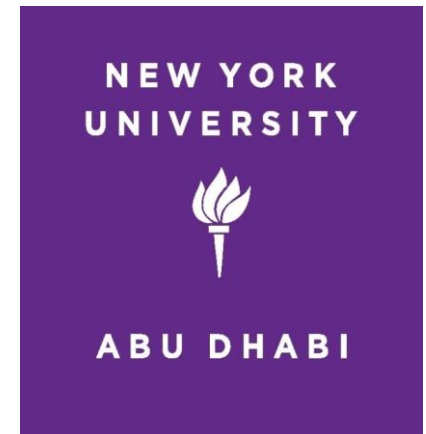


Install Packages in R & RStudio

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Open RStudio

The screenshot displays the RStudio application window. The title bar reads "RStudio" and the menu bar includes "File", "Edit", "Code", "View", "Plots", "Session", "Build", "Debug", "Profile", "Tools", and "Help". The toolbar contains icons for file operations and a search bar with the text "Go to file/function". The main interface is divided into three panes:

- Console:** Shows the R startup message for version 4.2.2 (2022-10-31 ucrt) on a 64-bit platform. It includes the license information and instructions for using help and quitting. The prompt is currently at `> |`.
- Environment:** Shows the "Global Environment" which is currently empty.
- Files:** Shows a file explorer view of the home directory with a table of files and folders.

Name	Size	Modified
.RData	2.5 KB	Jan 18, 2023, 9:37 AM
.Rhistory	91 B	Feb 10, 2023, 5:54 PM
Biomarker Statistical Analysis Plan_ASA.doc	89.5 KB	Oct 8, 2022, 5:49 PM
Custom Office Templates		
desktop.ini	402 B	Sep 26, 2022, 9:40 AM
dugong.txt	392 B	Oct 15, 2022, 8:08 PM
My Music		
My Pictures		
My Videos		
SAP_AA.doc	89.5 KB	Oct 8, 2022, 5:47 PM
Zoom		

Installing packages in R

- To install an R package, one can use the R function

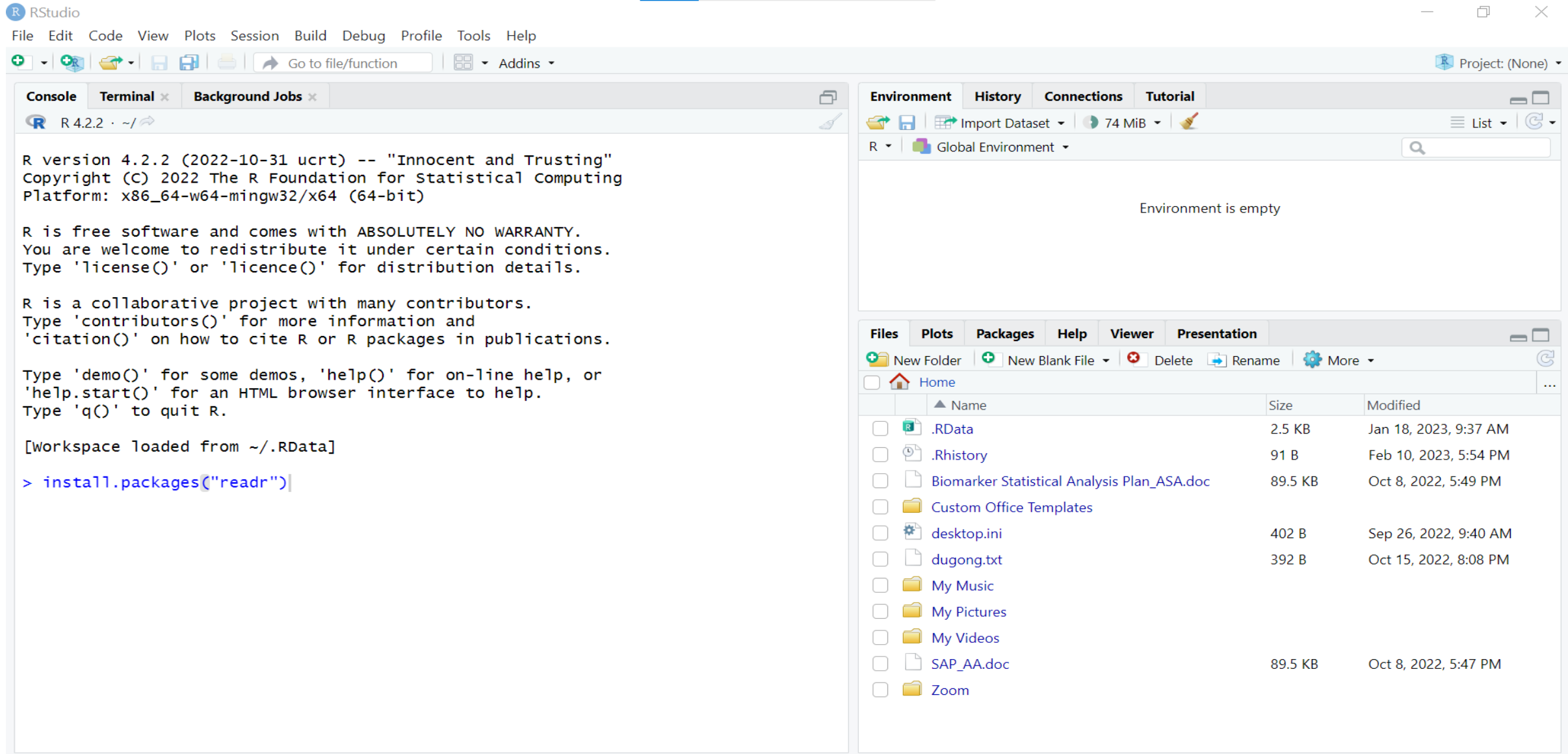
```
install.packages()
```

- For example, to install the R package readr, one can use the following command

```
install.packages("readr")
```

- Write the `install.packages("readr")` in the R console

Then hit the enter key on keyboard



The screenshot displays the RStudio interface. The top menu bar includes File, Edit, Code, View, Plots, Session, Build, Debug, Profile, Tools, and Help. The toolbar contains icons for file operations and a search bar. The main window is divided into several panes:

- Console:** Shows the R version 4.2.2 (2022-10-31 ucrt) -- "Innocent and Trusting" and the R license information. The prompt `>` is followed by `install.packages("readr")`.
- Environment:** Shows the Global Environment, which is currently empty.
- Files:** Shows a file explorer view of the Home directory, listing files and folders such as .RData, .Rhistory, Biomarker Statistical Analysis Plan_ASA.doc, Custom Office Templates, desktop.ini, dugong.txt, My Music, My Pictures, My Videos, SAP_AA.doc, and Zoom.

```
R version 4.2.2 (2022-10-31 ucrt) -- "Innocent and Trusting"
Copyright (C) 2022 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.

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]
> install.packages("readr")
```

Name	Size	Modified
.RData	2.5 KB	Jan 18, 2023, 9:37 AM
.Rhistory	91 B	Feb 10, 2023, 5:54 PM
Biomarker Statistical Analysis Plan_ASA.doc	89.5 KB	Oct 8, 2022, 5:49 PM
Custom Office Templates		
desktop.ini	402 B	Sep 26, 2022, 9:40 AM
dugong.txt	392 B	Oct 15, 2022, 8:08 PM
My Music		
My Pictures		
My Videos		
SAP_AA.doc	89.5 KB	Oct 8, 2022, 5:47 PM
Zoom		

```
Console Terminal x Background Jobs x
R 4.2.2 · ~/
Type 'q()' to quit R.

[Workspace loaded from ~/.RData]

> install.packages("readr")
WARNING: Rtools is required to build R packages but is not currently installed. Please download and install the appropriate version of Rtools before proceeding:

https://cran.rstudio.com/bin/windows/Rtools/
Installing package into 'C:/Users/asa12/AppData/Local/R/win-library/4.2'
(as 'lib' is unspecified)

There is a binary version available but the source version is later:
  binary source needs_compilation
readr 2.1.3 2.1.4 TRUE

Binaries will be installed
trying URL 'https://cran.rstudio.com/bin/windows/contrib/4.2/readr_2.1.3.zip'
Content type 'application/zip' length 1194963 bytes (1.1 MB)
downloaded 1.1 MB

package 'readr' successfully unpacked and MD5 sums checked
Warning in install.packages :
  cannot remove prior installation of package 'readr'
Warning in install.packages :
  problem copying C:\Users\asa12\AppData\Local\R\win-library\4.2\00LOCK\readr\libs\x64\readr.dll to C:\Users\asa12\AppData\Local\R\win-library\4.2\readr\libs\x64\readr.dll: Permission denied
Warning in install.packages :
  restored 'readr'

The downloaded binary packages are in
  C:\Users\asa12\AppData\Local\Temp\Rtmp4A64wj\downloaded_packages
> |
```

Environment History Connections Tutorial

Import Dataset 169 MiB

R Global Environment

Environment is empty

Files Plots Packages Help Viewer Presentation

New Folder New Blank File Delete Rename More

Home

	Name	Size	Modified
<input type="checkbox"/>	.RData	2.5 KB	Jan 18, 2023, 9:37 AM
<input type="checkbox"/>	.Rhistory	91 B	Feb 10, 2023, 5:54 PM
<input type="checkbox"/>	Biomarker Statistical Analysis Plan_ASA.doc	89.5 KB	Oct 8, 2022, 5:49 PM
<input type="checkbox"/>	Custom Office Templates		
<input type="checkbox"/>	desktop.ini	402 B	Sep 26, 2022, 9:40 AM
<input type="checkbox"/>	dugong.txt	392 B	Oct 15, 2022, 8:08 PM
<input type="checkbox"/>	My Music		
<input type="checkbox"/>	My Pictures		
<input type="checkbox"/>	My Videos		
<input type="checkbox"/>	SAP_AA.doc	89.5 KB	Oct 8, 2022, 5:47 PM
<input type="checkbox"/>	Zoom		

Installing packages in R

- R may ask you to specify a [CRAN mirror](#).
- This is because there are several CRAN mirror worldwide, which are frequently located at universities
- Please select our [NYUAD CRAN mirror](#)

```
R version 4.2.1 (2022-06-23 ucrt) -- "Funny-Looking Kid"  
Copyright (C) 2022 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.
```

```
[Previously saved workspace restored]
```

```
> install.packages("readr")  
Installing package into 'C:/Users/asal2/AppData/Local/R/win-libr  
(as 'lib' is unspecified)  
--- Please select a CRAN mirror for use in this session ---
```

Secure CRAN mirrors

Indonesia (Banda Aceh) [https]
Iran (Mashhad) [https]
Italy (Milano) [https]
Italy (Padua) [https]
Japan (Tokyo) [https]
Japan (Yonezawa) [https]
Korea (Gyeongsan-si) [https]
Korea (Ulsan) [https]
Malaysia [https]
Mexico (Mexico City) [https]
Mexico (Texcoco) [https]
Morocco [https]
Netherlands (Dronten) [https]
New Zealand [https]
Norway [https]
South Africa (Johannesburg) [https]
Spain (A Coruña) [https]
Spain (Madrid) [https]
Sweden (Umeå) [https]
Switzerland (Zurich 1) [https]
Taiwan (Taipei) [https]
Turkey (Denizli) [https]
Turkey (Istanbul) [https]
Turkey (Mersin) [https]
UK (Bristol) [https]
UK (London 1) [https]
USA (IA) [https]
USA (MI) [https]
USA (MO) [https]
USA (OH) [https]
USA (OR) [https]
USA (TN) [https]
USA (TX 1) [https]
United Arab Emirates [https]
Uruguay [https]
(other mirrors)

OK

Cancel

Then click the OK key



Loading an R package

- You load the R package readr as following

```
> library(readr)
```

```
>
```