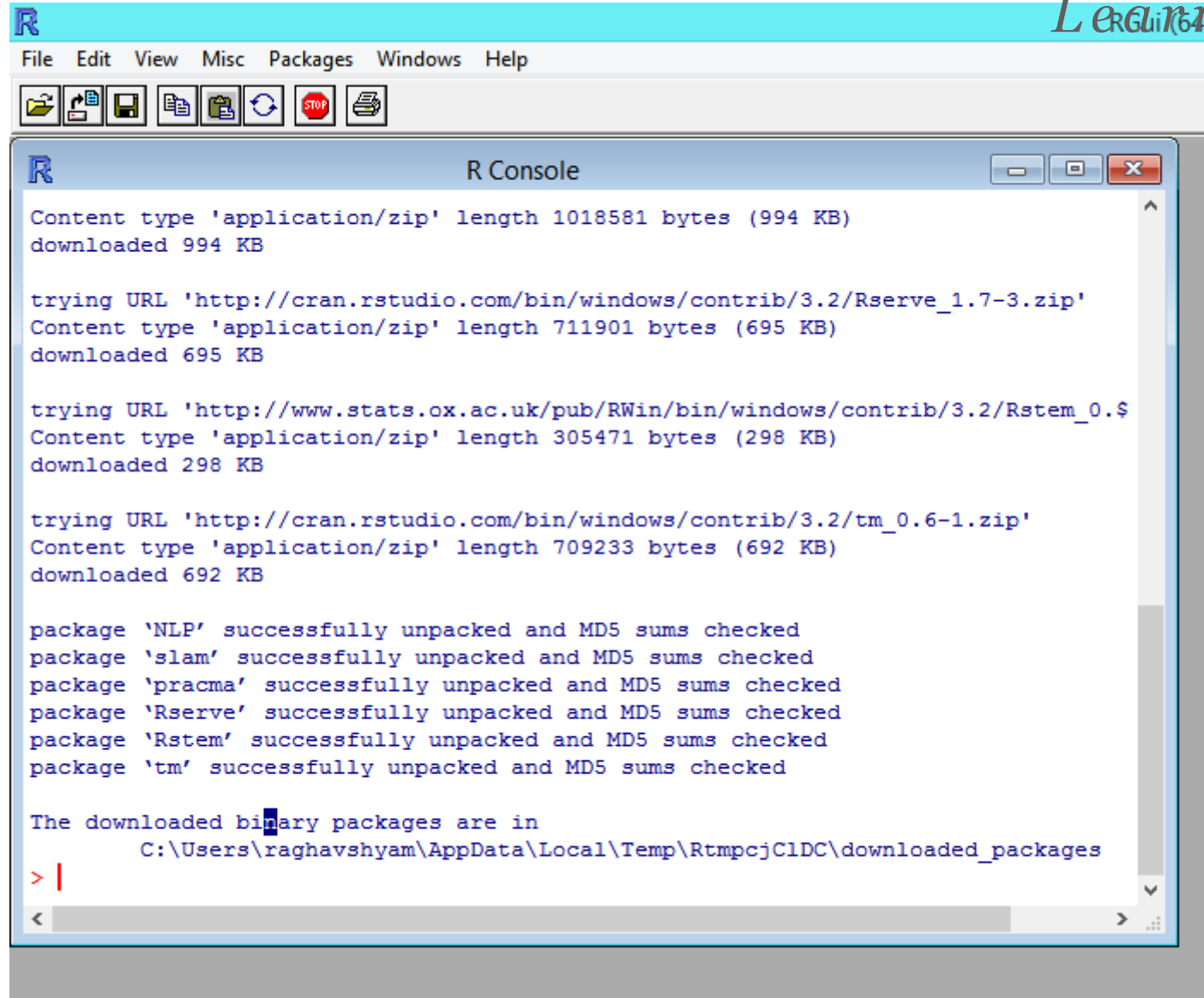
trying URL 'http://cran.rstudio.com/bin/windows/contrib/3.2/tm_0.6-1.zip'
Content type 'application/zip' length 709233 bytes (692 KB)
downloaded 695 KB

trying URL 'http://www.stats.ox.ac.uk/pub/RWin/bin/windows/contrib/3.2/tm_0.6-1.zip'
Content type 'application/zip' length 305471 bytes (298 KB)
downloaded 298 KB

trying URL 'http://cran.rstudio.com/bin/windows/contrib/3.2/tm_0.6-1.zip'
Content type 'application/zip' length 709233 bytes (692 KB)
downloaded 692 KB
```

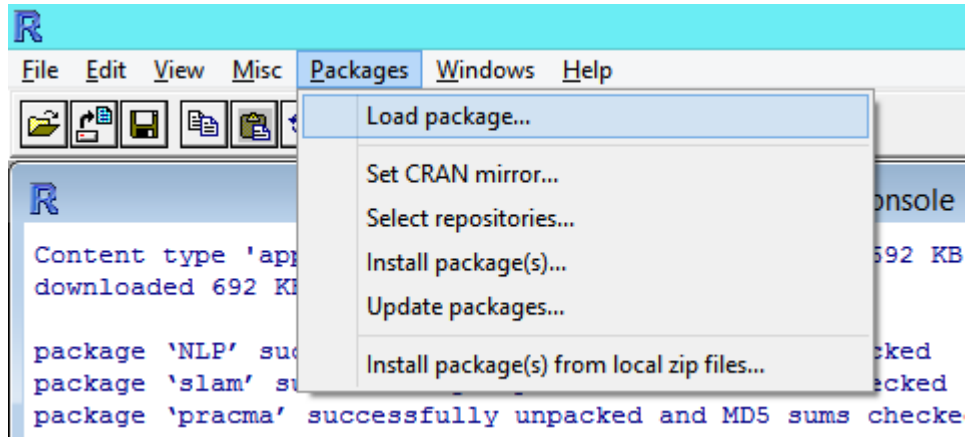
8% downloaded

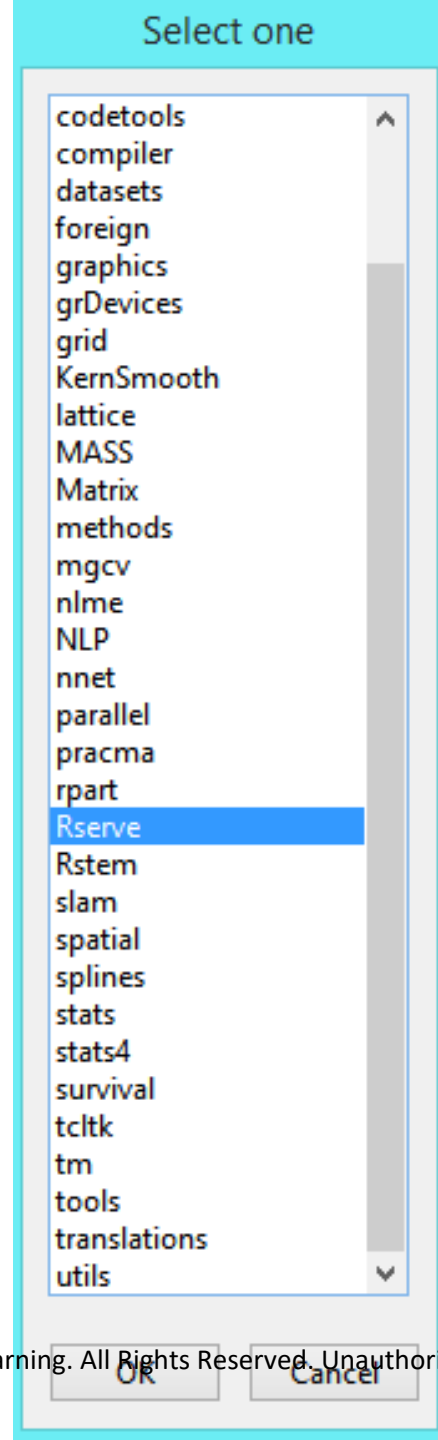
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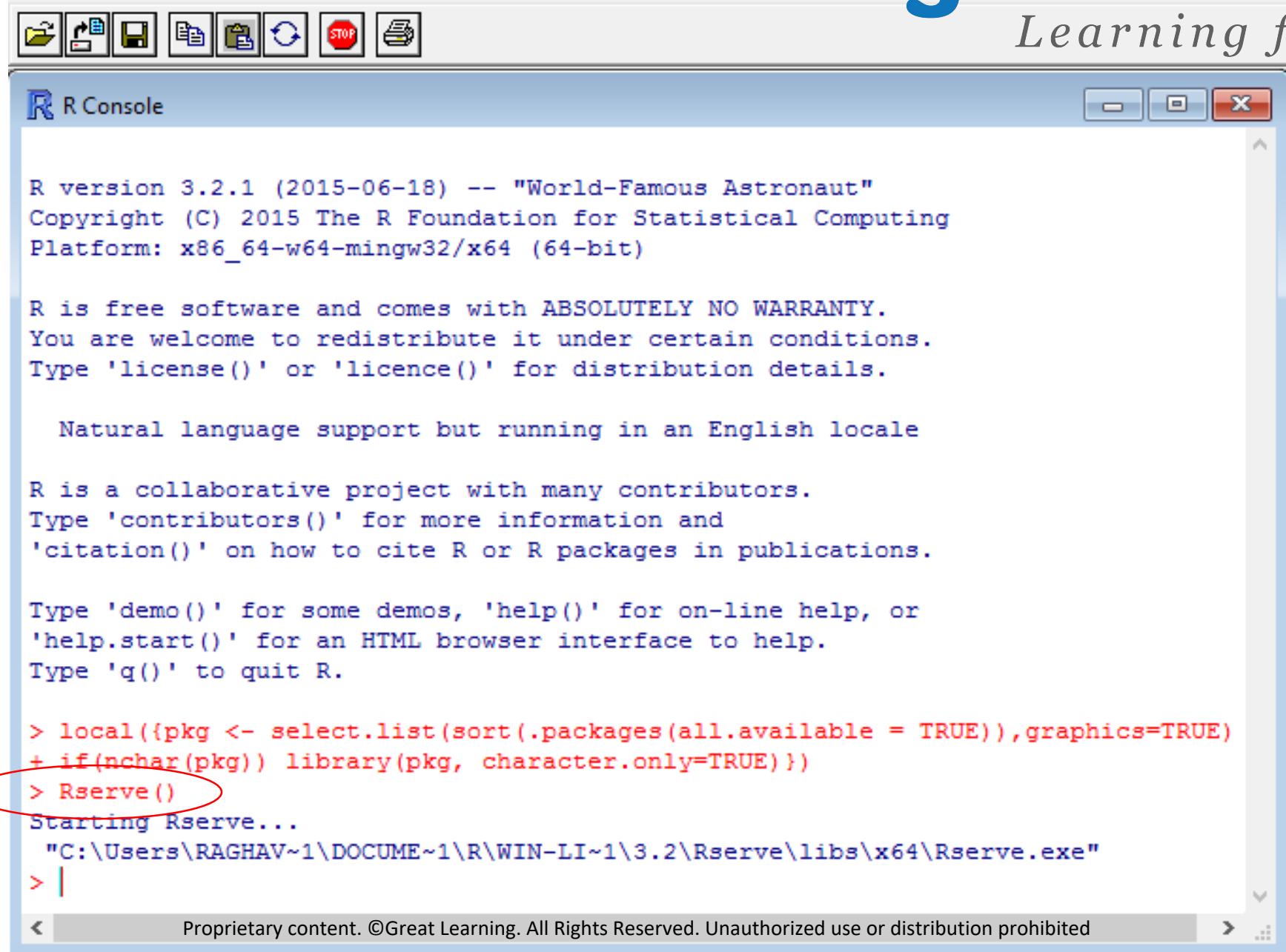


The screenshot shows the R GUI interface. The main window has a menu bar (File, Edit, View, Misc, Packages, Windows, Help) and a toolbar with icons for file operations. An 'R Console' window is open, displaying the following text:

```
R  
Content type 'application/zip' length 1018581 bytes (994 KB)  
downloaded 994 KB  
  
trying URL 'http://cran.rstudio.com/bin/windows/contrib/3.2/Rserve_1.7-3.zip'  
Content type 'application/zip' length 711901 bytes (695 KB)  
downloaded 695 KB  
  
trying URL 'http://www.stats.ox.ac.uk/pub/RWin/bin/windows/contrib/3.2/Rstem_0.5-1.zip'  
Content type 'application/zip' length 305471 bytes (298 KB)  
downloaded 298 KB  
  
trying URL 'http://cran.rstudio.com/bin/windows/contrib/3.2/tm_0.6-1.zip'  
Content type 'application/zip' length 709233 bytes (692 KB)  
downloaded 692 KB  
  
package 'NLP' successfully unpacked and MD5 sums checked  
package 'slam' successfully unpacked and MD5 sums checked  
package 'pracma' successfully unpacked and MD5 sums checked  
package 'Rserve' successfully unpacked and MD5 sums checked  
package 'Rstem' successfully unpacked and MD5 sums checked  
package 'tm' successfully unpacked and MD5 sums checked  
  
The downloaded binary packages are in  
  C:\Users\raghavshyam\AppData\Local\Temp\RtmpcjC1DC\downloaded_packages  
> |
```





```
R version 3.2.1 (2015-06-18) -- "World-Famous Astronaut"
Copyright (C) 2015 The R Foundation for Statistical Computing
Platform: x86_64-w64-mingw32/x64 (64-bit)

R is free software and comes with ABSOLUTELY NO WARRANTY.
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.

> local({pkg <- select.list(sort(.packages(all.available = TRUE)),graphics=TRUE)
+ if(nchar(pkg)) library(pkg, character.only=TRUE)})
> Rserve()
Starting Rserve...
"C:\Users\RAGHAV~1\DOCUME~1\R\WIN-LI~1\3.2\Rserve\libs\x64\Rserve.exe"
> |
```

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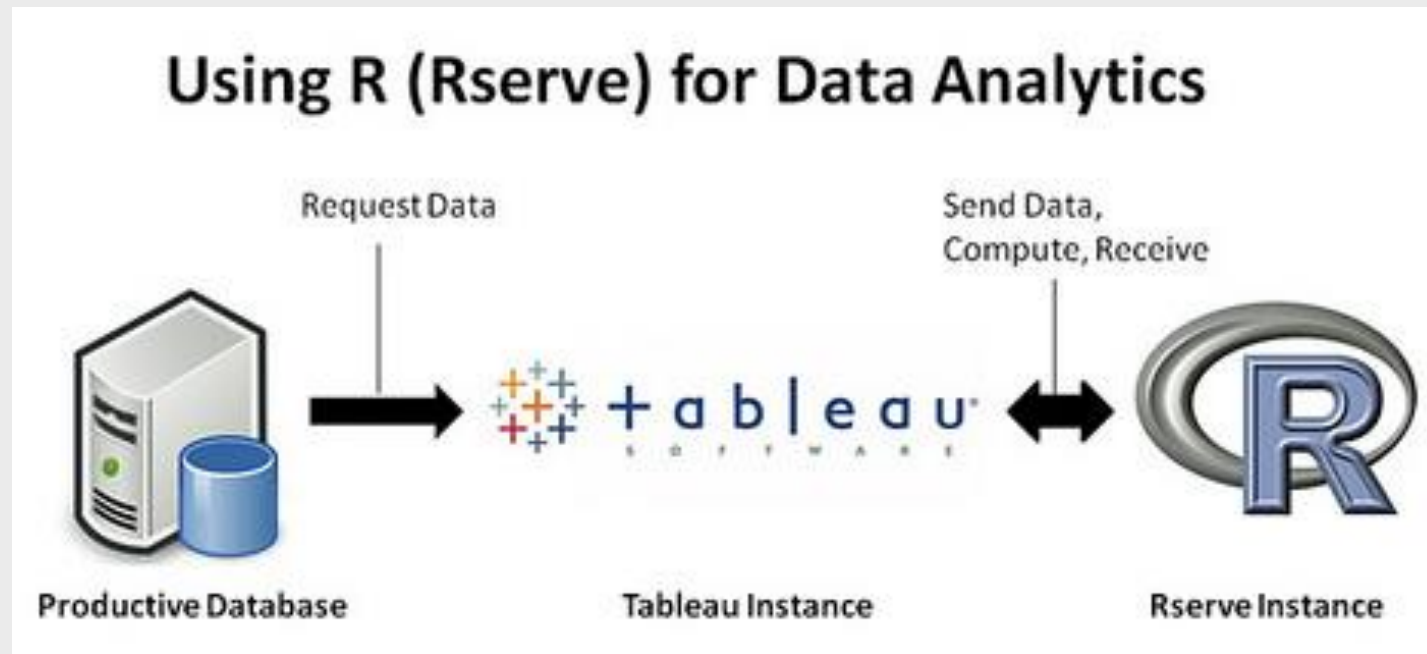
For some users, an error message like below might pop up

Fatal error: you must specify '--save', '--no-save' or '--vanilla'

In case of above error, type below command onto the R Console:

> Rserve(args="--no-save")

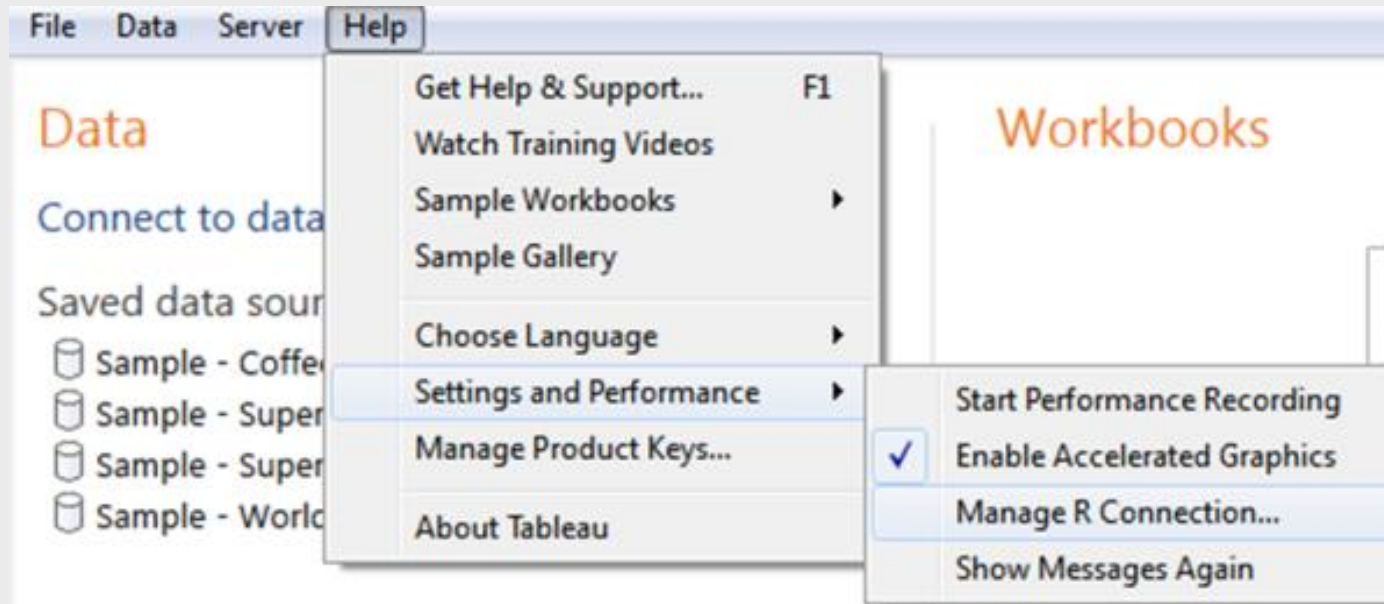
Tableau and R



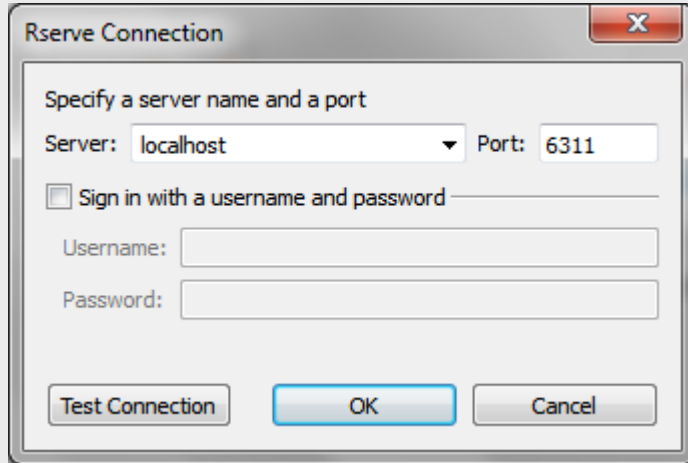
- So how does the integration work? It starts with an R package called Rserve which is a TCP/IP server that allows other programs to use facilities of R. The stated typical use is "to integrate R backend for computation of statistical models, plots etc. in other applications". The nice thing about using Rserve is that once you start the service, you don't need to have R running at all, if you are on a Windows machine. If you want to reduce memory usage, you would start R, load the Rserve library and start the Rserve service in the R environment.

How is Tableau integrating with R?

- R functions and models can now be used in Tableau by creating new calculated fields that dynamically invoke the R engine and pass values to R. The results are then returned back to Tableau for use by the Tableau visualization engine.
- Then establish a connection to Rserve from Tableau. This is done in Tableau via the top menu Help -> Settings and Performance -> Manage R connections.



How is Tableau integrating with R?

A screenshot of the 'Rserve Connection' dialog box. The title bar says 'Rserve Connection' with a close button. The main area contains the text 'Specify a server name and a port'. Below this, there is a 'Server:' dropdown menu with 'localhost' selected, and a 'Port:' text box with '6311'. A checkbox labeled 'Sign in with a username and password' is unchecked. Below the checkbox are two text boxes: 'Username:' and 'Password:'. At the bottom, there are three buttons: 'Test Connection', 'OK', and 'Cancel'.

- Enter or select a server name using a domain or an IP address. The drop-down list includes localhost and the server you most recently connected to.
- Specify a port. Port 6311 is the default port for Rserve servers.
- If the server requires credentials, specify a Username and Password.
- Click Test Connection.
- Click OK.

If no connection can be established, an error message is displayed. Click Show Details in the message to see any diagnostic information returned by the server.