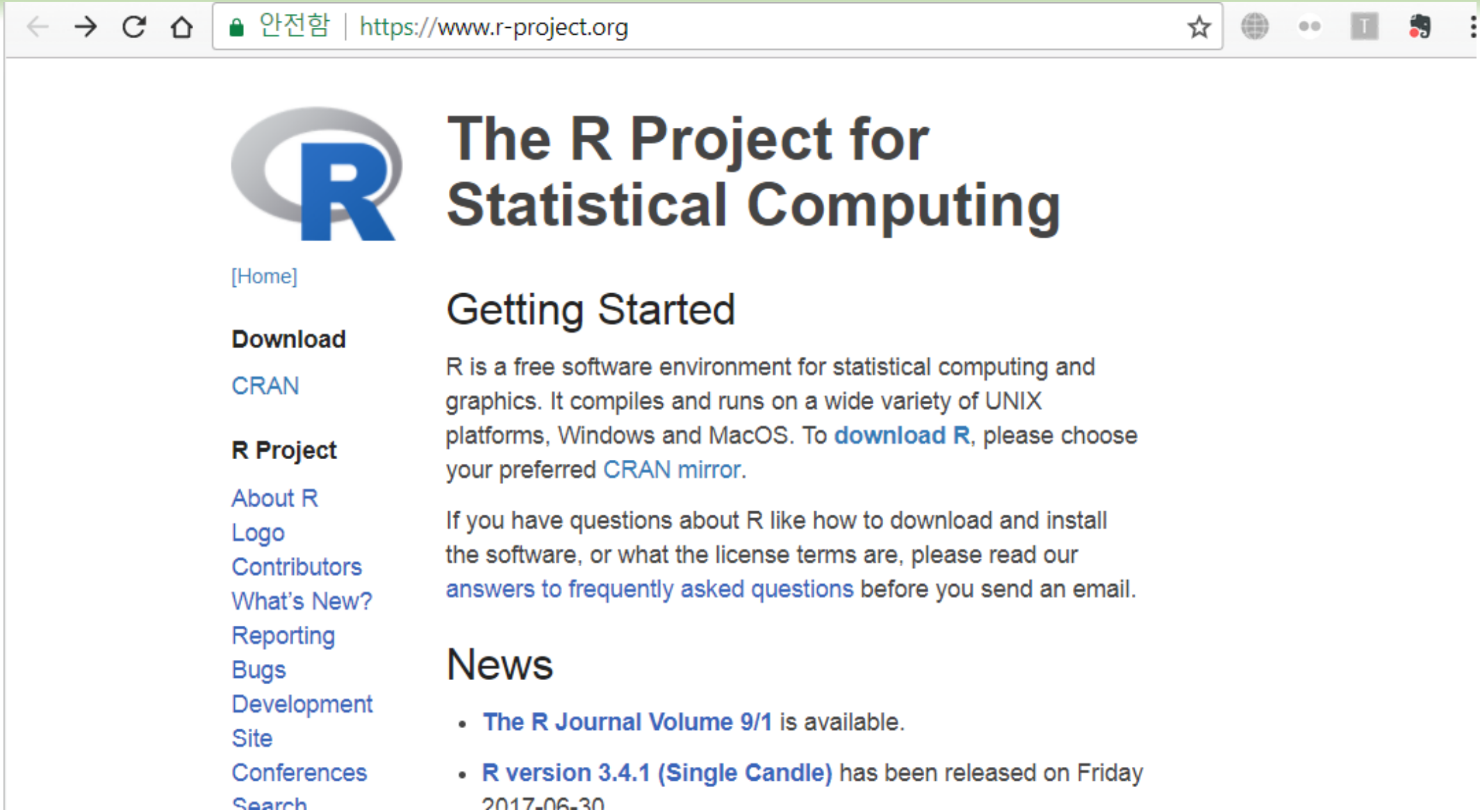
Environment Setup

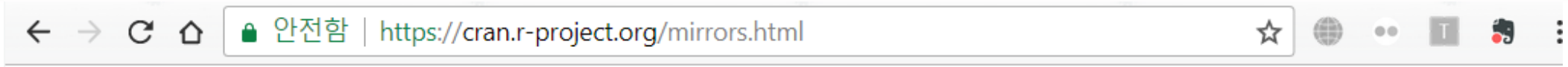
Bok, Jong Soon
javaexpert@nate.com
https://github.com/swacademy/R

Installation

R Software Download (Cont.)

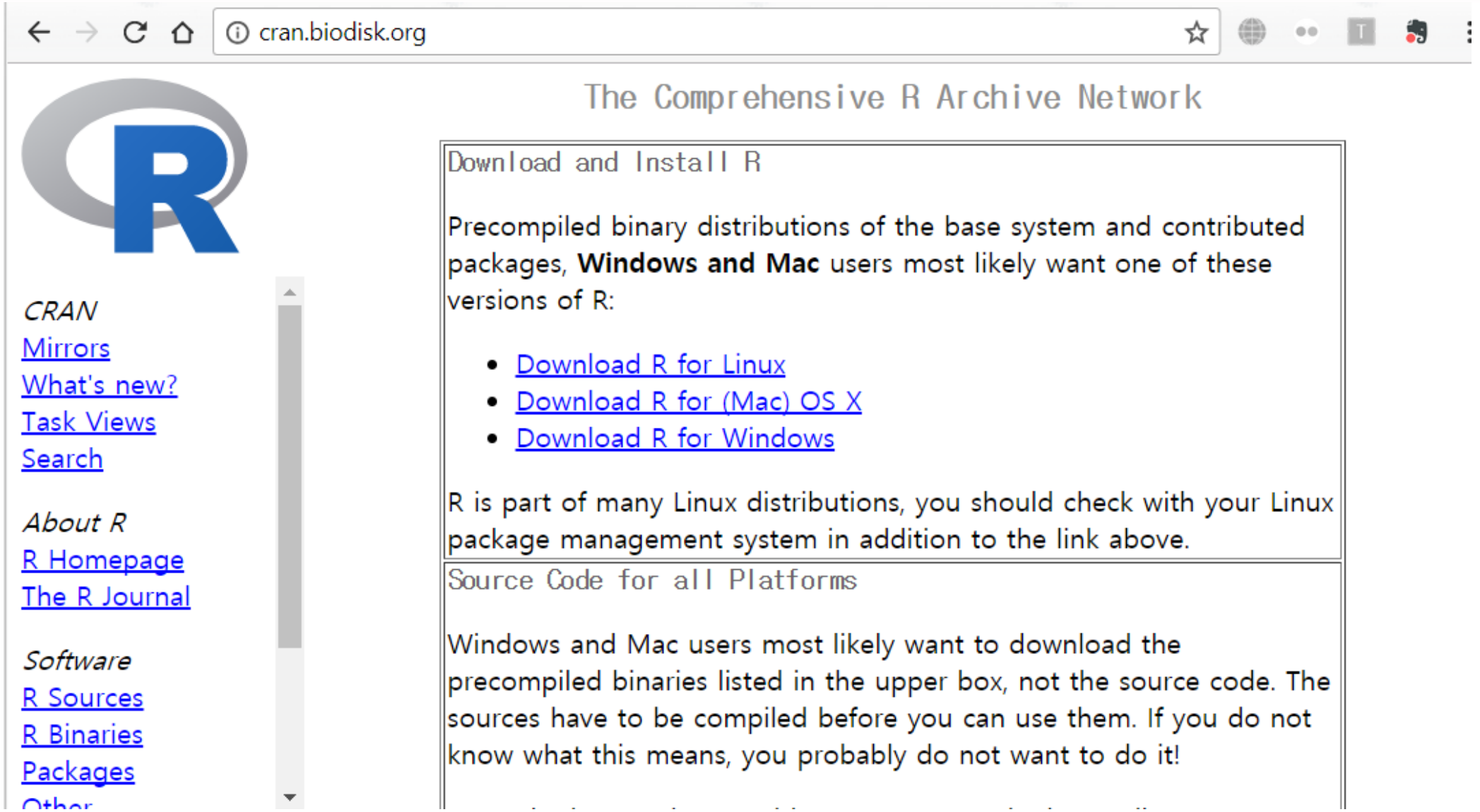


R Software Download (Cont.)

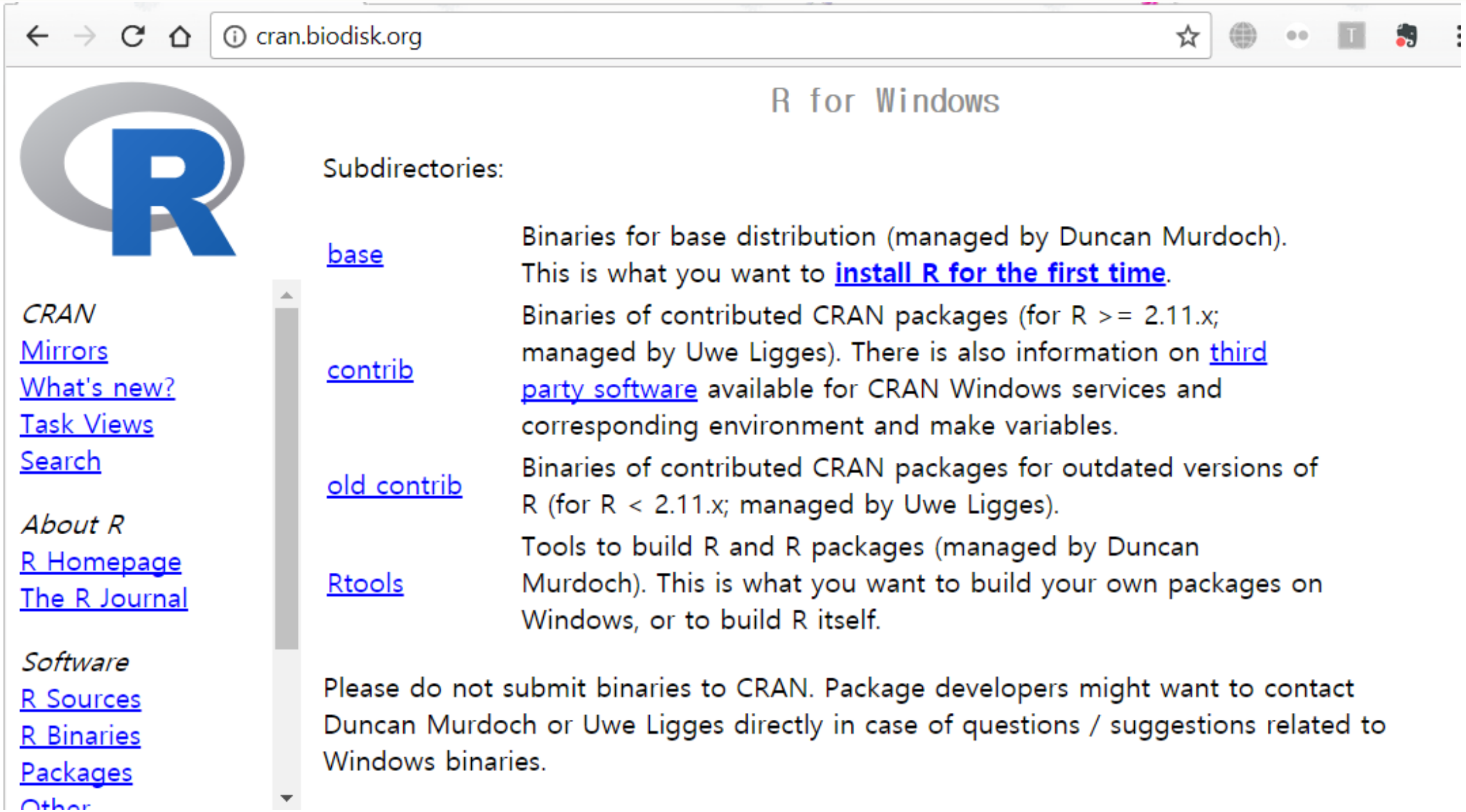


http://cran.mirror.garr.it/mirrors/CRAN/	Garr Mirror, Milano
https://cran.stat.unipd.it/	University of Padua
http://cran.stat.unipd.it/	University of Padua
http://dssm.unipa.it/CRAN/	Universita degli Studi di Palermo
Japan	
https://cran.ism.ac.jp/	The Institute of Statistical Mathematics, Tokyo
http://cran.ism.ac.jp/	The Institute of Statistical Mathematics, Tokyo
Korea	
http://cran.nexr.com/	NexR Corporation, Seoul
http://healthstat.snu.ac.kr/CRAN/	Graduate School of Public Health, Seoul National University, Seoul
http://cran.biodisk.org/	The Genome Institute of UNIST (Ulsan National Institute of Science and Technology)
Malaysia	
https://wbc.upm.edu.my/cran/	Univerisiti Putra Malaysia
http://wbc.upm.edu.my/cran/	Univerisiti Putra Malaysia
Mexico	
https://cran.itam.mx/	Instituto Tecnologico Autonomo de Mexico

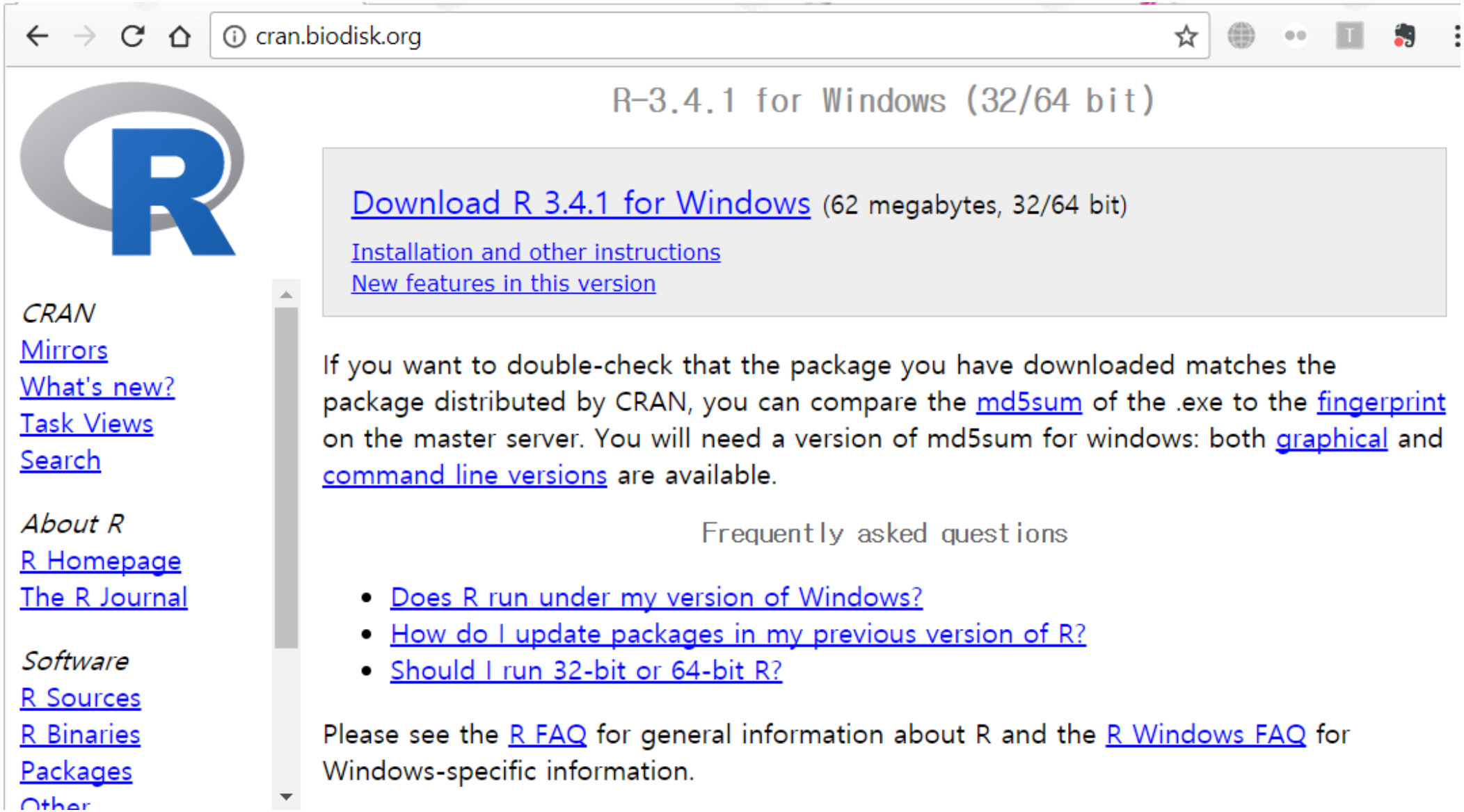
R Software Download (Cont.)



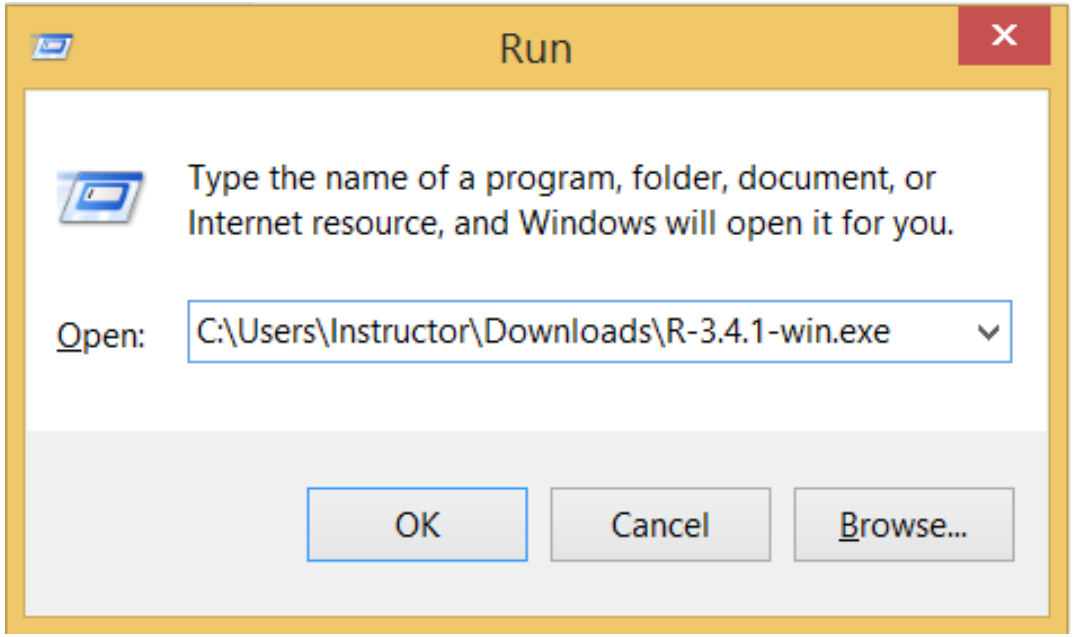
R Software Download (Cont.)

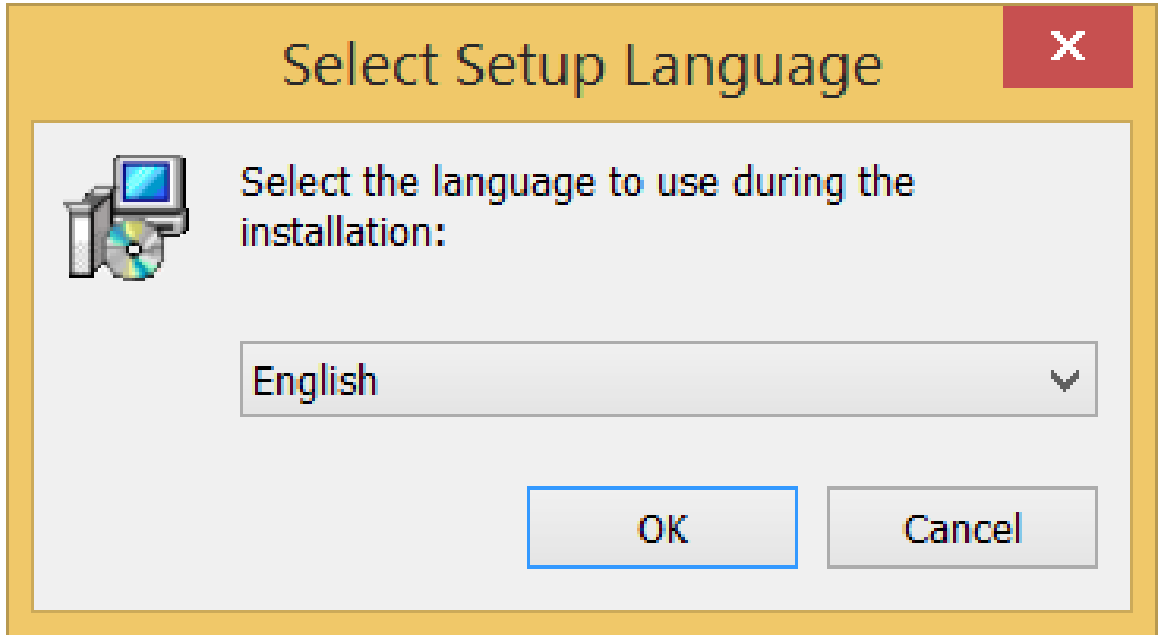


R Software Download (Cont.)

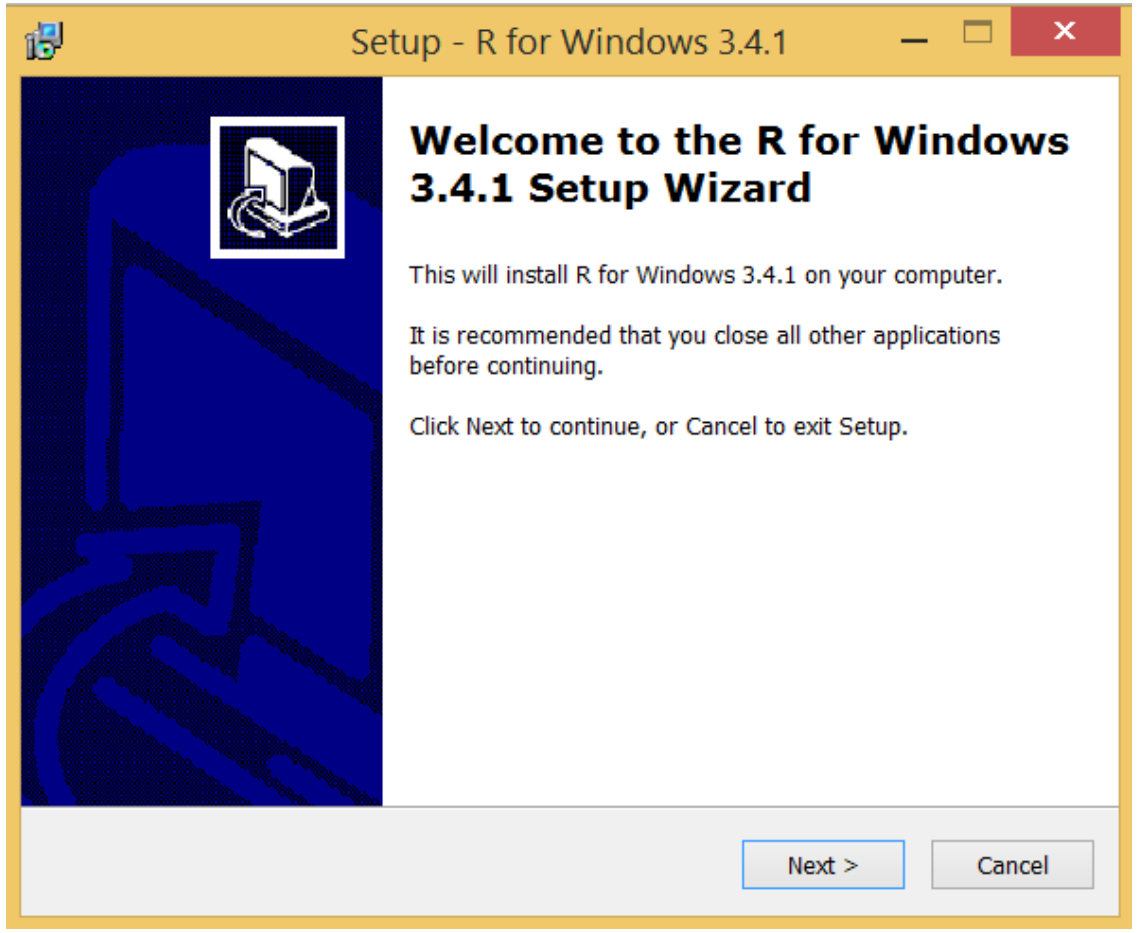


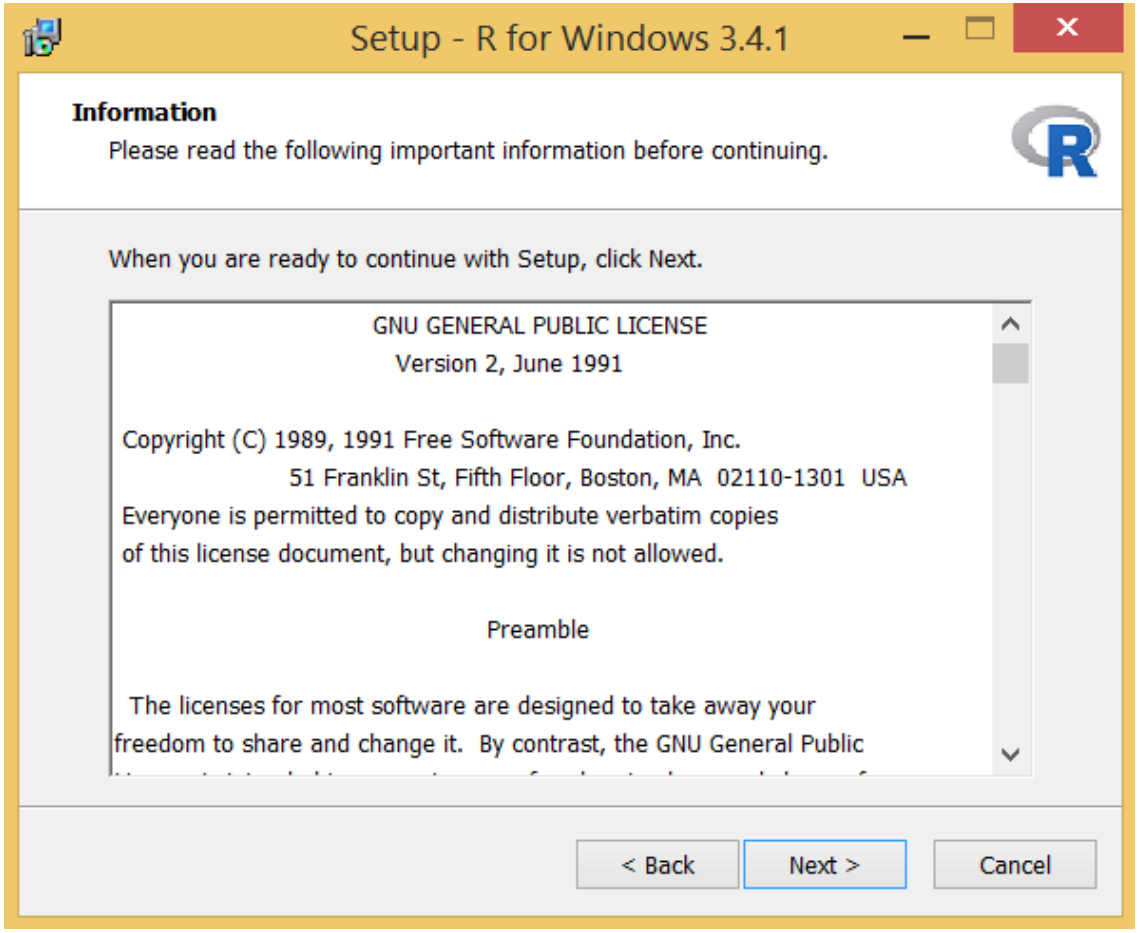
R Software Installation



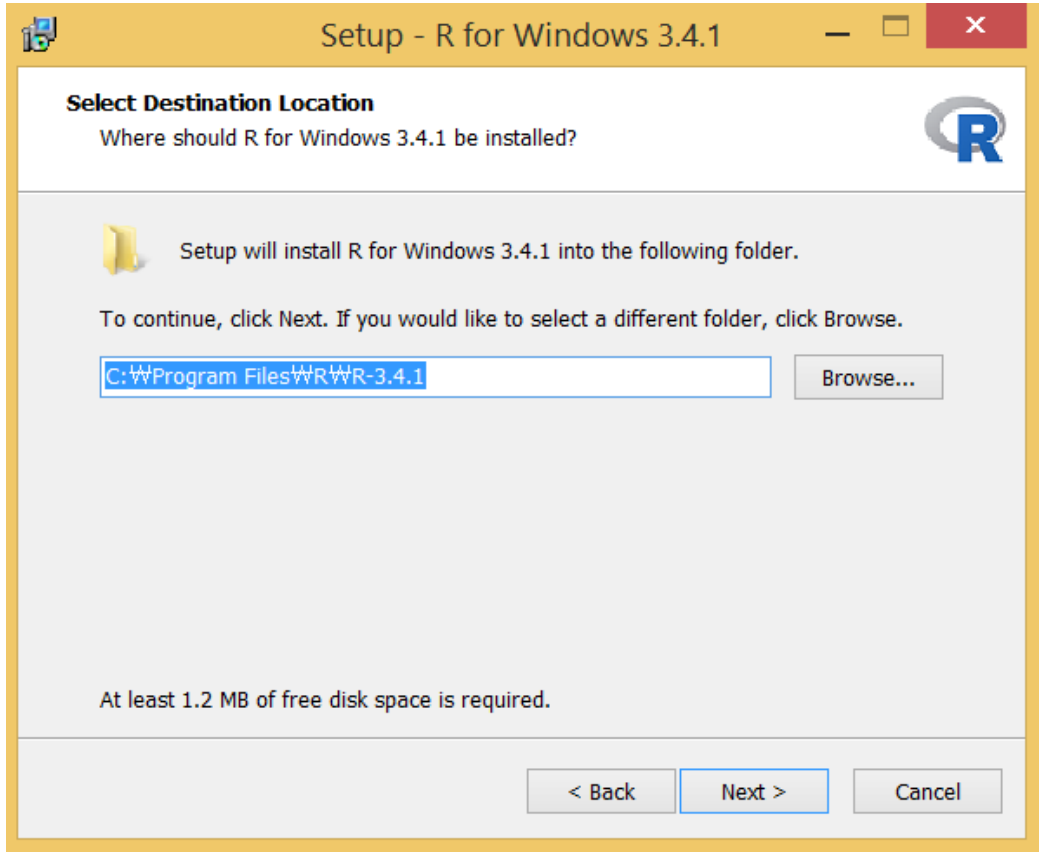


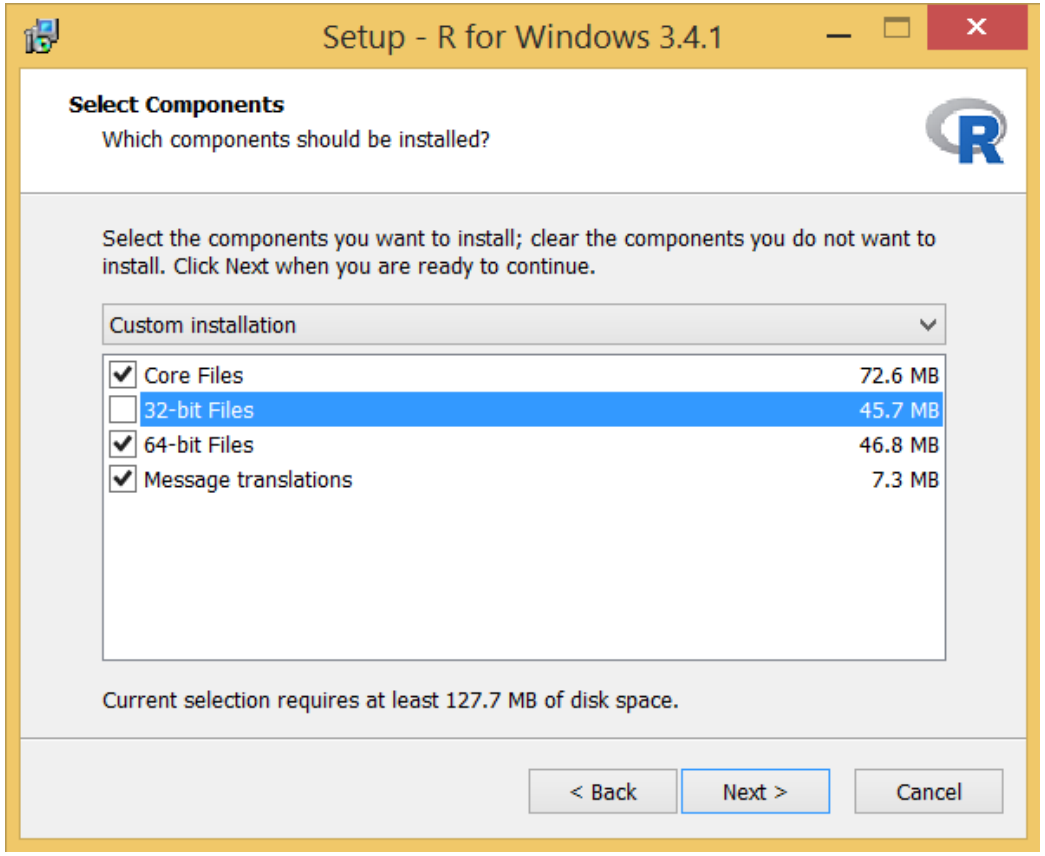
R Software Installation (Cont.)



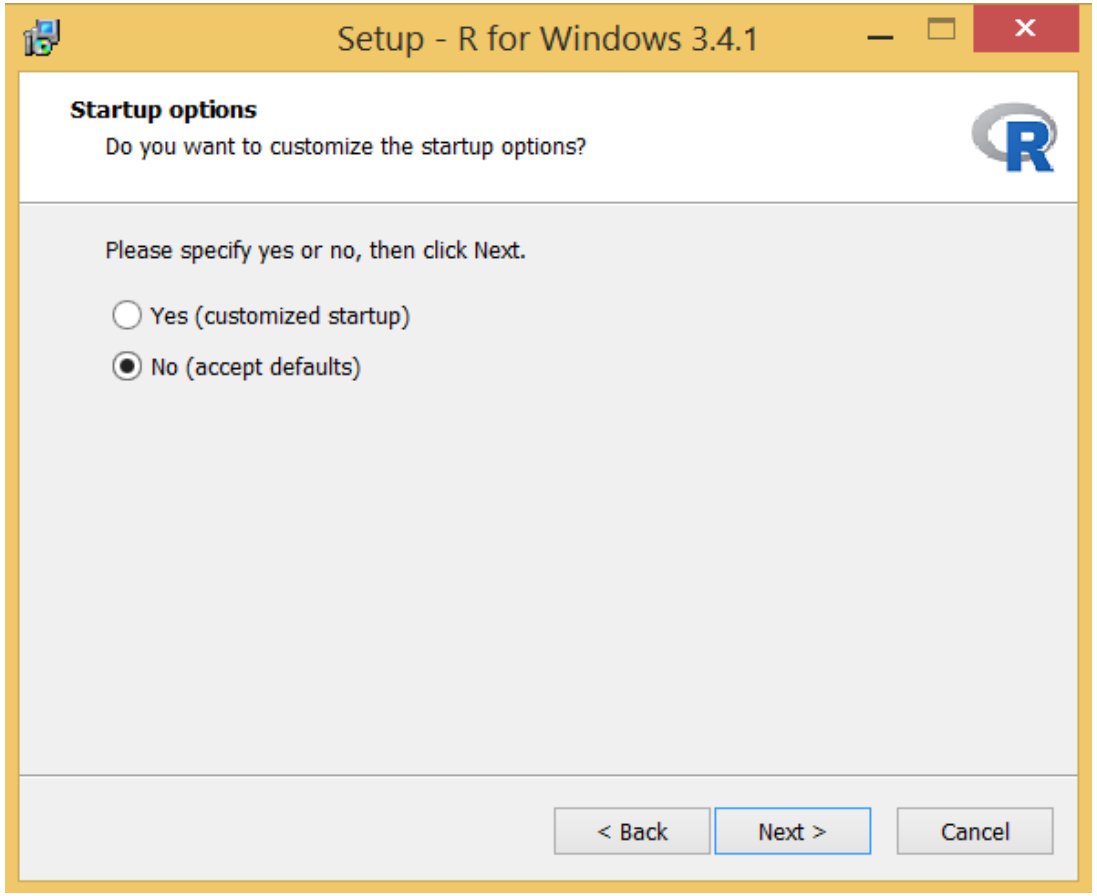


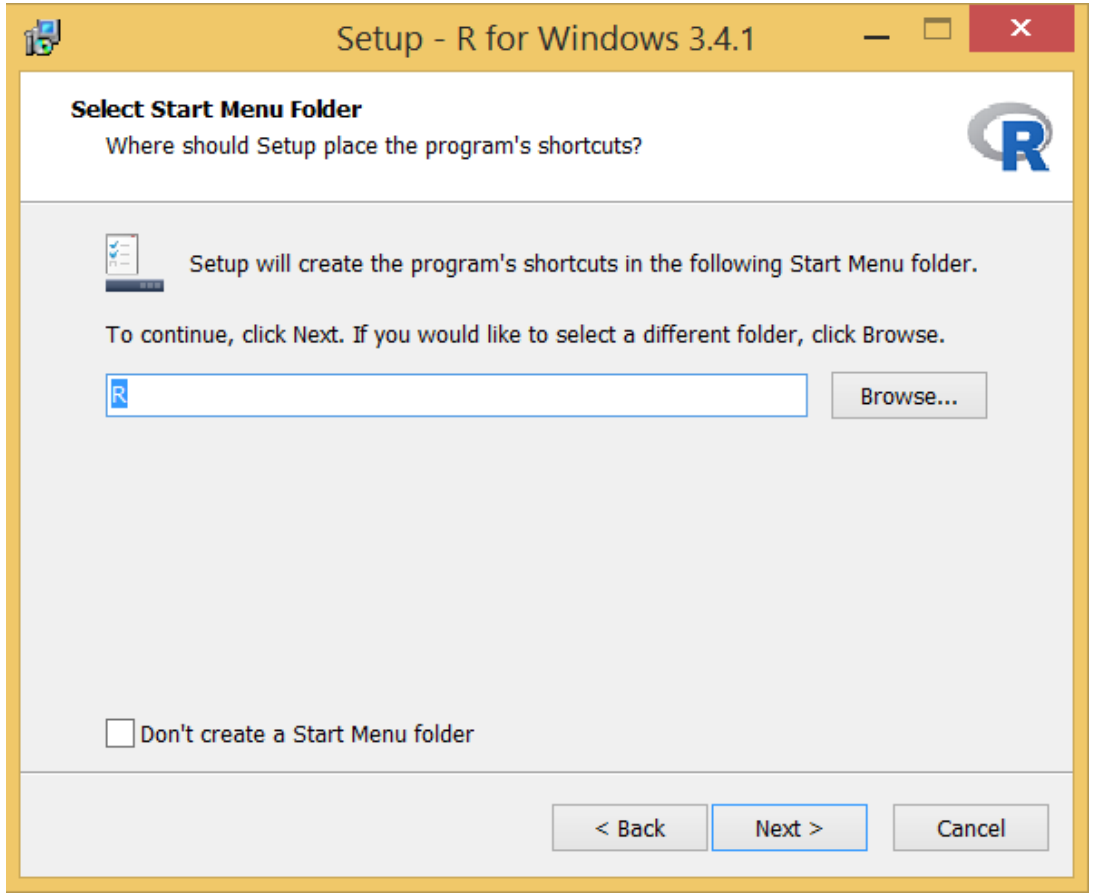
R Software Installation (Cont.)



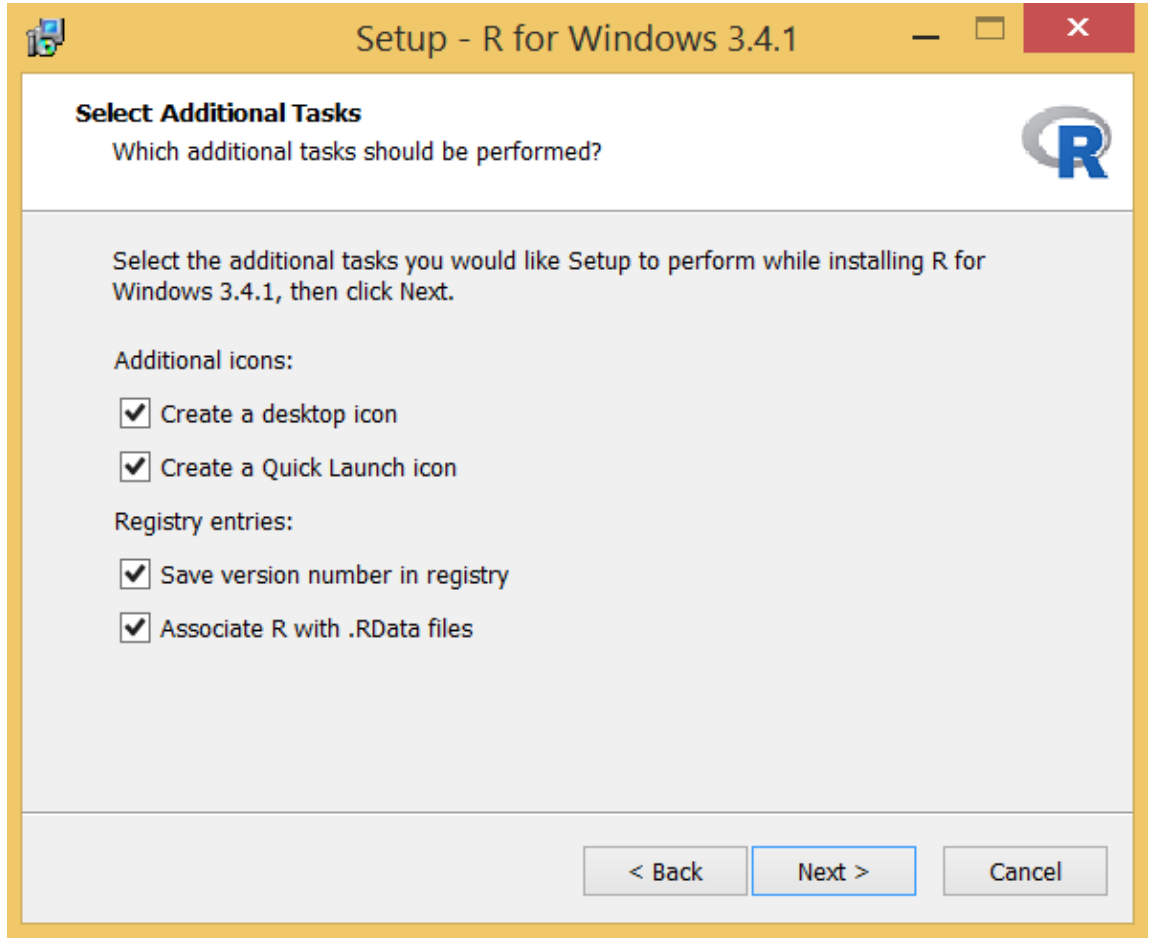


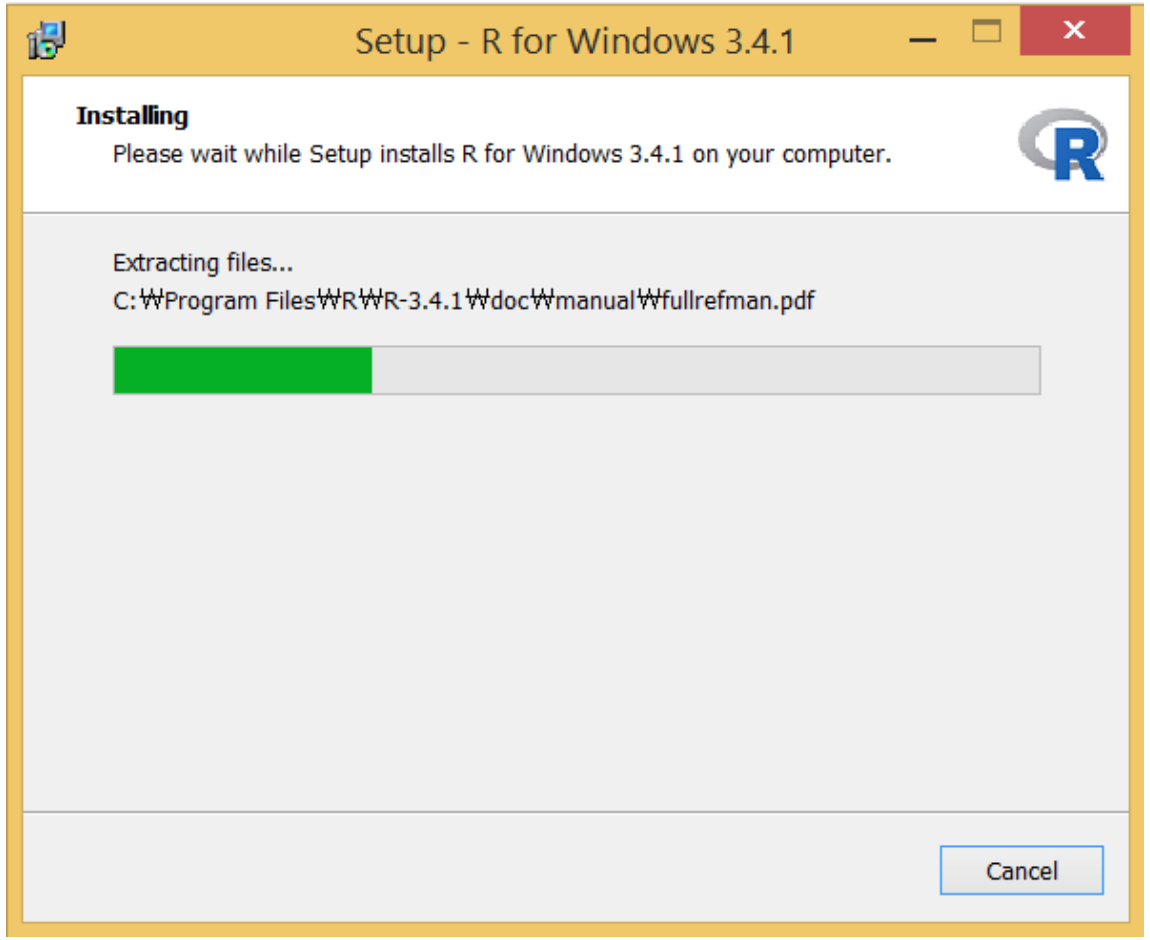
R Software Installation (Cont.)



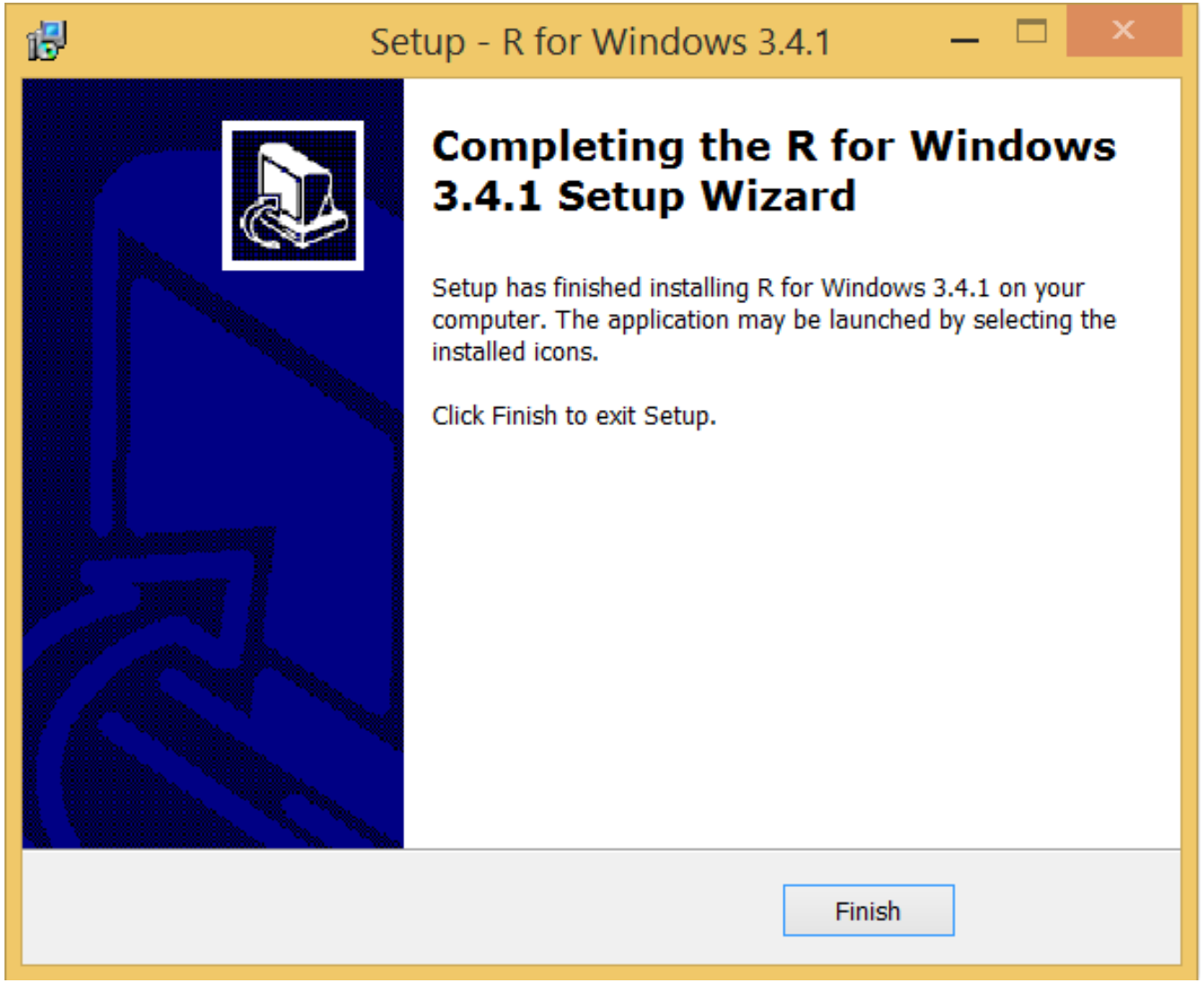


R Software Installation (Cont.)

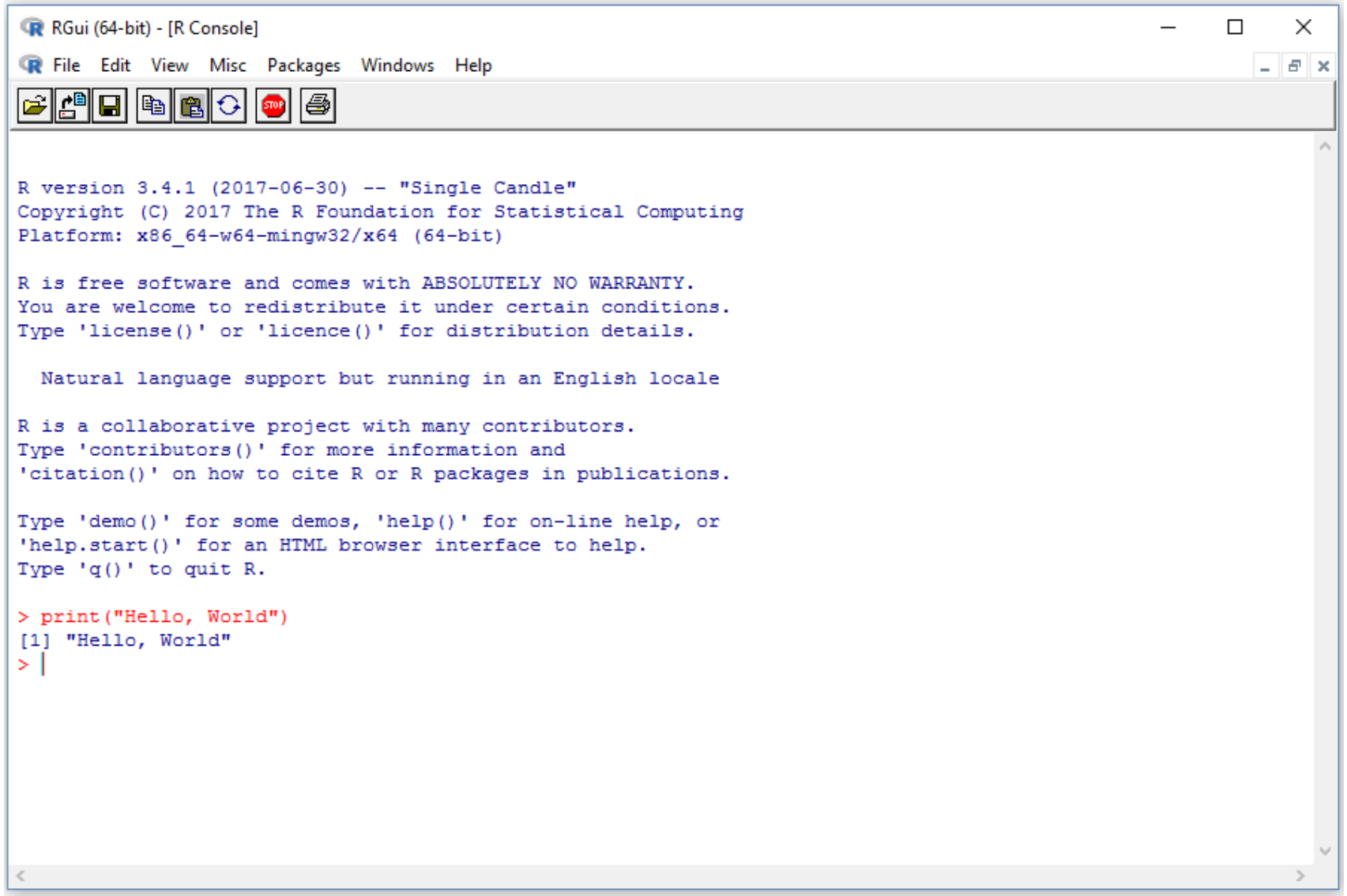




R Software Installation (Cont.)

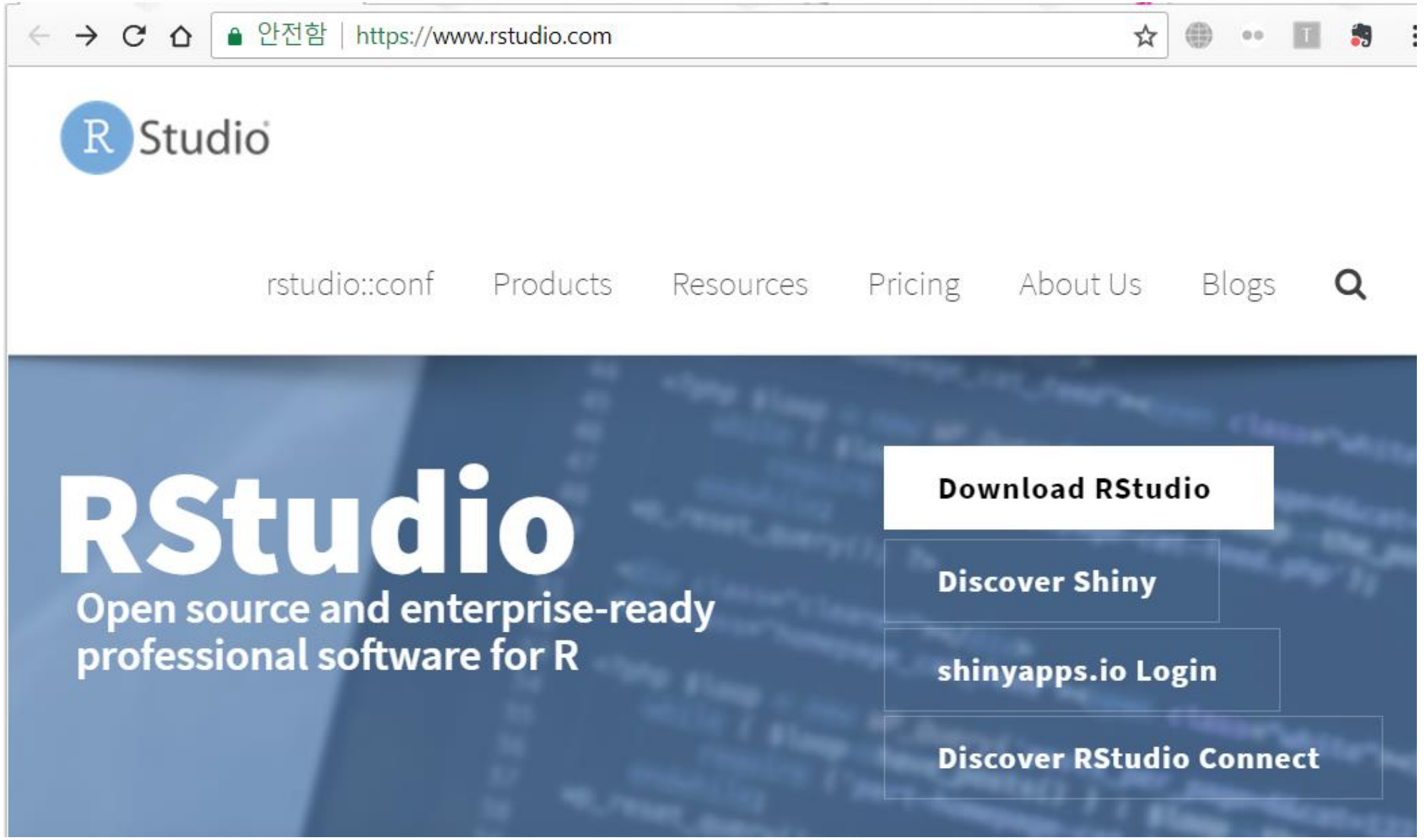


R Software Installation (Cont.)

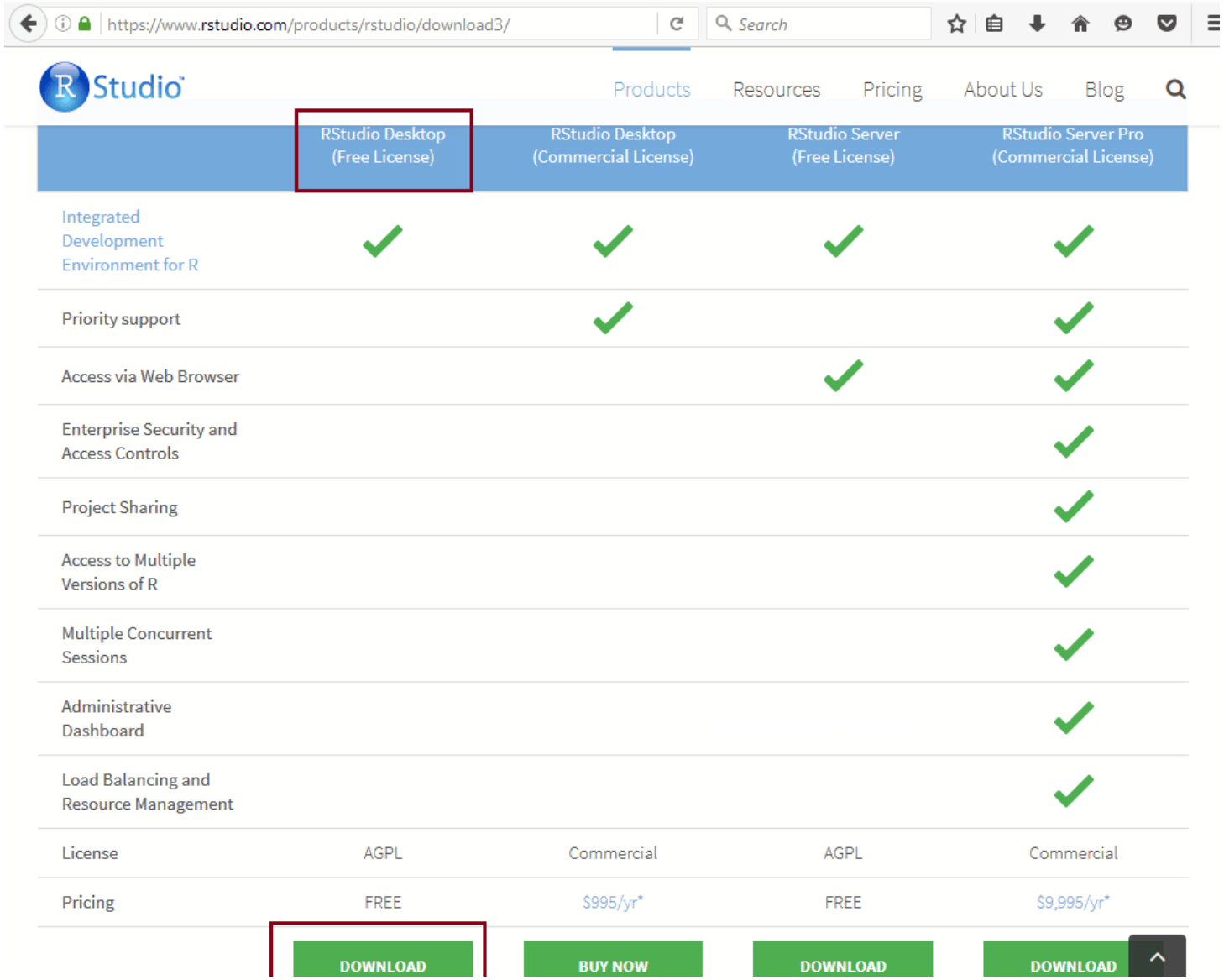


Studio Installation

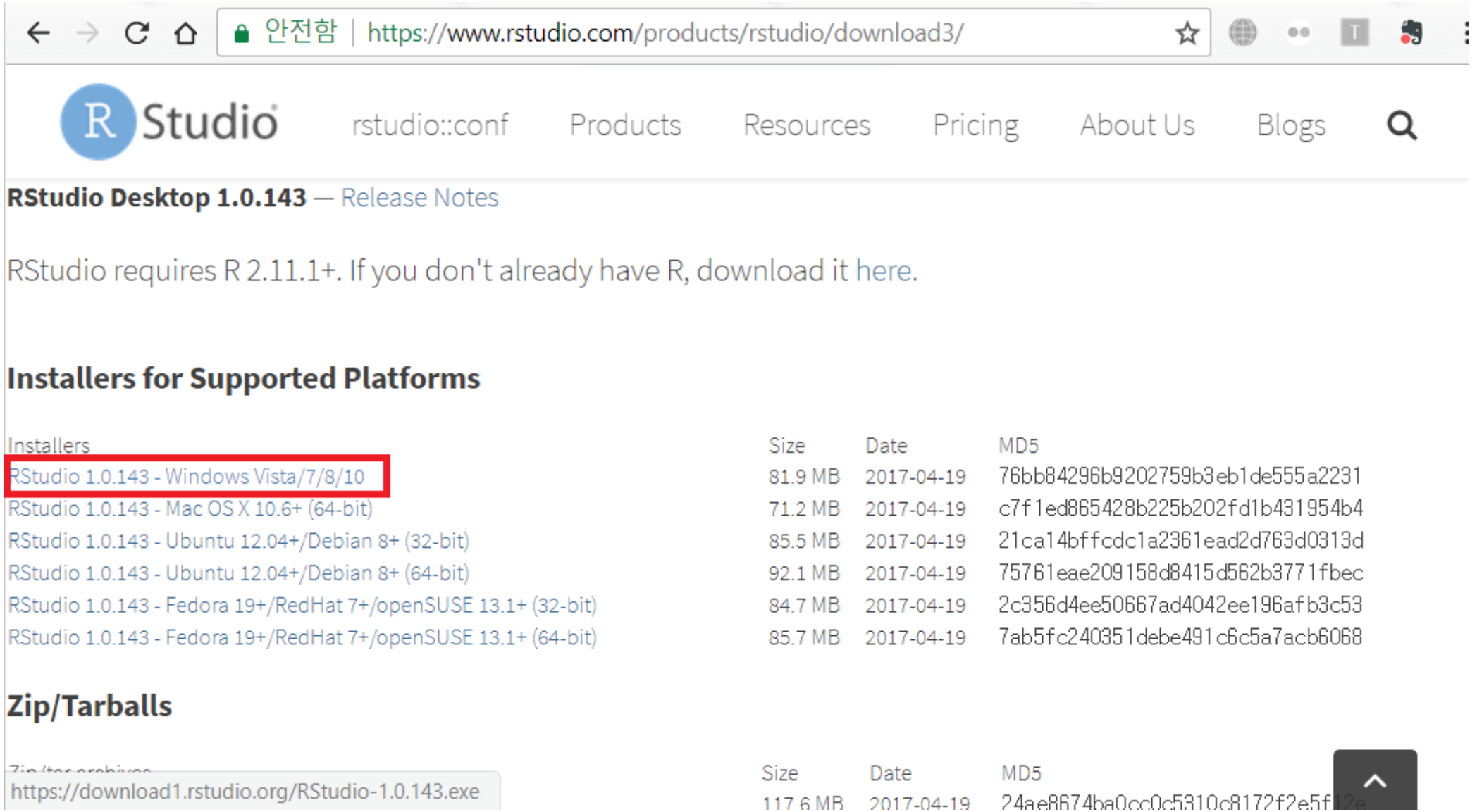
Download R Studio and Install



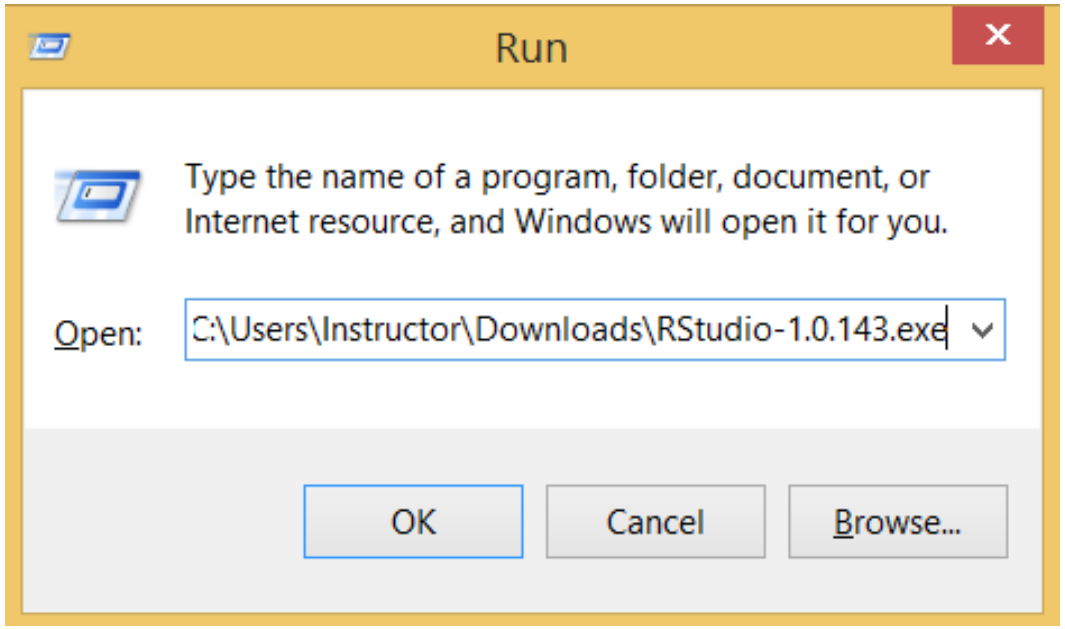
Download R Studio and Install (Cont.)

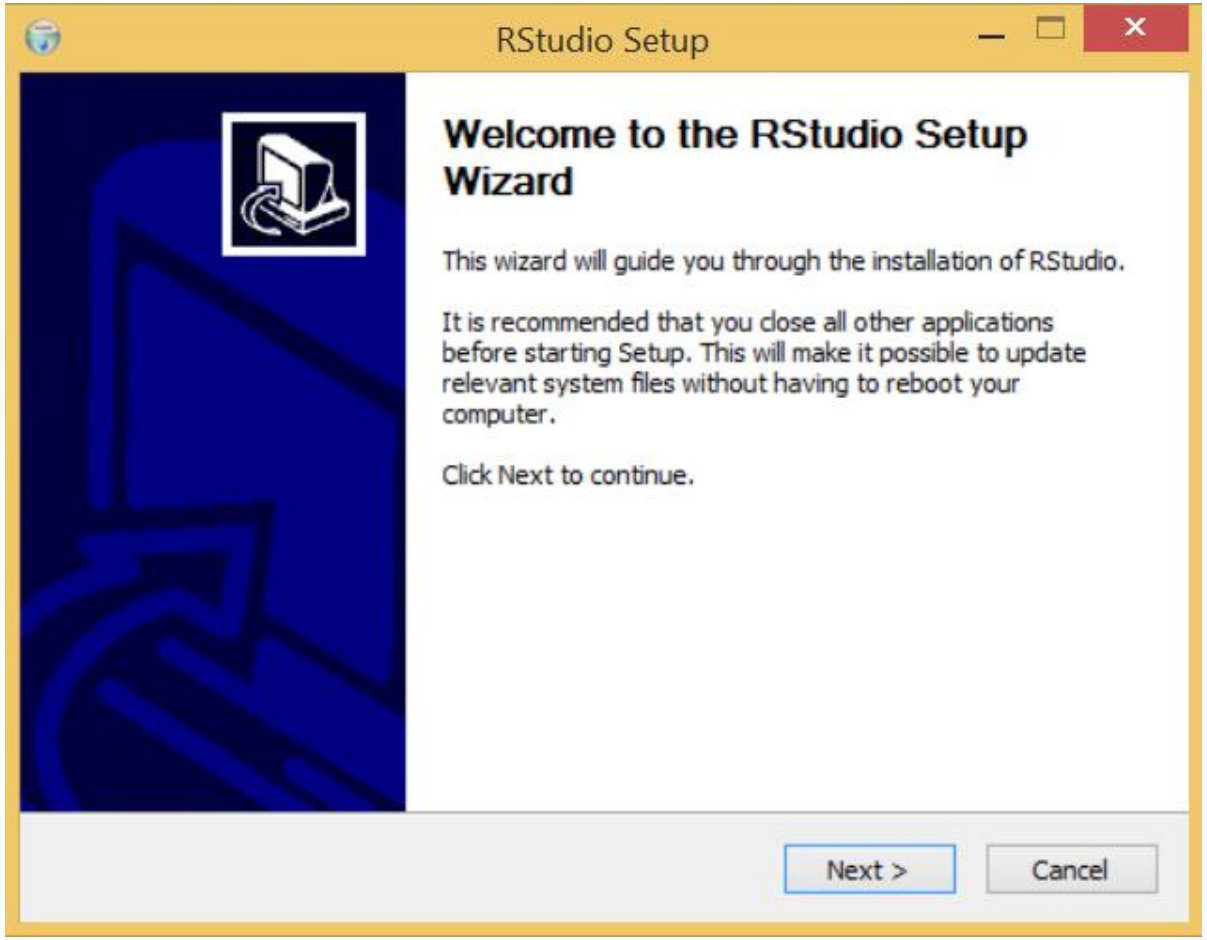


Download R Studio and Install (Cont.)

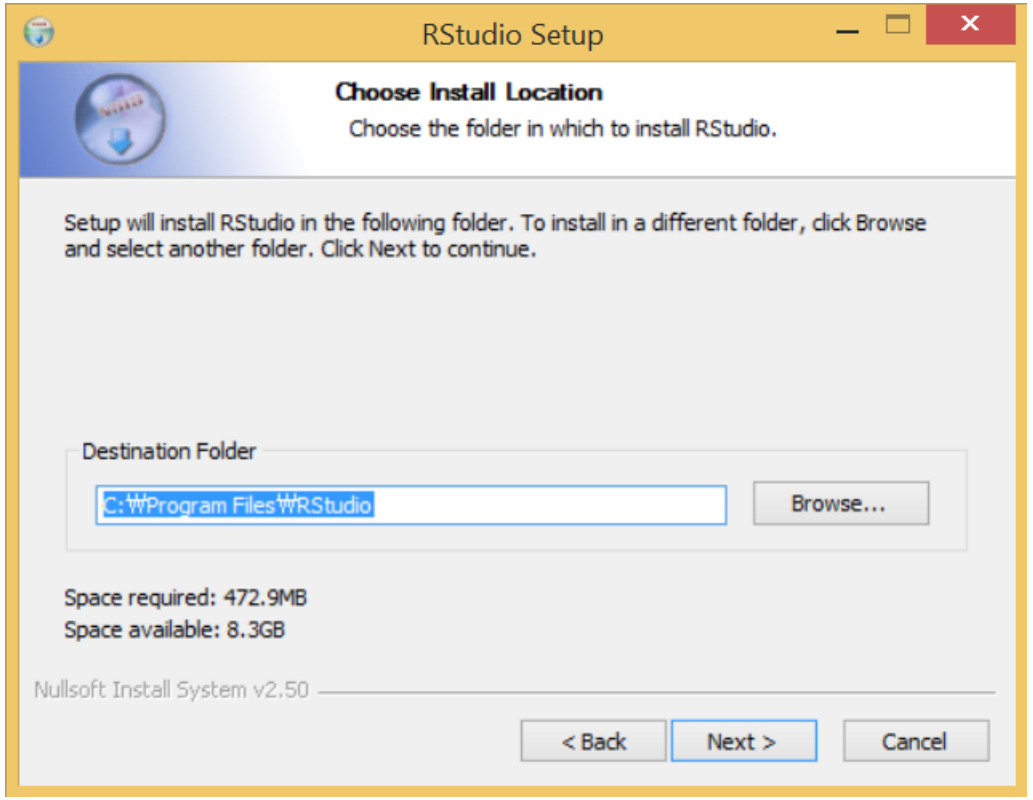


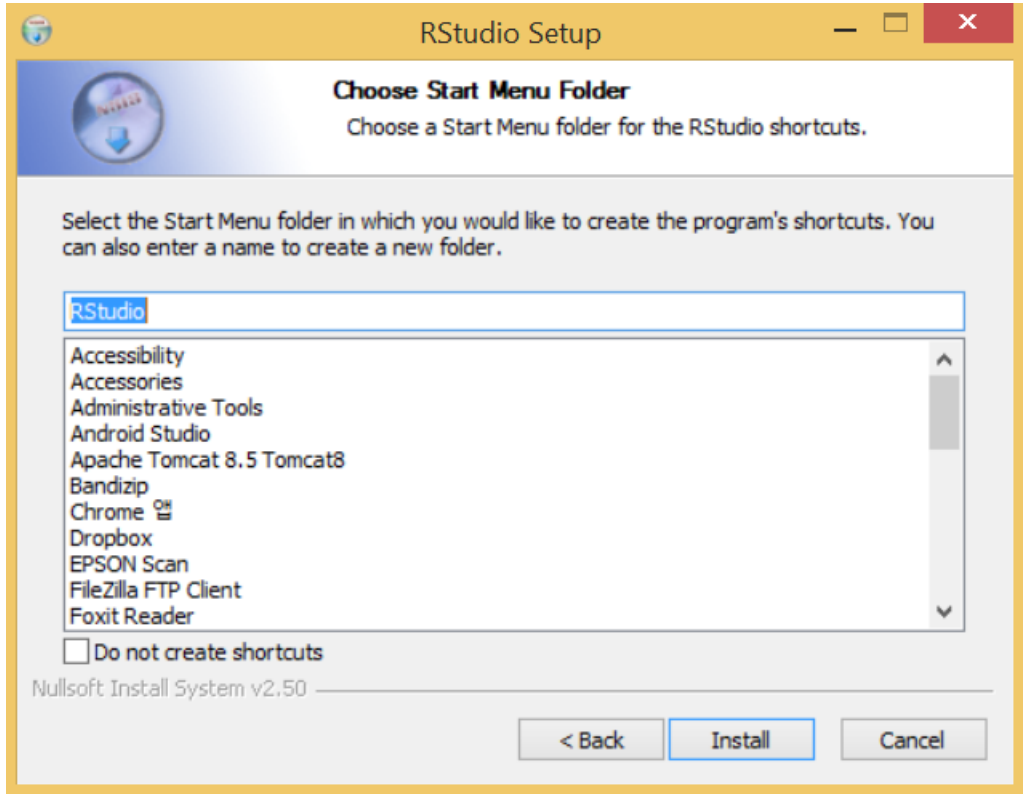
Download R Studio and Install (Cont.)



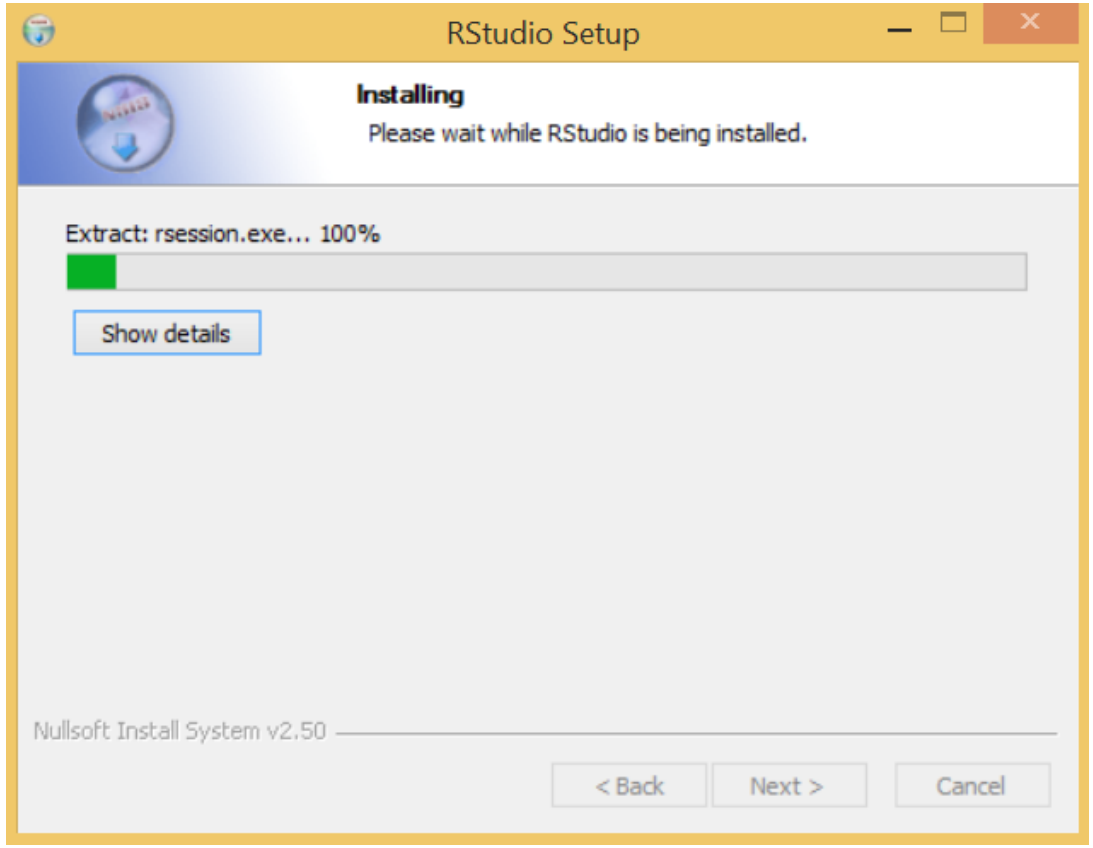


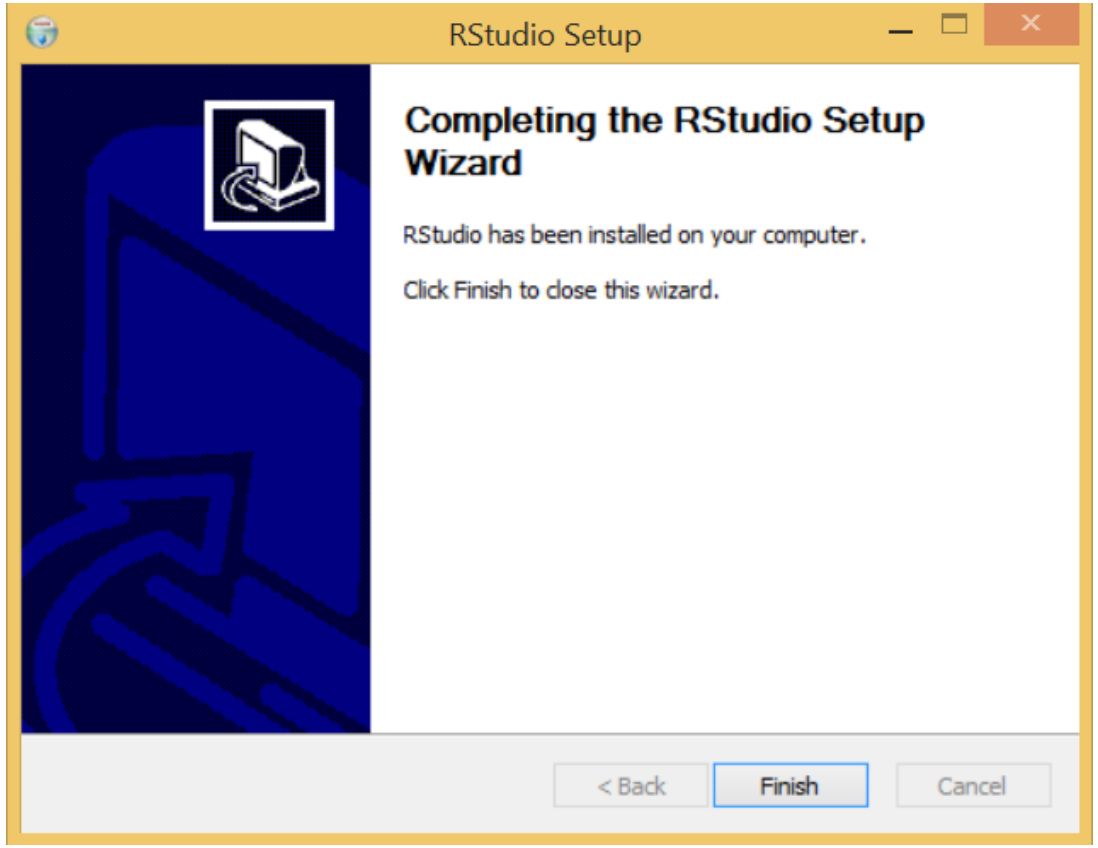
Download R Studio and Install (Cont.)



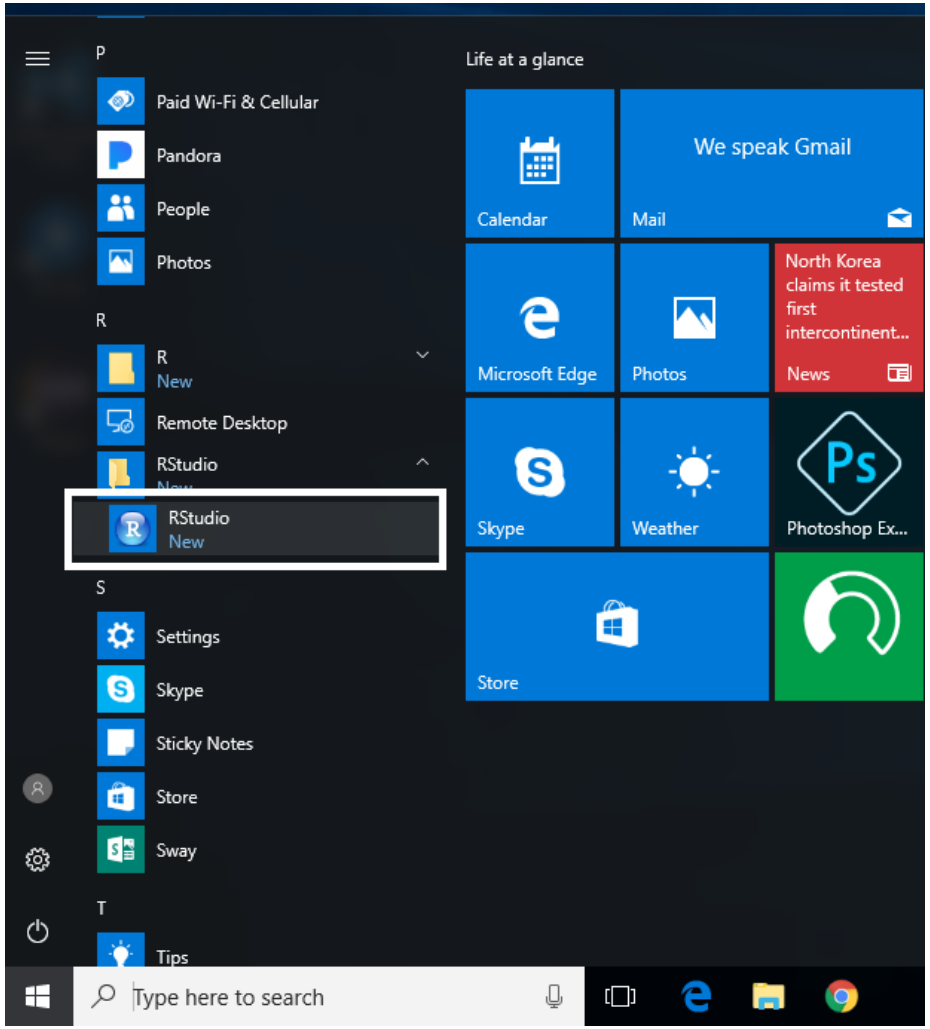


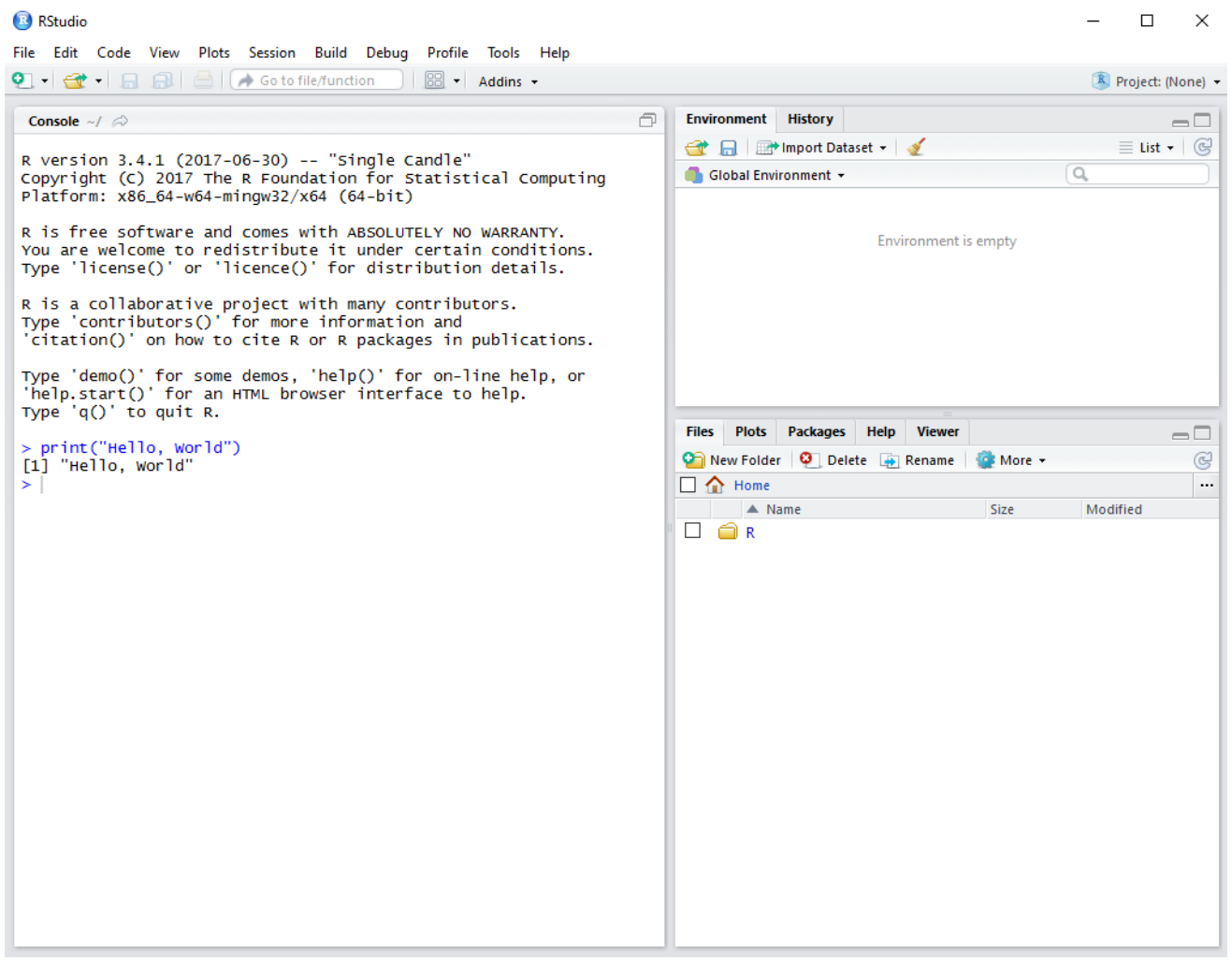
Download R Studio and Install (Cont.)



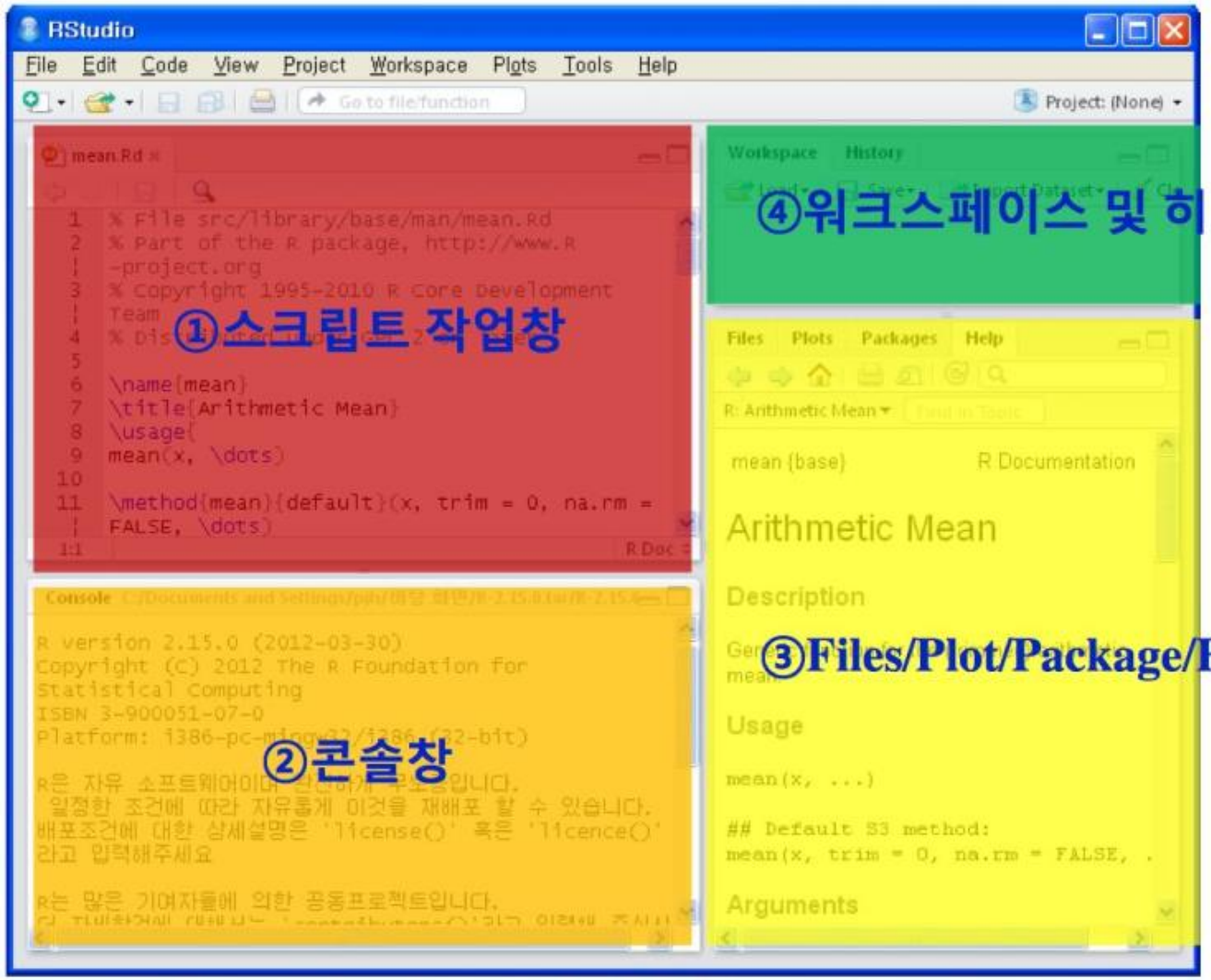


Download R Studio and Install (Cont.)

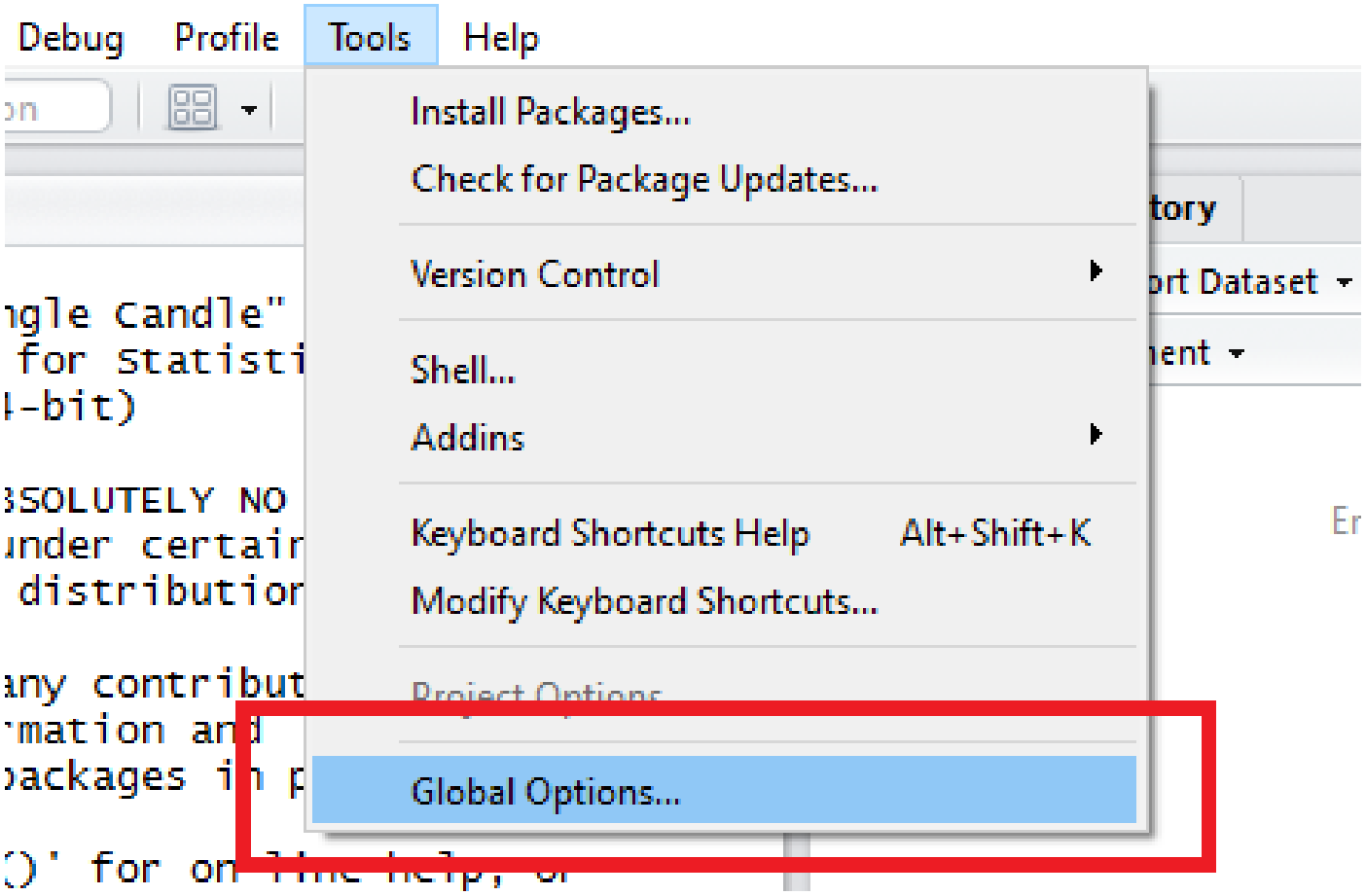




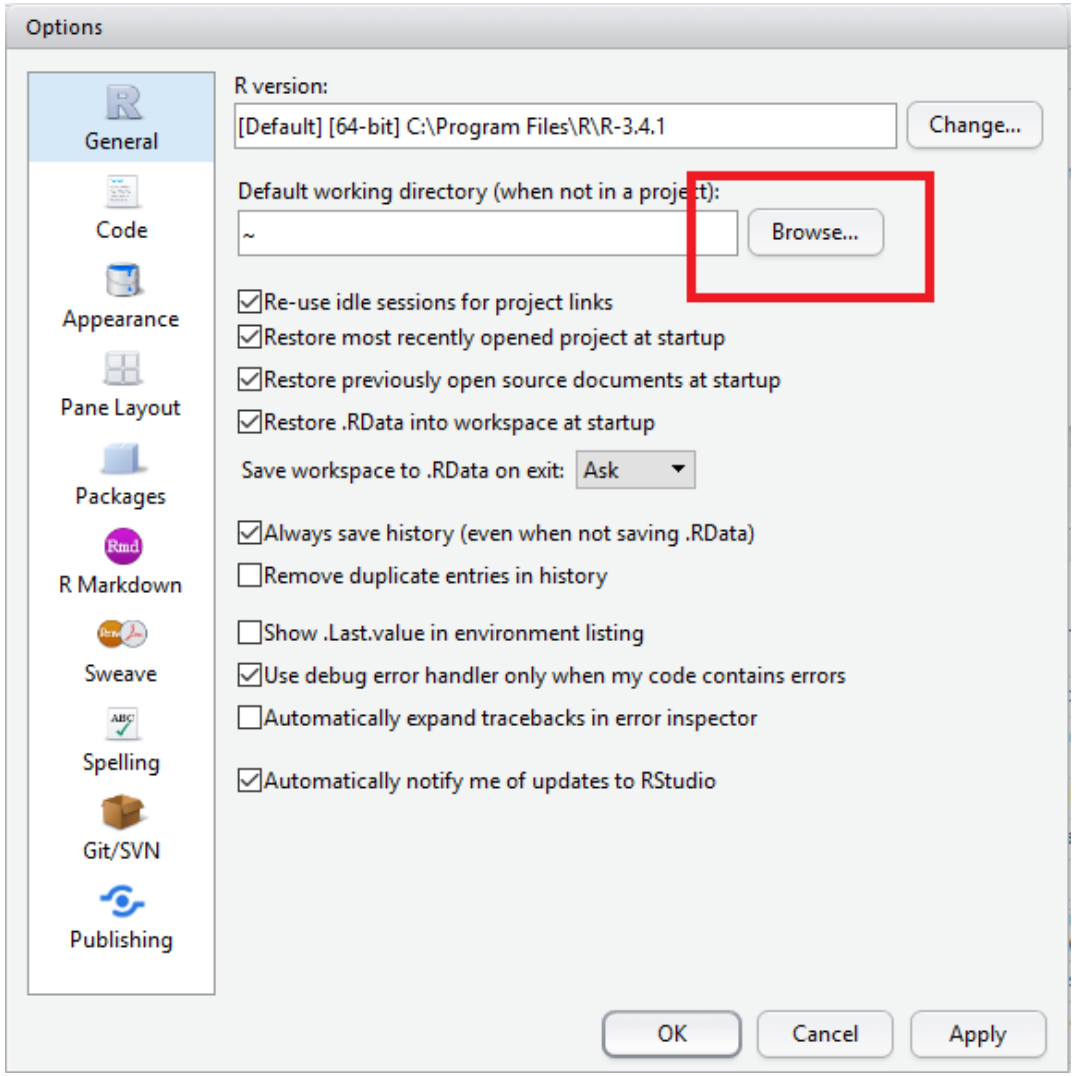
Download R Studio and Install (Cont.)



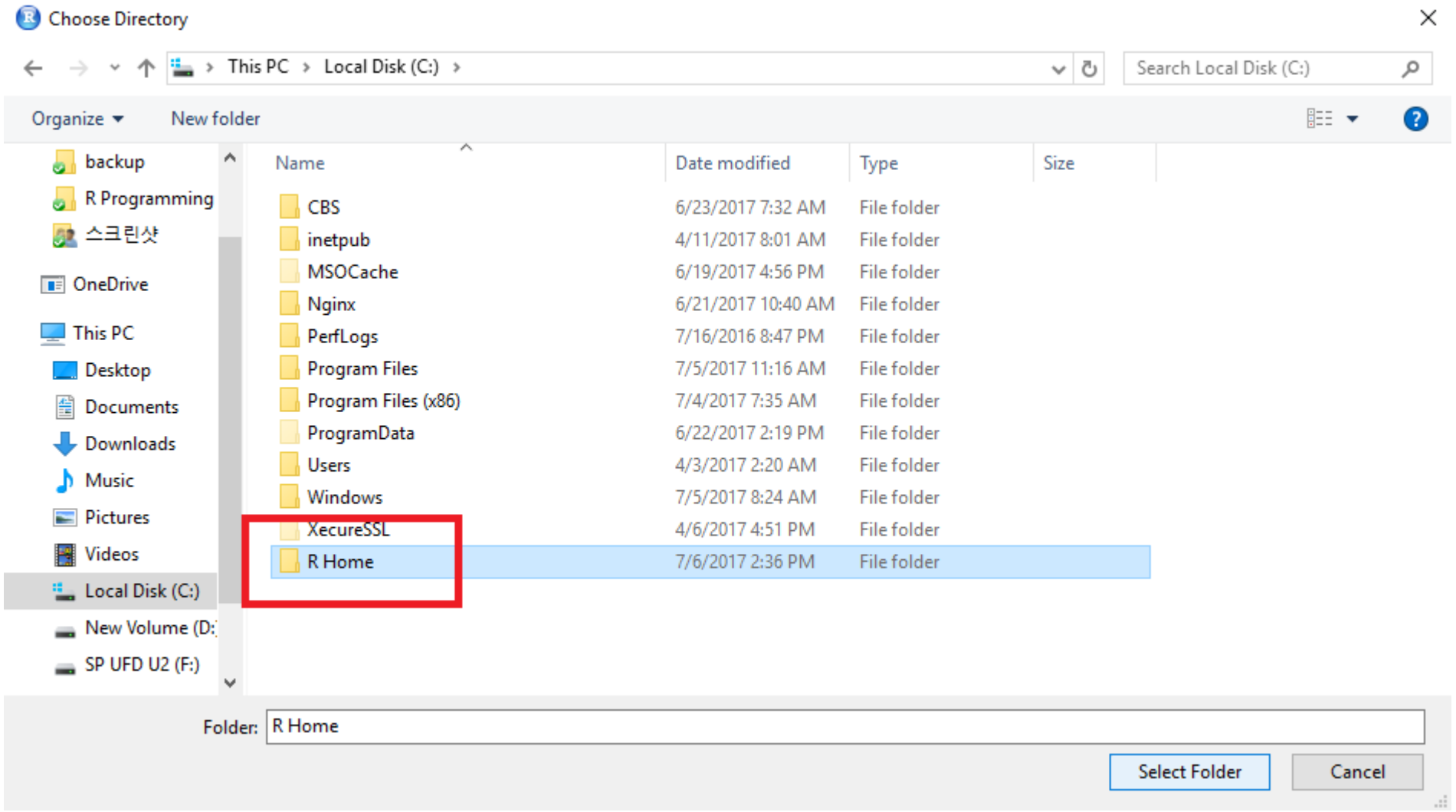
Configure Working Directory



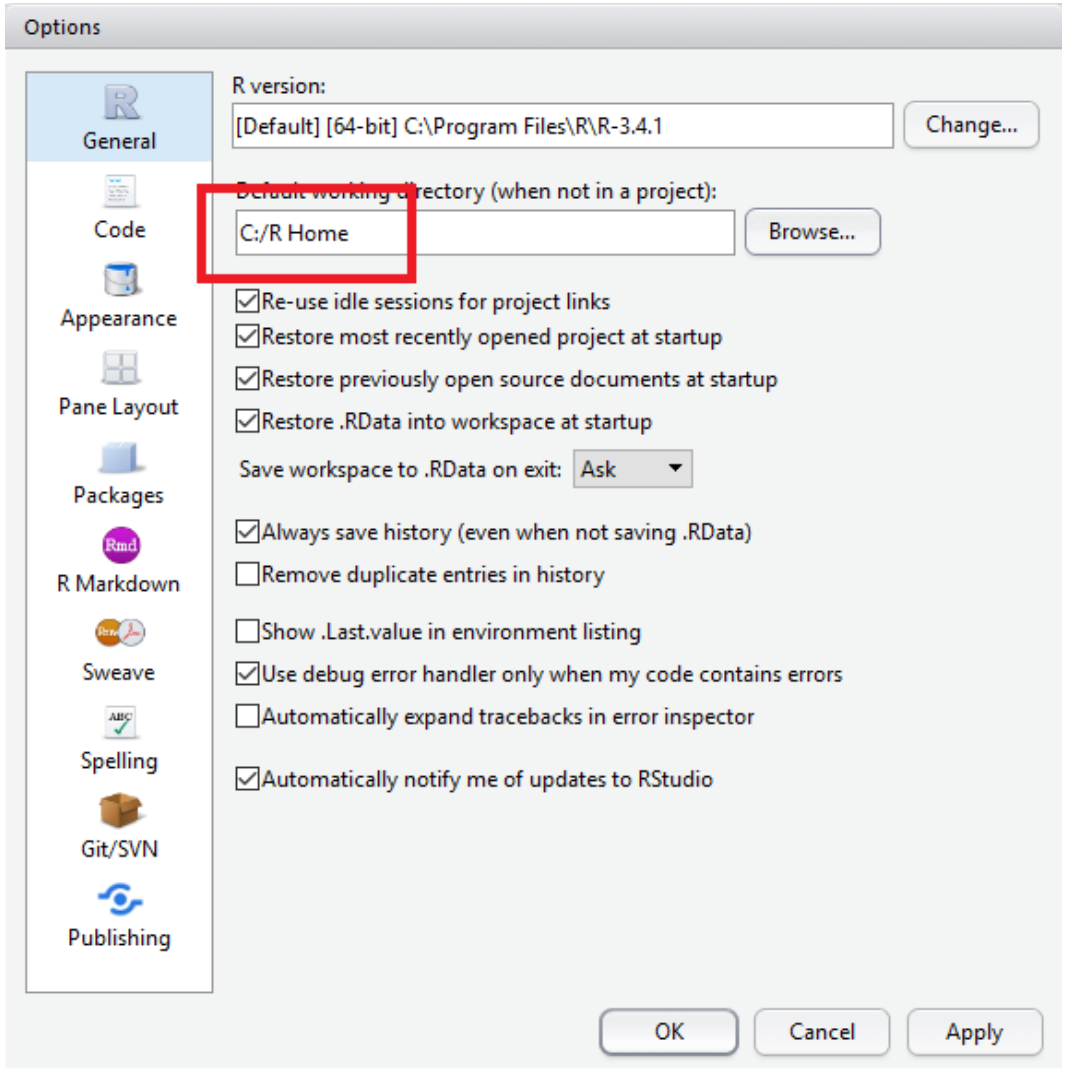
Configure Working Directory (Cont.)



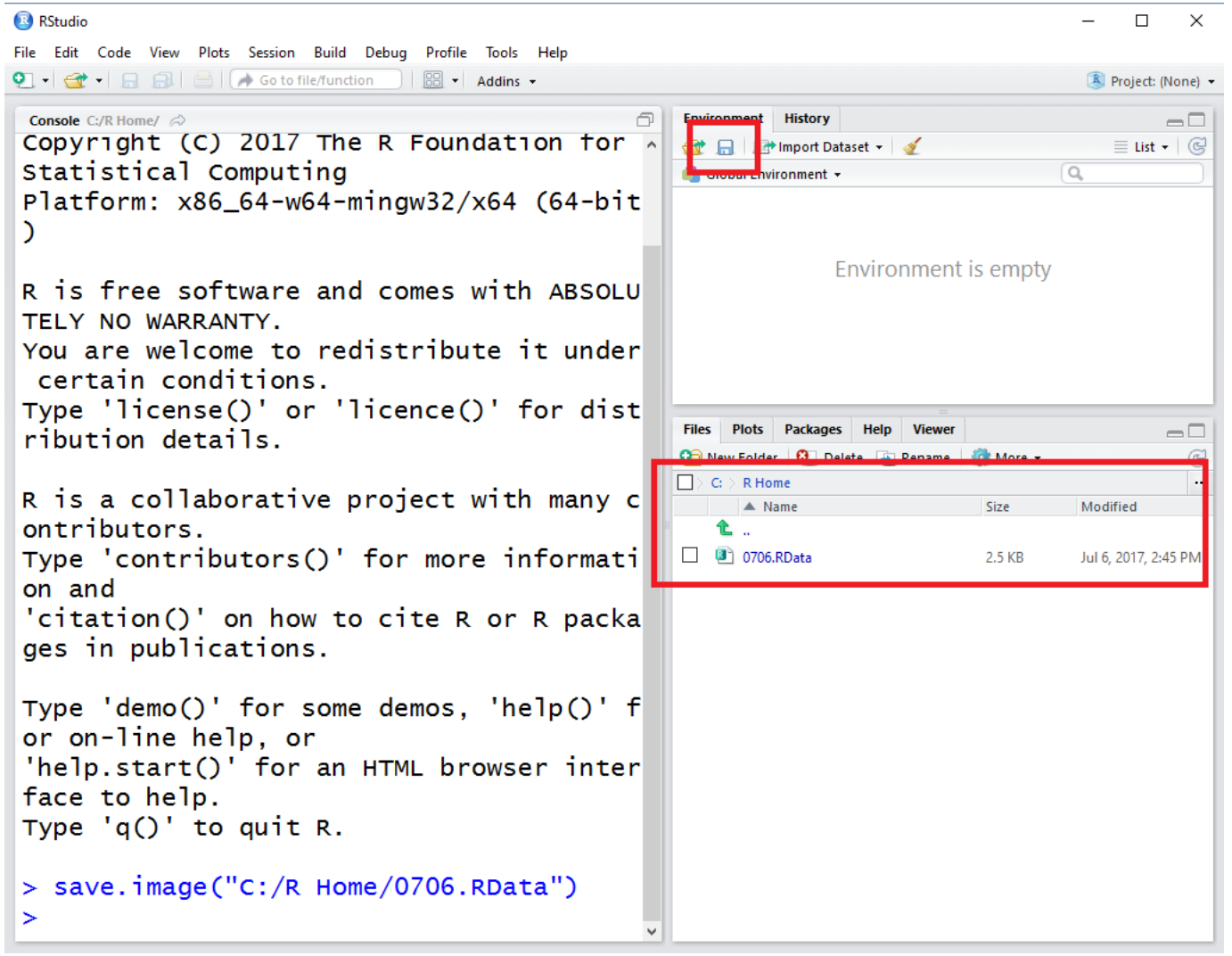
Configure Working Directory (Cont.)



Configure Working Directory (Cont.)

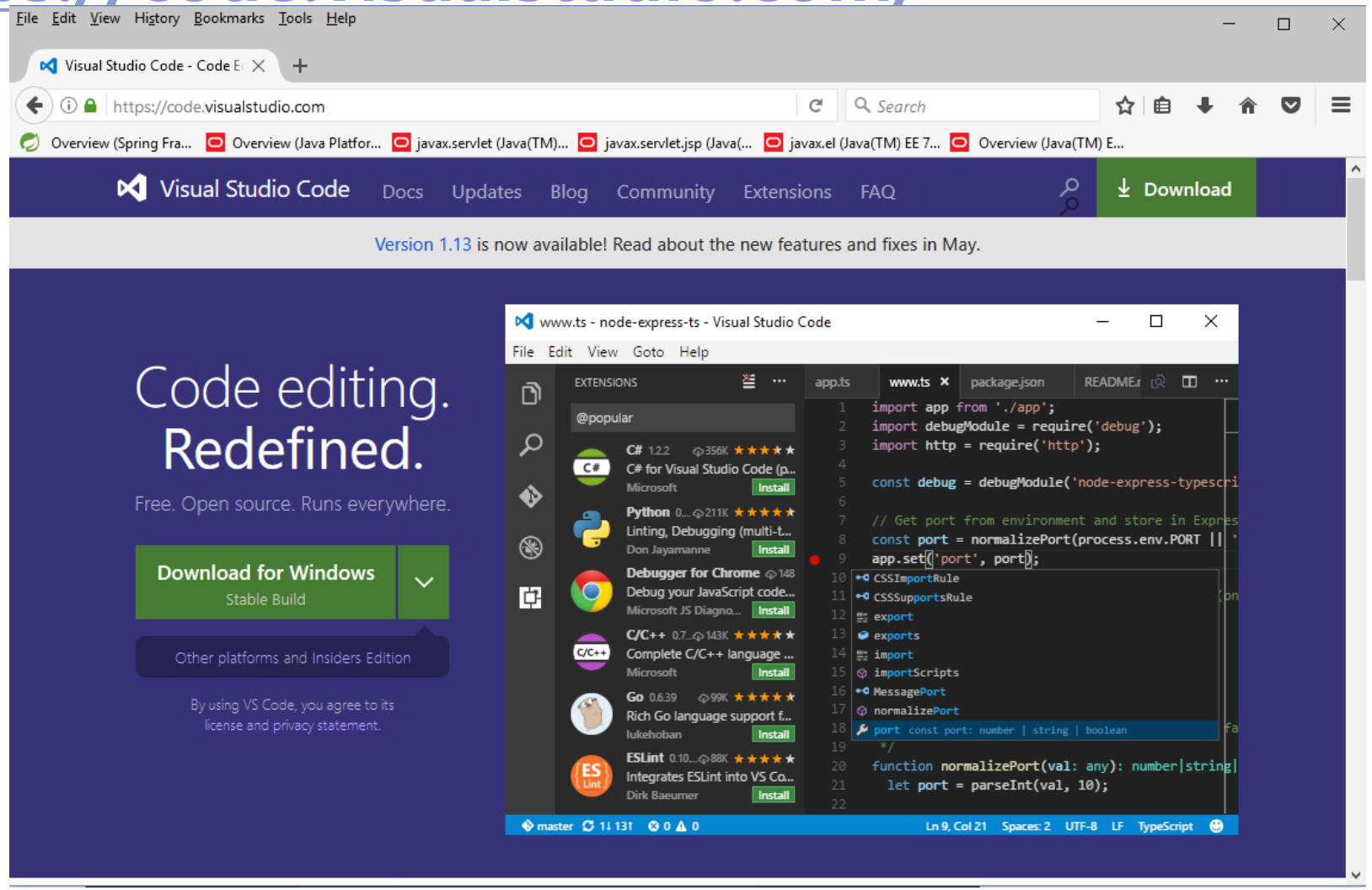


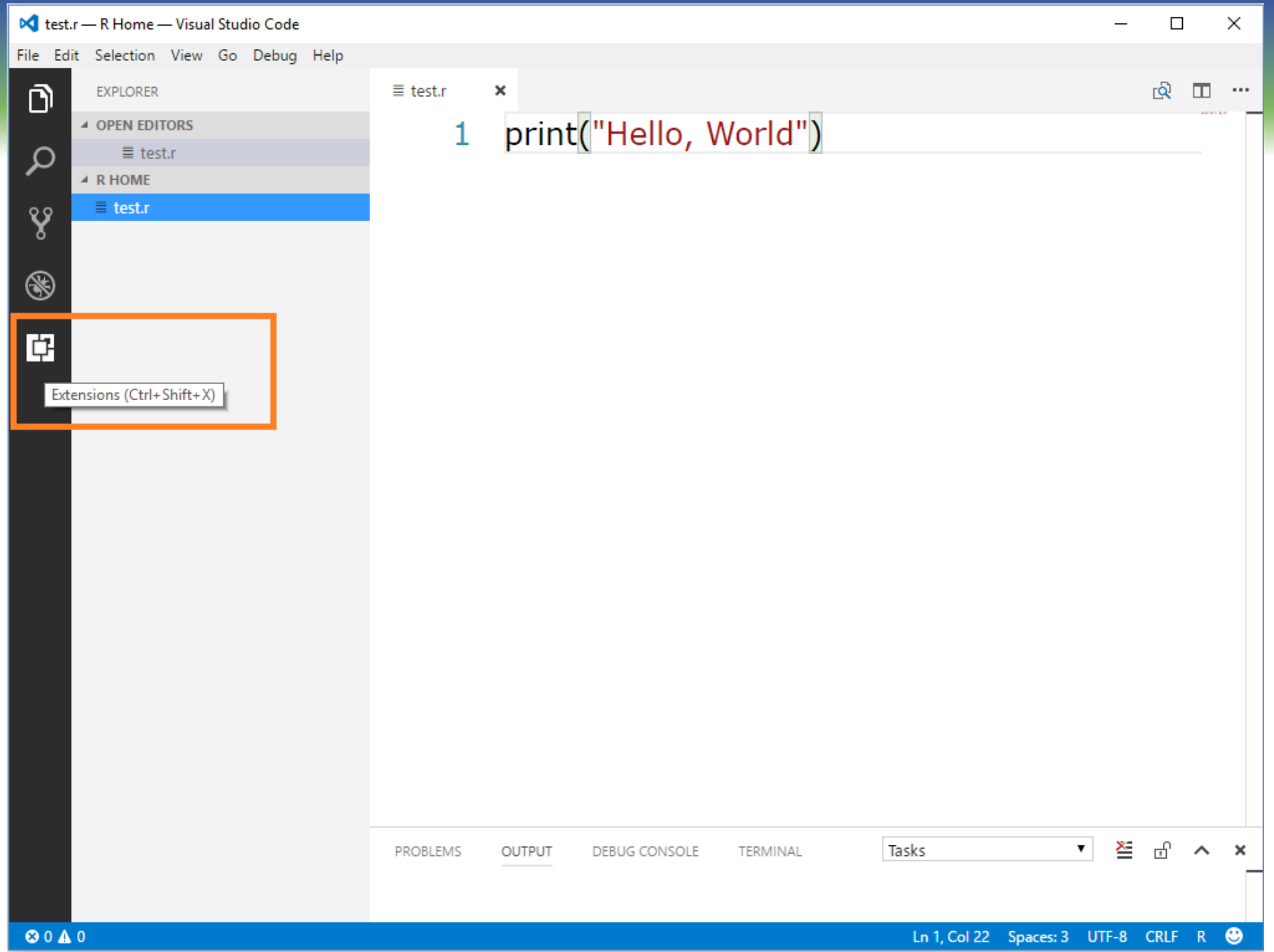
Configure Working Directory (Cont.)

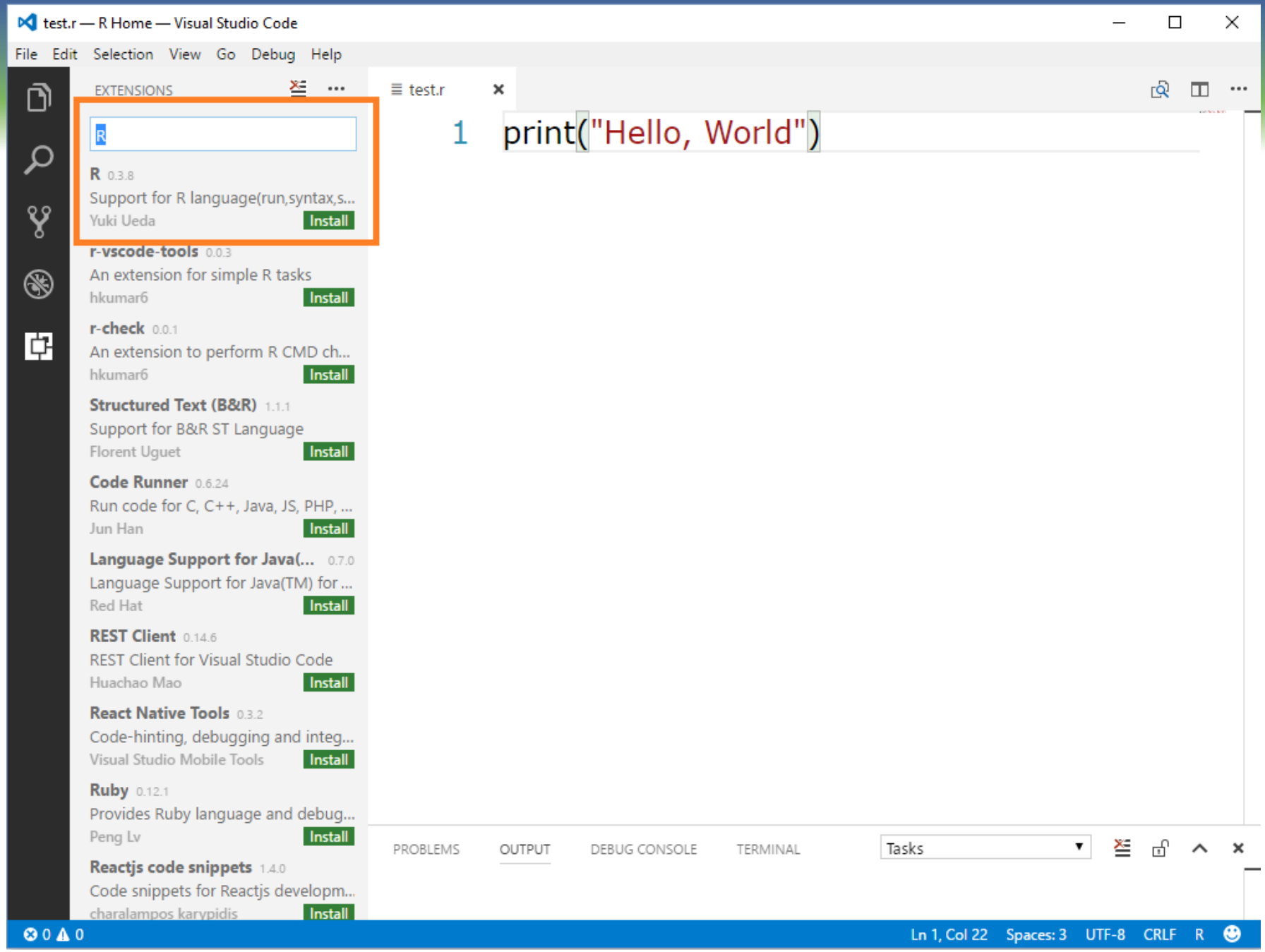


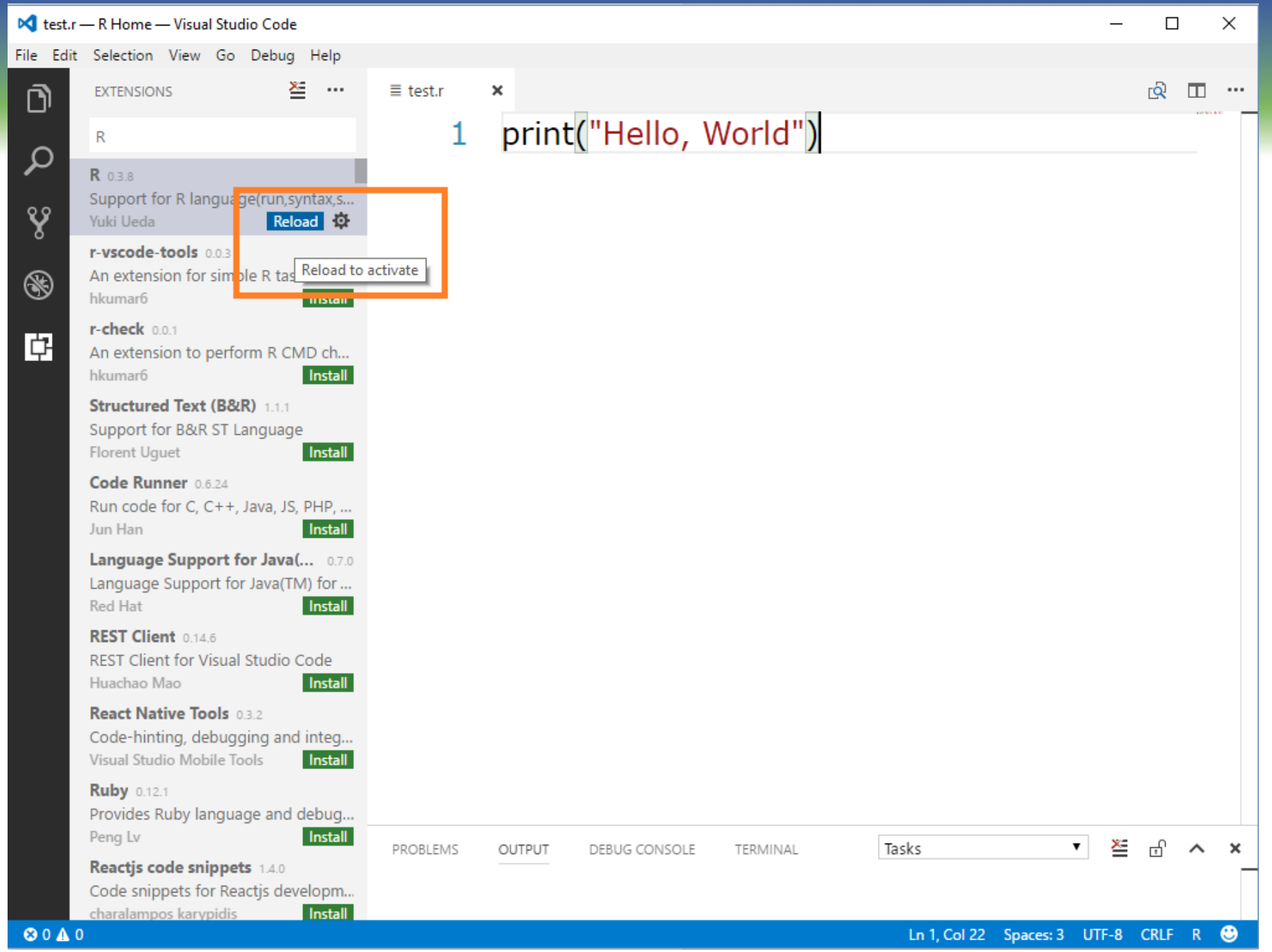
R tool : Microsoft Visual Studio Code

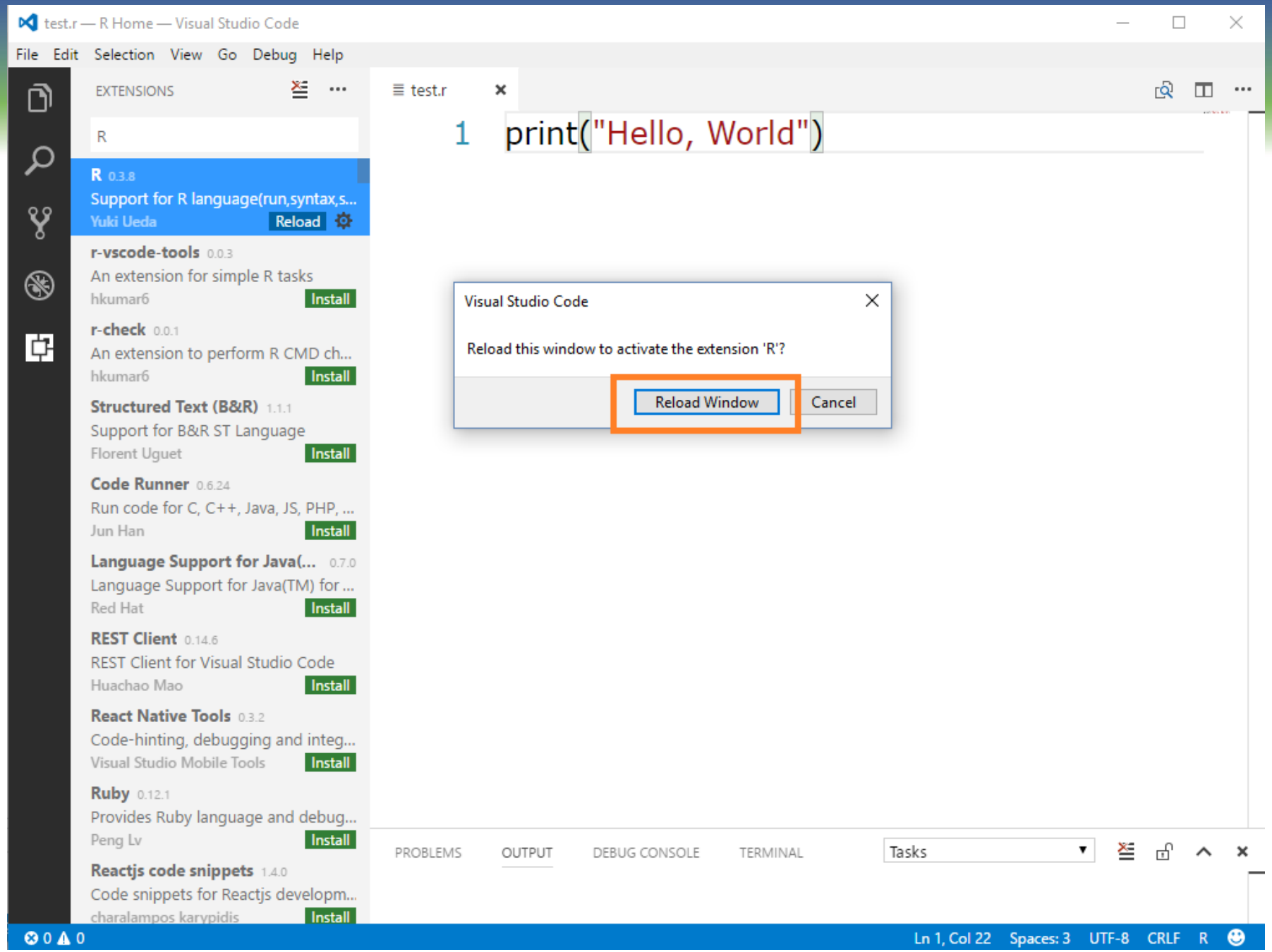
- https://code.visualstudio.com/

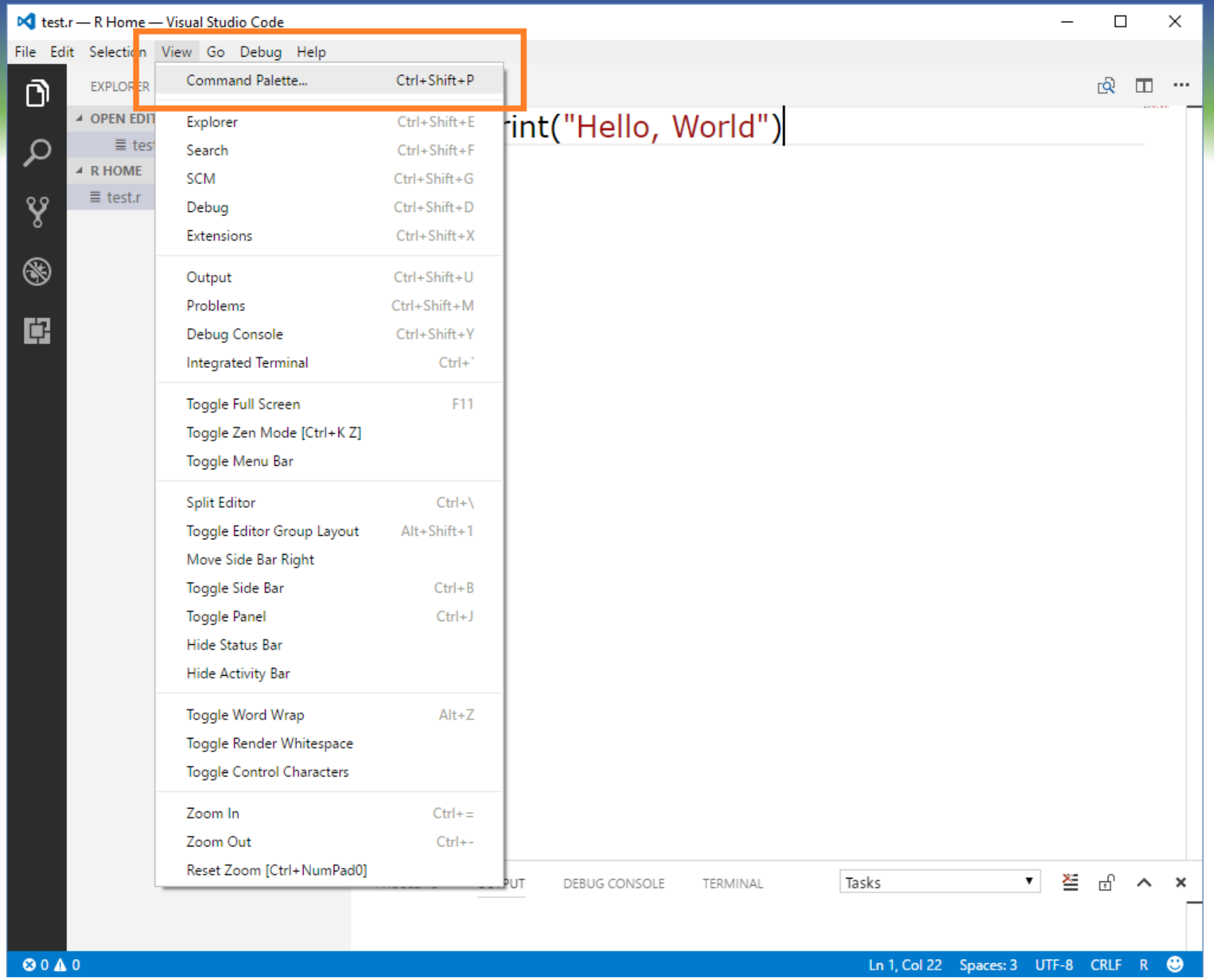


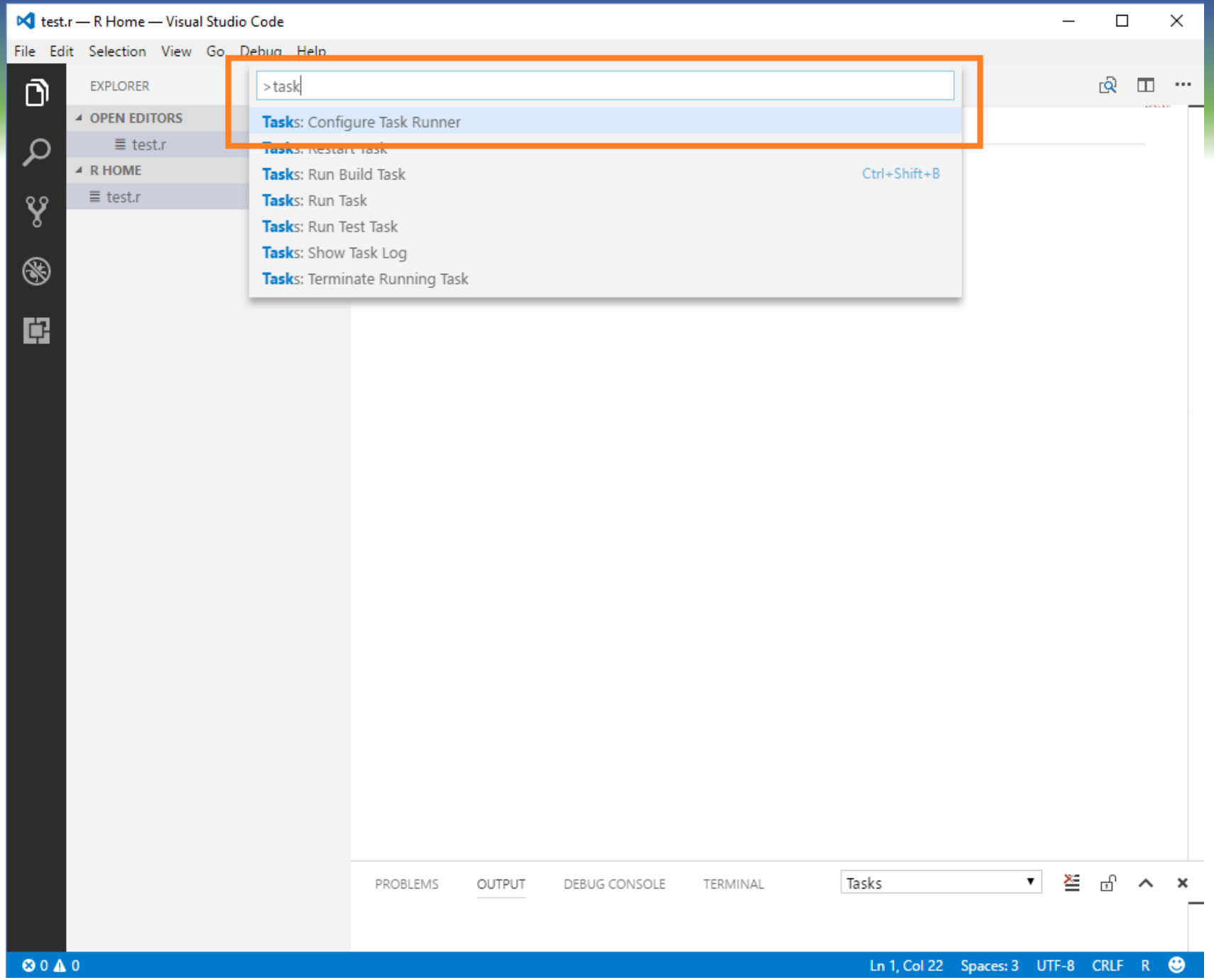

test.r — R Home — Visual Studio Code
File Edit Selection View Go Debug Help
EXPLORER
OPEN EDITORS
test.r
R HOME
test.r
Extensions (Ctrl+Shift+X)
test.r
1 print("Hello, World")
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL
Tasks
0 0
Ln 1, Col 22 Spaces: 3 UTF-8 CRLF R

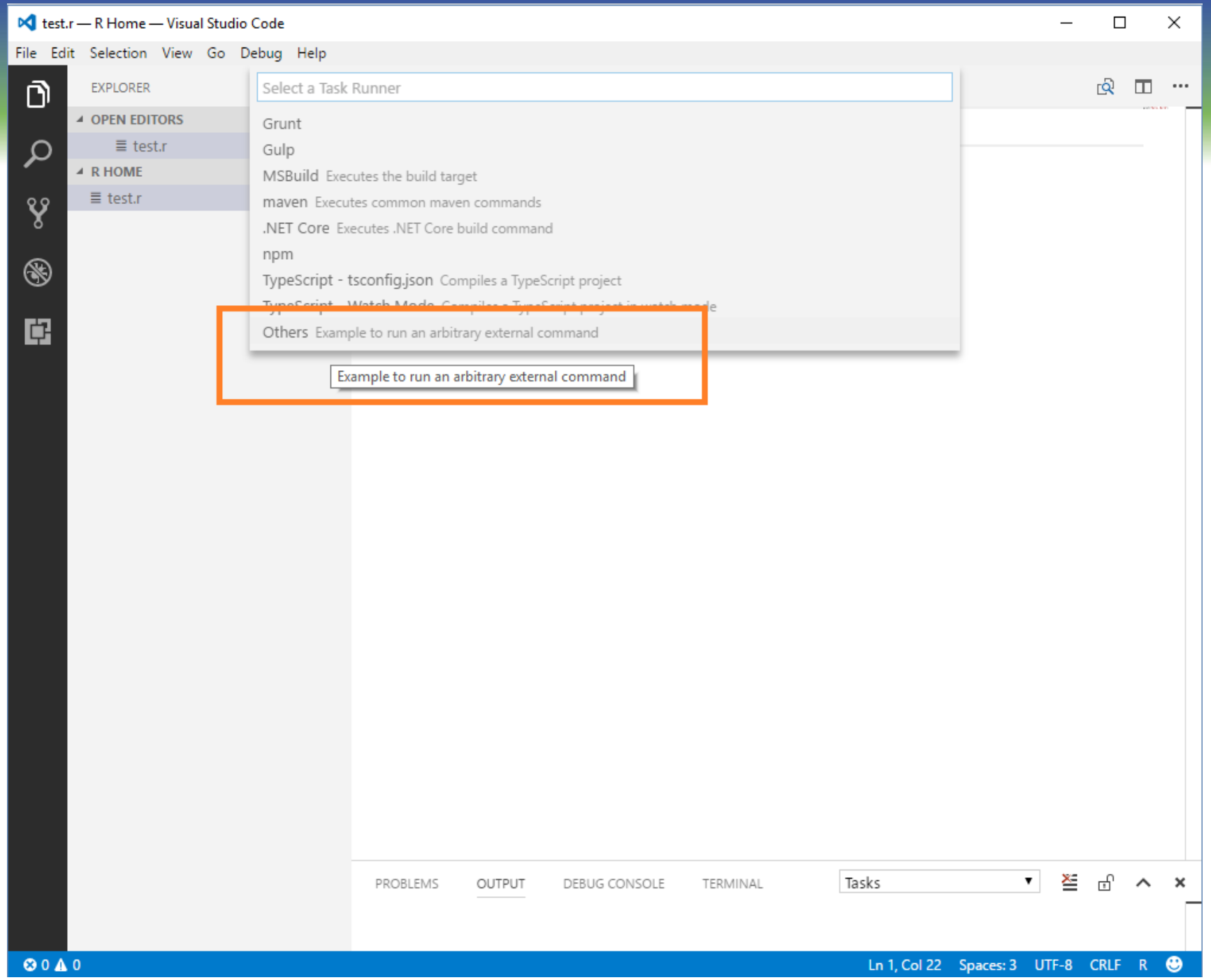

test.r — R Home — Visual Studio Code
File Edit Selection View Go Debug Help
EXTENSIONS
R
R 0.3.8
Support for R language(run,syntax,s...
Yuki Ueda
Install
r-vscode-tools 0.0.3
An extension for simple R tasks
hkumar6
Install
r-check 0.0.1
An extension to perform R CMD ch...
hkumar6
Install
Structured Text (B&R) 1.1.1
Support for B&R ST Language
Florent Uguet
Install
Code Runner 0.6.24
Run code for C, C++, Java, JS, PHP, ...
Jun Han
Install
Language Support for Java(... 0.7.0
Language Support for Java(TM) for ...
Red Hat
Install
REST Client 0.14.6
REST Client for Visual Studio Code
Huachao Mao
Install
React Native Tools 0.3.2
Code-hinting, debugging and integ...
Visual Studio Mobile Tools
Install
Ruby 0.12.1
Provides Ruby language and debug...
Peng Lv
Install
Reactjs code snippets 1.4.0
Code snippets for Reactjs developm...
charalampos karypidis
Install
test.r
1 print("Hello, World")
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL
Tasks
0 0
Ln 1, Col 22 Spaces: 3 UTF-8 CRLF R

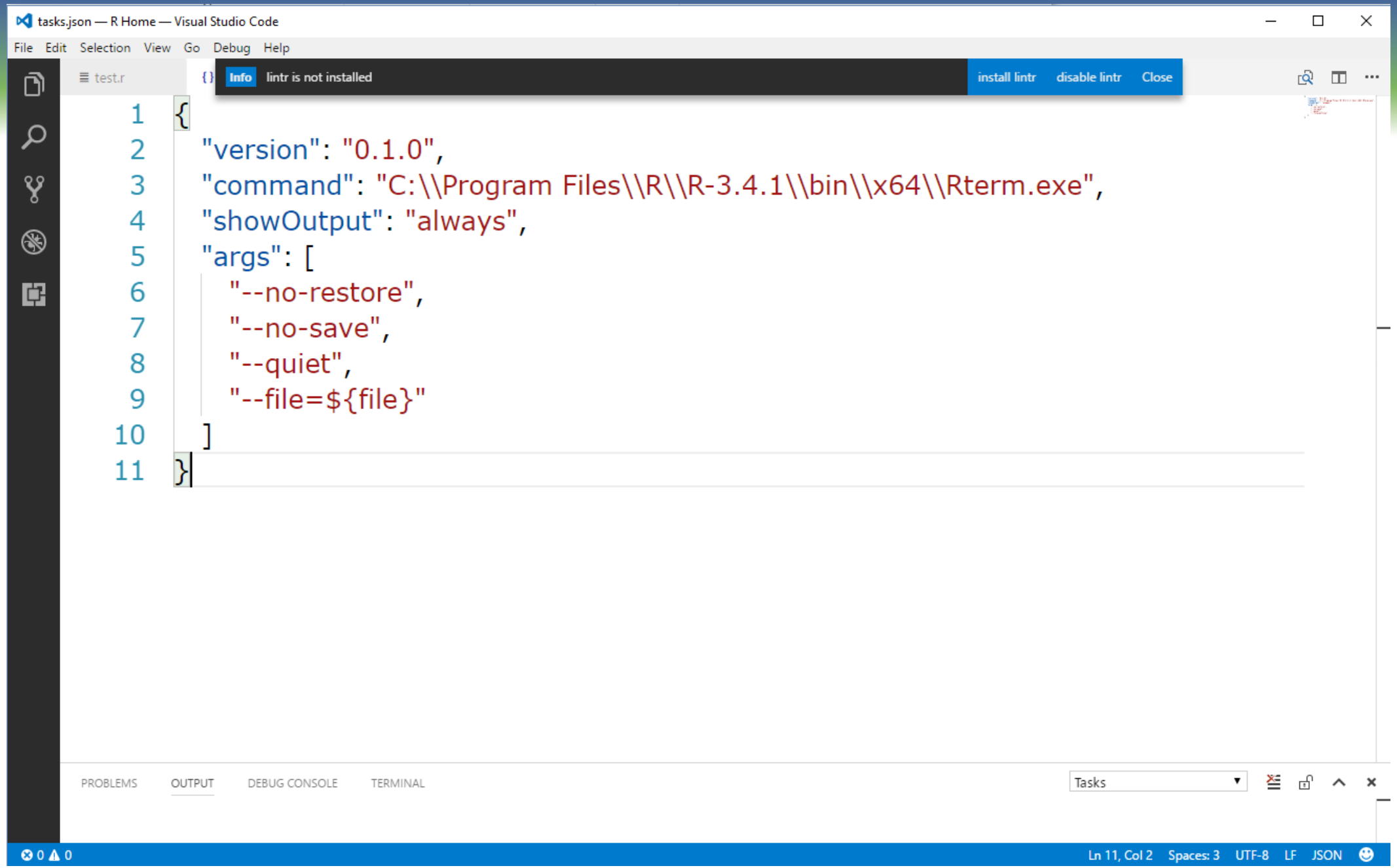

test.r — R Home — Visual Studio Code
File Edit Selection View Go Debug Help
EXTENSIONS
R
R 0.3.8
Support for R langua ge(run,syntax,s...
Yuki Ueda
Reload
Reload to activate
r-vscode-tools 0.0.3
An extension for simple R tas
hkumar6
r-check 0.0.1
An extension to perform R CMD ch...
hkumar6
Install
Structured Text (B&R) 1.1.1
Support for B&R ST Language
Florent Uguet
Install
Code Runner 0.6.24
Run code for C, C++, Java, JS, PHP, ...
Jun Han
Install
Language Support for Java(... 0.7.0
Language Support for Java(TM) for ...
Red Hat
Install
REST Client 0.14.6
REST Client for Visual Studio Code
Huachao Mao
Install
React Native Tools 0.3.2
Code-hinting, debugging and integ...
Visual Studio Mobile Tools
Install
Ruby 0.12.1
Provides Ruby language and debug...
Peng Lv
Install
Reactjs code snippets 1.4.0
Code snippets for Reactjs developm...
charalampos karypidis
Install
test.r
1 print("Hello, World")
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL
Tasks
0 0
Ln 1, Col 22 Spaces: 3 UTF-8 CRLF R

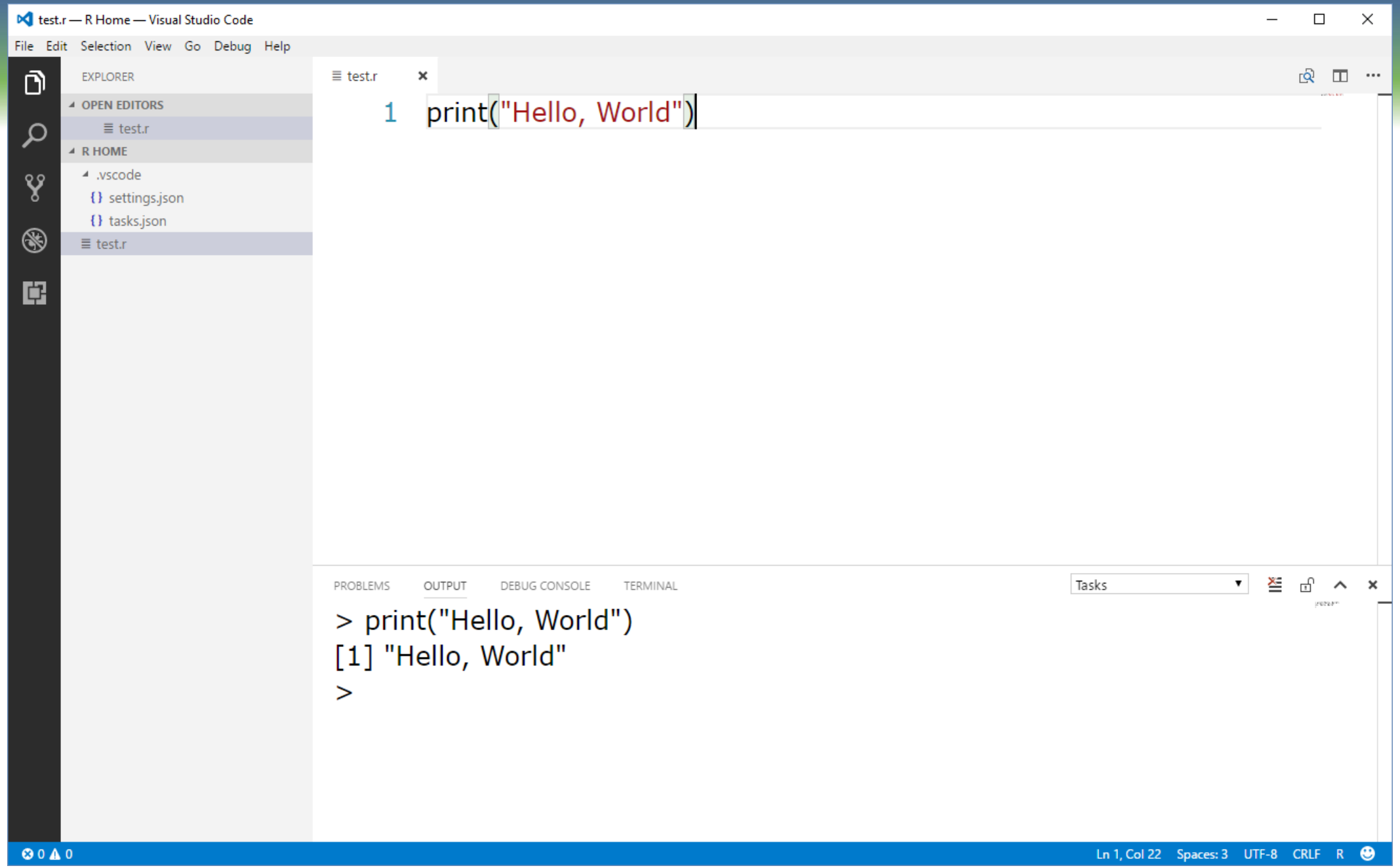

test.r — R Home — Visual Studio Code
File Edit Selection View Go Debug Help
EXTENSIONS
R
R 0.3.8
Support for R language(run,syntax,s...
Yuki Ueda
Reload
r-vscode-tools 0.0.3
An extension for simple R tasks
hkumar6
Install
r-check 0.0.1
An extension to perform R CMD ch...
hkumar6
Install
Structured Text (B&R) 1.1.1
Support for B&R ST Language
Florent Uguet
Install
Code Runner 0.6.24
Run code for C, C++, Java, JS, PHP, ...
Jun Han
Install
Language Support for Java(... 0.7.0
Language Support for Java(TM) for ...
Red Hat
Install
REST Client 0.14.6
REST Client for Visual Studio Code
Huachao Mao
Install
React Native Tools 0.3.2
Code-hinting, debugging and integ...
Visual Studio Mobile Tools
Install
Ruby 0.12.1
Provides Ruby language and debug...
Peng Lv
Install
Reactjs code snippets 1.4.0
Code snippets for Reactjs developm...
charalampos karypidis
Install
test.r
1 print("Hello, World")
Visual Studio Code
Reload this window to activate the extension 'R'?
Reload Window
Cancel
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL
Tasks
0 0
Ln 1, Col 22 Spaces: 3 UTF-8 CRLF R

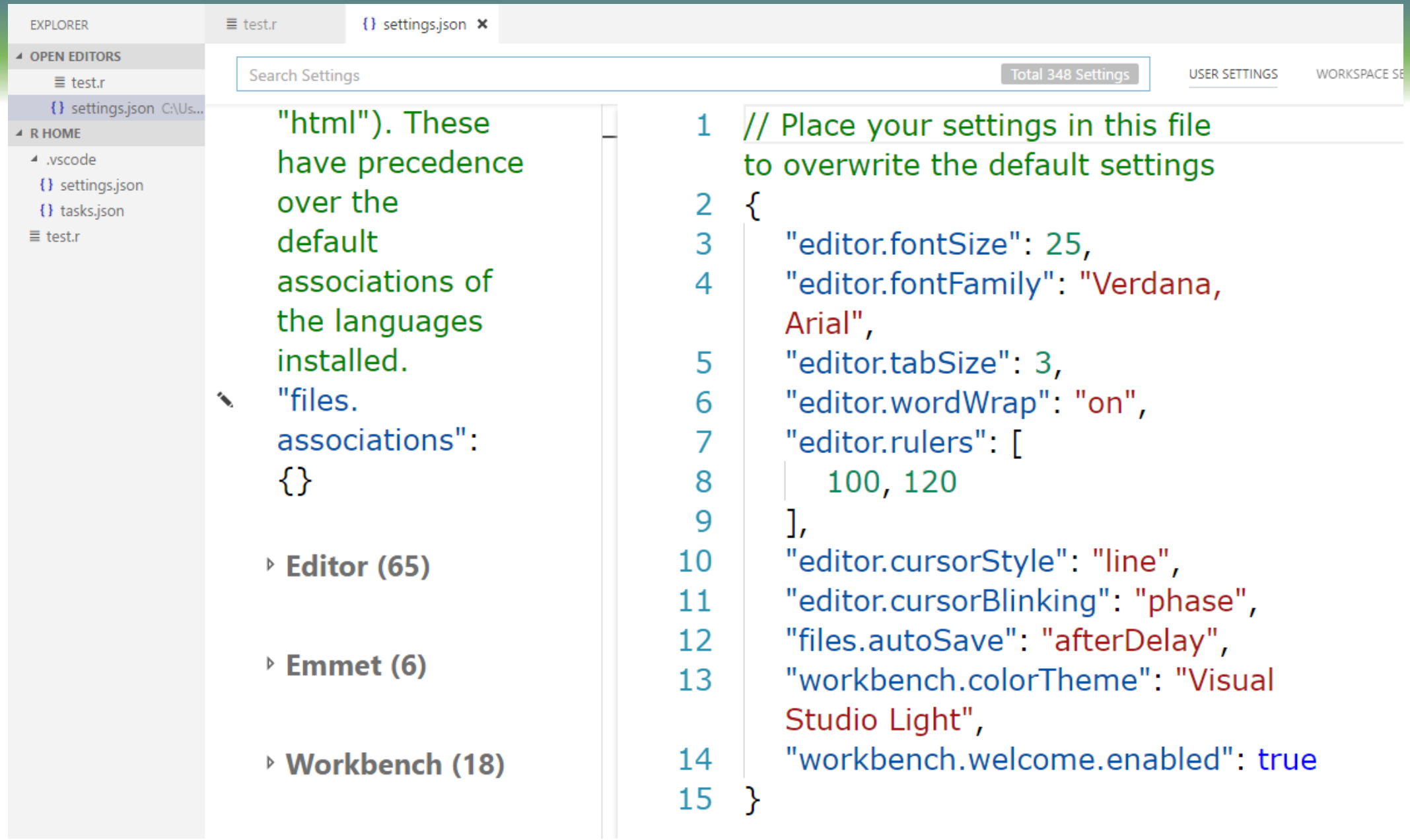

test.r — R Home — Visual Studio Code
File Edit Selection View Go Debug Help
Command Palette... Ctrl+Shift+P
Explorer Ctrl+Shift+E
Search Ctrl+Shift+F
SCM Ctrl+Shift+G
Debug Ctrl+Shift+D
Extensions Ctrl+Shift+X
Output Ctrl+Shift+U
Problems Ctrl+Shift+M
Debug Console Ctrl+Shift+Y
Integrated Terminal Ctrl+`
Toggle Full Screen F11
Toggle Zen Mode [Ctrl+K Z]
Toggle Menu Bar
Split Editor Ctrl+\
Toggle Editor Group Layout Alt+Shift+1
Move Side Bar Right
Toggle Side Bar Ctrl+B
Toggle Panel Ctrl+J
Hide Status Bar
Hide Activity Bar
Toggle Word Wrap Alt+Z
Toggle Render Whitespace
Toggle Control Characters
Zoom In Ctrl+=
Zoom Out Ctrl+-
Reset Zoom [Ctrl+NumPad0]
EXPLORER
OPEN EDIT
test
R HOME
test.r
rint("Hello, World")
DEBUG CONSOLE
TERMINAL
Tasks
Ln 1, Col 22 Spaces: 3 UTF-8 CRLF R


test.r — R Home — Visual Studio Code
File Edit Selection View Go Debug Help
EXPLORER
OPEN EDITORS
test.r
R HOME
test.r
>task
Tasks: Configure Task Runner
Tasks: Run Build Task Ctrl+Shift+B
Tasks: Run Task
Tasks: Run Test Task
Tasks: Show Task Log
Tasks: Terminate Running Task
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL
Tasks
0 0
Ln 1, Col 22 Spaces: 3 UTF-8 CRLF R


test.r — R Home — Visual Studio Code
File Edit Selection View Go Debug Help
EXPLORER
OPEN EDITORS
test.r
R HOME
test.r
Select a Task Runner
Grunt
Gulp
MSBuild Executes the build target
maven Executes common maven commands
.NET Core Executes .NET Core build command
npm
TypeScript - tsconfig.json Compiles a TypeScript project
Others Example to run an arbitrary external command
Example to run an arbitrary external command
PROBLEMS
OUTPUT
DEBUG CONSOLE
TERMINAL
Tasks
0 0
Ln 1, Col 22
Spaces: 3
UTF-8
CRLF
R

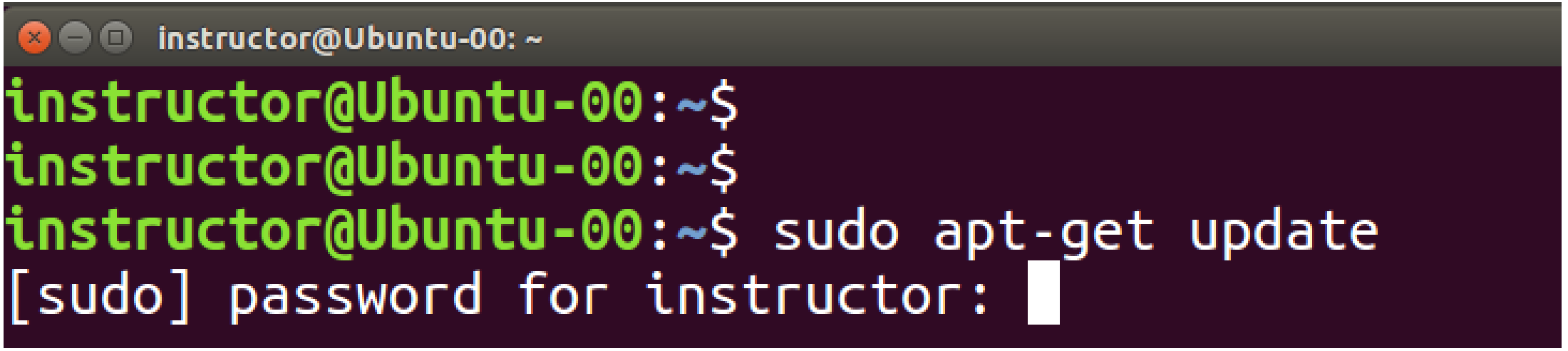

tasks.json — R Home — Visual Studio Code
File Edit Selection View Go Debug Help
test.r
Info lintr is not installed
install lintr
disable lintr
Close
{
"version": "0.1.0",
"command": "C:\\Program Files\\R\\R-3.4.1\\bin\\x64\\Rterm.exe",
"showOutput": "always",
"args": [
"--no-restore",
"--no-save",
"--quiet",
"--file=${file}"
]
}
PROBLEMS
OUTPUT
DEBUG CONSOLE
TERMINAL
Tasks
0 0
Ln 11, Col 2
Spaces: 3
UTF-8
LF
JSON


test.r — R Home — Visual Studio Code
File Edit Selection View Go Debug Help
EXPLORER
OPEN EDITORS
test.r
R HOME
.vscode
settings.json
tasks.json
test.r
test.r
1 print("Hello, World")
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL
Tasks
> print("Hello, World")
[1] "Hello, World"
>
0 0
Ln 1, Col 22 Spaces: 3 UTF-8 CRLF R


EXPLORER
test.r
settings.json
OPEN EDITORS
test.r
settings.json C:\Us...
R HOME
.vscode
settings.json
tasks.json
test.r
Search Settings
Total 348 Settings
USER SETTINGS
WORKSPACE SE
"html"). These have precedence over the default associations of the languages installed.
"files.associations": {}
Editor (65)
Emmet (6)
Workbench (18)
1 // Place your settings in this file to overwrite the default settings
2 {
3 "editor.fontSize": 25,
4 "editor.fontFamily": "Verdana, Arial",
5 "editor.tabSize": 3,
6 "editor.wordWrap": "on",
7 "editor.rulers": [
8 100, 120
9],
10 "editor.cursorStyle": "line",
11 "editor.cursorBlinking": "phase",
12 "files.autoSave": "afterDelay",
13 "workbench.colorTheme": "Visual Studio Light",
14 "workbench.welcome.enabled": true
15 }

Installation R on Ubuntu 16.04 LTS

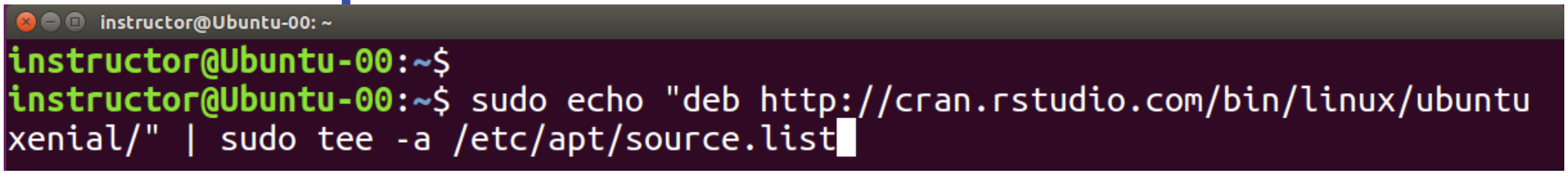
1. apt-get update

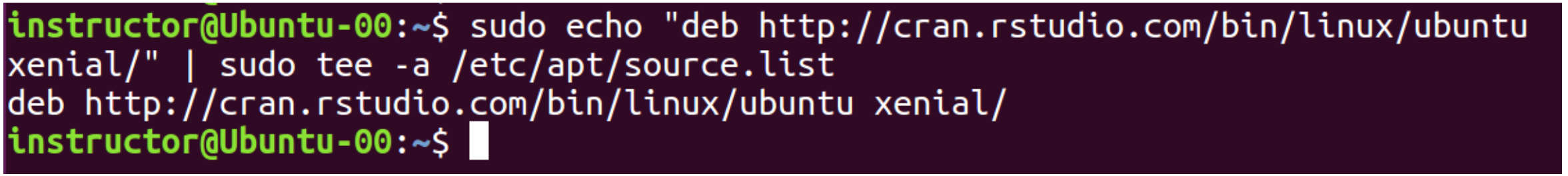


Installation R on Ubuntu 16.04 LTS (Cont.)

2. Add R repository

$ sudo echo "deb http://cran.rstudio.com/bin/linux/ubuntu xenial/" | sudo tee -a /etc/apt/sources.list





Installation R on Ubuntu 16.04 LTS (Cont.)

3. Add R to Ubuntu Keyring

$ gpg --keyserver keyserver.ubuntu.com --recv-key E084DAB9

```
instructor@Ubuntu-00:~$
instructor@Ubuntu-00:~$ gpg --keyserver keyserver.ubuntu.com --recv-key E084DAB9
```

```
instructor@Ubuntu-00:~$ gpg --keyserver keyserver.ubuntu.com --recv-key E084DAB9
gpg: keyring `/home/instructor/.gnupg/secring.gpg' created
gpg: keyring `/home/instructor/.gnupg/pubring.gpg' created
gpg: requesting key E084DAB9 from hkp server keyserver.ubuntu.com
gpg: /home/instructor/.gnupg/trustdb.gpg: trustdb created
gpg: key E084DAB9: public key "Michael Rutter <marutter@gmail.com>" imported
gpg: Total number processed: 1
gpg:               imported: 1  (RSA: 1)
instructor@Ubuntu-00:~$
```

Installation R on Ubuntu 16.04 LTS (Cont.)

4. Add R to Ubuntu Keyring

$ gpg -a --export E084DAB9 | sudo apt-key add -

```
instructor@Ubuntu-00:~$
instructor@Ubuntu-00:~$ gpg -a --export E084DAB9 | sudo apt-key add -
```

```
instructor@Ubuntu-00:~$
instructor@Ubuntu-00:~$ gpg -a --export E084DAB9 | sudo apt-key add -
OK
instructor@Ubuntu-00:~$
```

Installation R on Ubuntu 16.04 LTS (Cont.)

5. Install R-Base

$ sudo apt-get update

```
instructor@Ubuntu-00:~$
instructor@Ubuntu-00:~$ sudo apt-get update
```

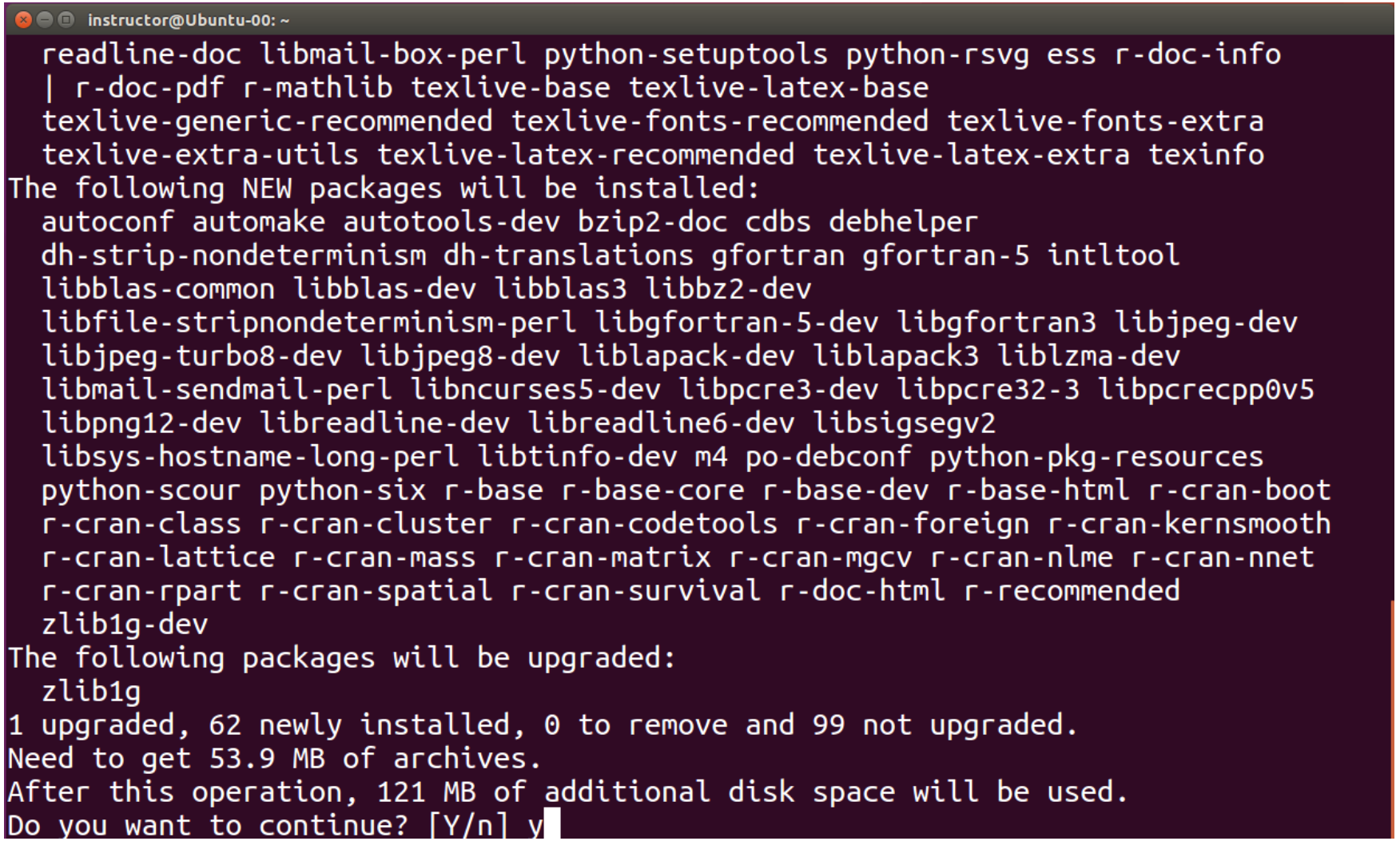
Installation R on Ubuntu 16.04 LTS (Cont.)

5. Install R-Base

$ sudo apt-get install r-base r-base-dev

```
instructor@Ubuntu-00:~$
instructor@Ubuntu-00:~$ sudo apt-get install r-base r-base-dev
```

Installation R on Ubuntu 16.04 LTS (Cont.)



Installation R on Ubuntu 16.04 LTS (Cont.)

6. Installing R-Studio

$ sudo apt-get install gdebi-core

```
instructor@Ubuntu-00:~$
instructor@Ubuntu-00:~$ sudo apt-get install gdebi-core
```

Installation R on Ubuntu 16.04 LTS (Cont.)

```
Reading state information... Done
The following packages were automatically installed and are no longer required:
  linux-headers-4.8.0-45 linux-headers-4.8.0-45-generic linux-headers-4.8.0-46
  linux-headers-4.8.0-46-generic linux-headers-4.8.0-49
  linux-headers-4.8.0-49-generic linux-image-4.8.0-45-generic
  linux-image-4.8.0-46-generic linux-image-4.8.0-49-generic
  linux-image-extra-4.8.0-45-generic linux-image-extra-4.8.0-46-generic
  linux-image-extra-4.8.0-49-generic
Use 'sudo apt autoremove' to remove them.
The following NEW packages will be installed:
  gdebi-core
0 upgraded, 1 newly installed, 0 to remove and 99 not upgraded.
Need to get 9,716 B of archives.
After this operation, 135 kB of additional disk space will be used.
Get:1 http://kr.archive.ubuntu.com/ubuntu xenial/main amd64 gdebi-core all 0.9.5.7
ubuntu1 [9,716 B]
Fetched 9,716 B in 0s (119 kB/s)
Selecting previously unselected package gdebi-core.
(Reading database ... 326226 files and directories currently installed.)
Preparing to unpack .../gdebi-core_0.9.5.7ubuntu1_all.deb ...
Unpacking gdebi-core (0.9.5.7ubuntu1) ...
Processing triggers for man-db (2.7.5-1) ...
Setting up gdebi-core (0.9.5.7ubuntu1) ...
instructor@Ubuntu-00:~$
```

Installation R on Ubuntu 16.04 LTS (Cont.)

6. Installing R-Studio

$ wget https://download1.rstudio.org/rstudio-1.0.143-amd64.deb

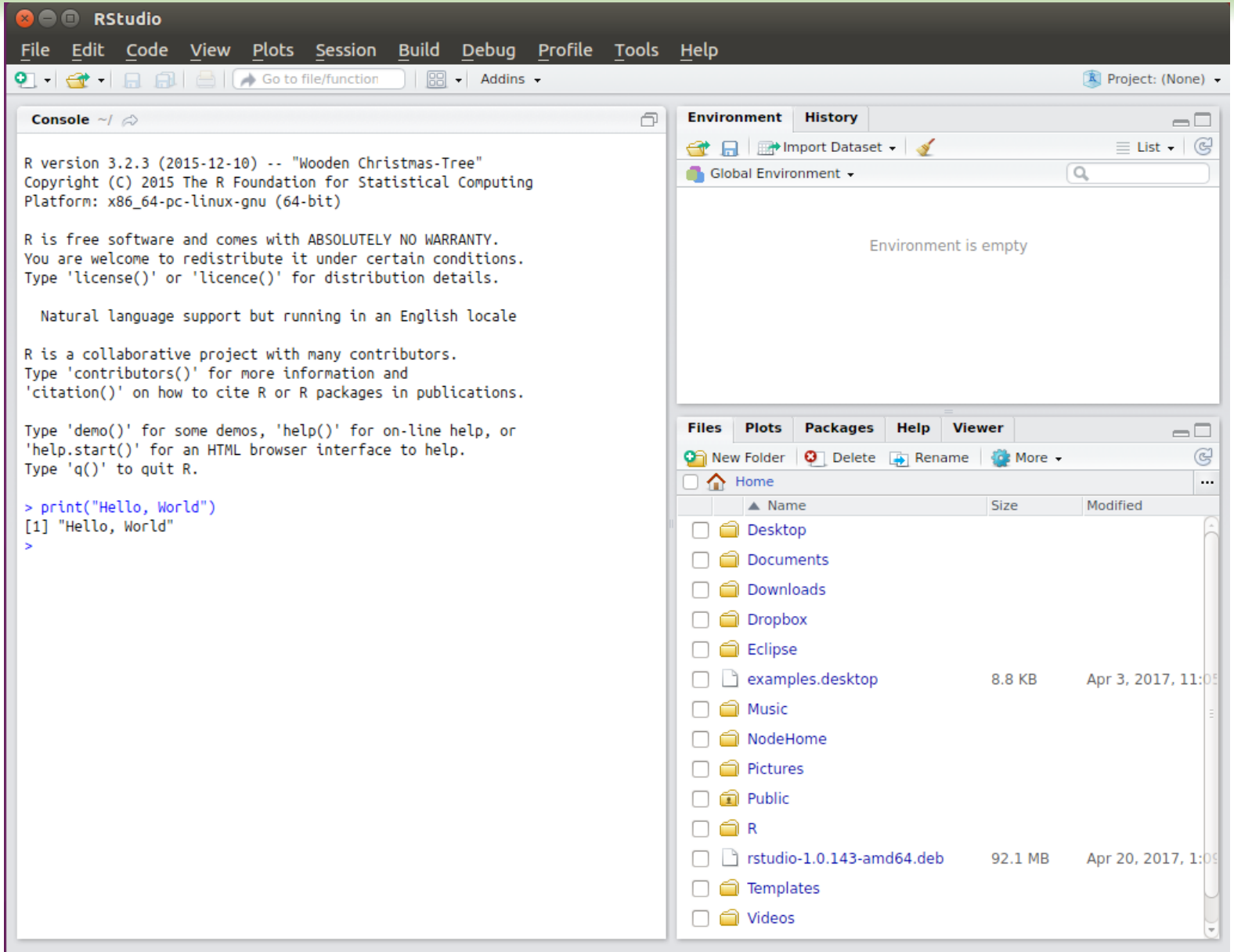
```
instructor@Ubuntu-00:~$
instructor@Ubuntu-00:~$ wget https://download1.rstudio.org/rstudio-1.0.143-amd64.deb
```

```
instructor@Ubuntu-00:~$ wget https://download1.rstudio.org/rstudio-1.0.143-amd64.deb
--2017-07-04 17:32:57--  https://download1.rstudio.org/rstudio-1.0.143-amd64.deb
Resolving download1.rstudio.org (download1.rstudio.org)... 54.230.249.193, 54.230.249.51,
54.230.249.203, ...
Connecting to download1.rstudio.org (download1.rstudio.org)|54.230.249.193|:443... connect
ed.
HTTP request sent, awaiting response... 200 OK
Length: 96607276 (92M) [application/x-deb]
Saving to: ‘rstudio-1.0.143-amd64.deb’

rstudio-1.0.143-amd64. 100%[=========================>]  92.13M  58.5MB/s    in 1.6s

2017-07-04 17:32:58 (58.5 MB/s) - ‘rstudio-1.0.143-amd64.deb’ saved [96607276/96607276]

instructor@Ubuntu-00:~$
```

Installation R on Ubuntu 16.04 LTS (Cont.)

6. Installing R-Studio

$ sudo gdebi -n rstudio-0.99.896-amd64.deb

```
instructor@Ubuntu-00:~$ ls
Desktop    Dropbox            Music     Public                        Videos
Documents  Eclipse            NodeHome  rstudio-1.0.143-amd64.deb     WebHome
Downloads  examples.desktop    Pictures  Templates
instructor@Ubuntu-00:~$ sudo gdebi -n rstudio-1.0.143-amd64.deb
```

Installation R on Ubuntu 16.04 LTS (Cont.)