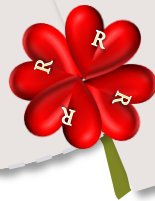


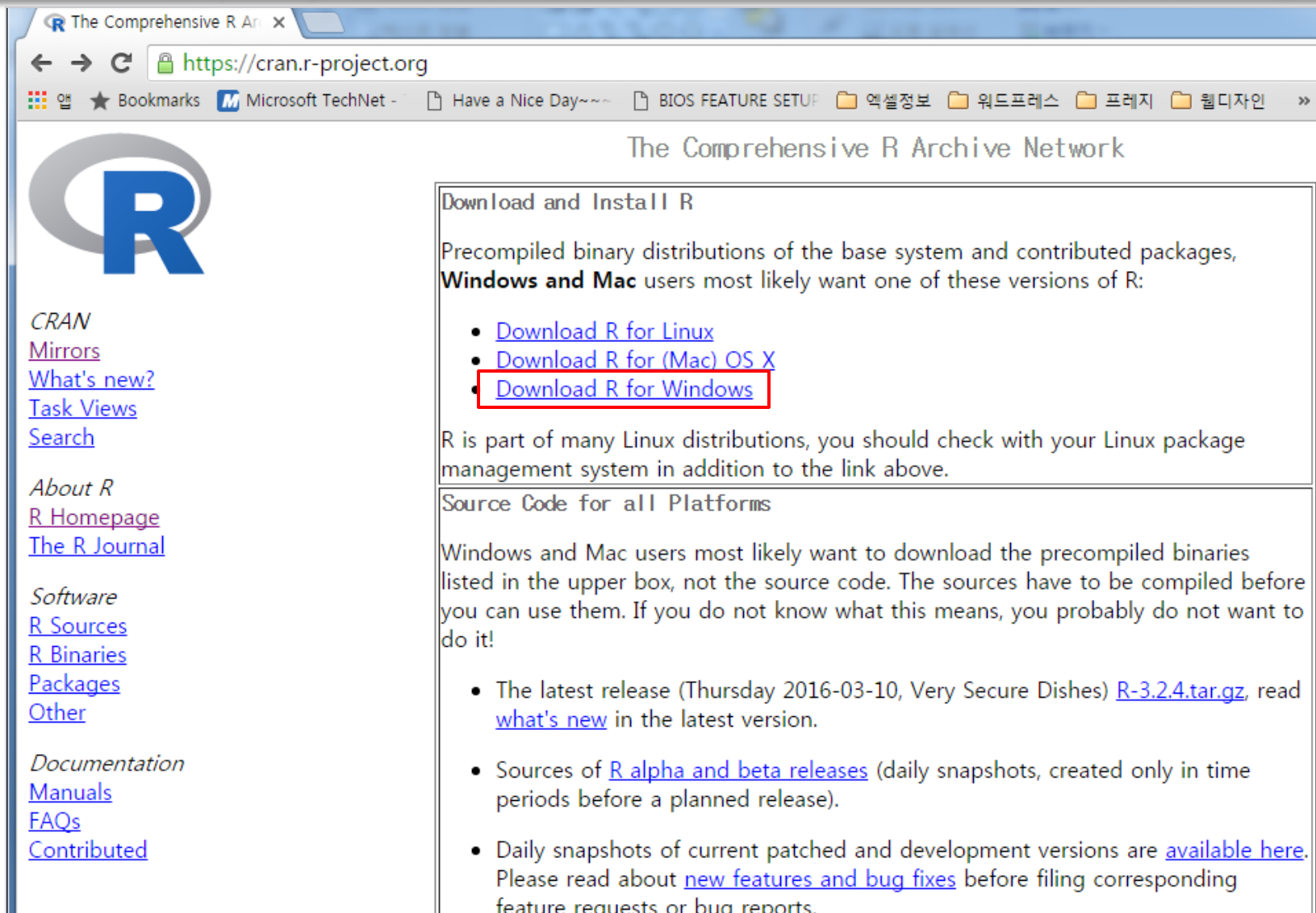
2.R설치

r 프로그램을 배우기 위해서 우리 컴퓨터에 r을
설치하고 작업환경을 설정합니다. 실행방법도 학습해요



1. R 프로그램 설치

<https://cran.r-project.org> 에 접속하여 그림처럼 “download R for windows” 클릭하여 다운로드 합니다.



The screenshot shows the CRAN website with the following content:

The Comprehensive R Archive Network

Download and Install R

Precompiled binary distributions of the base system and contributed packages, **Windows and Mac** users most likely want one of these versions of R:

- [Download R for Linux](#)
- [Download R for \(Mac\) OS X](#)
- [Download R for Windows](#)

R is part of many Linux distributions, you should check with your Linux package management system in addition to the link above.

Source Code for all Platforms

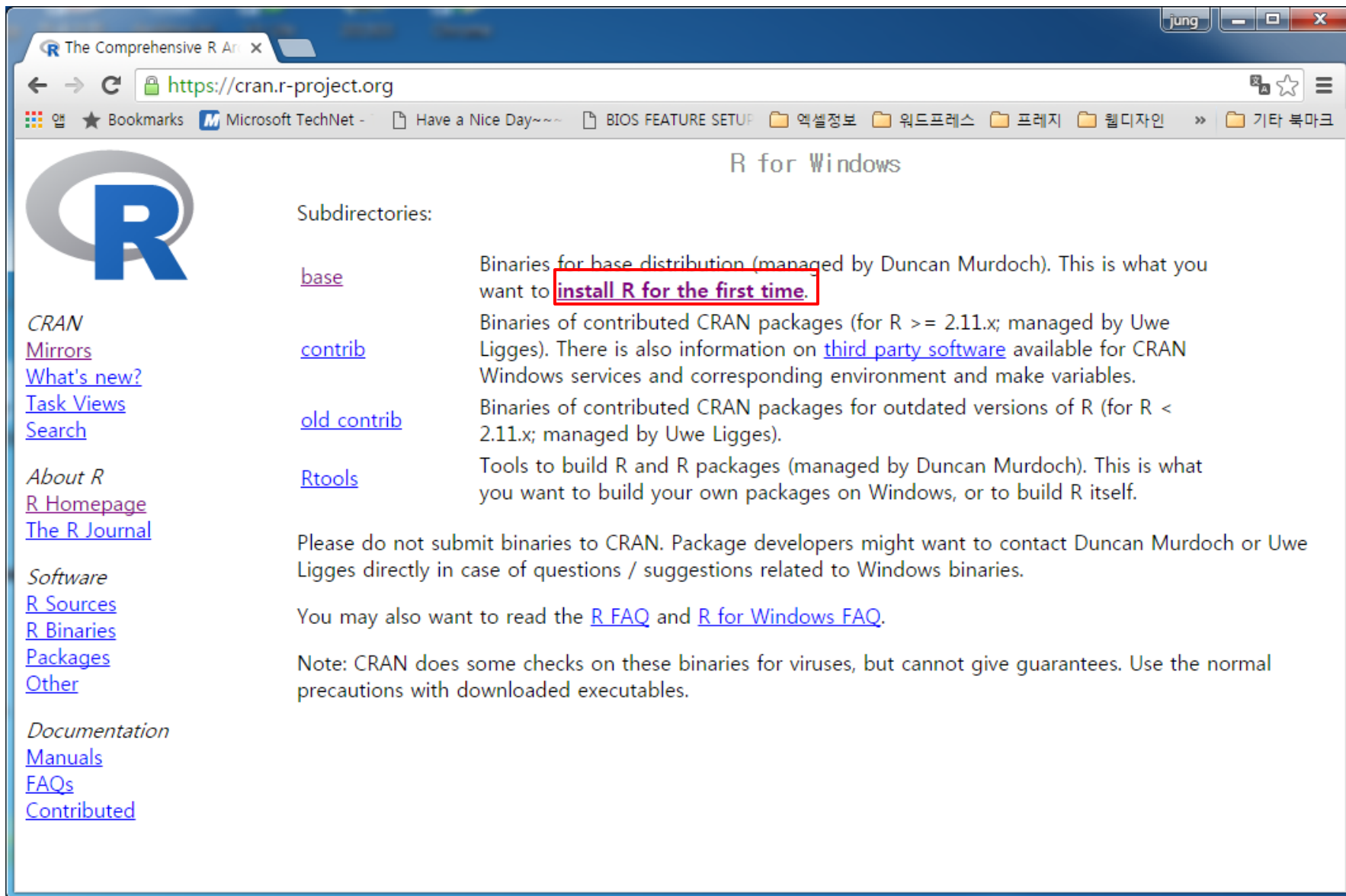
Windows and Mac users most likely want to download the precompiled binaries listed in the upper box, not the source code. The sources have to be compiled before you can use them. If you do not know what this means, you probably do not want to do it!

- The latest release (Thursday 2016-03-10, Very Secure Dishes) [R-3.2.4.tar.gz](#), read [what's new](#) in the latest version.
- Sources of [R alpha and beta releases](#) (daily snapshots, created only in time periods before a planned release).
- Daily snapshots of current patched and development versions are [available here](#). Please read about [new features and bug fixes](#) before filing corresponding feature requests or bug reports.

Left sidebar navigation:

- CRAN
- [Mirrors](#)
- [What's new?](#)
- [Task Views](#)
- [Search](#)
- About R
 - [R Homepage](#)
 - [The R Journal](#)
- Software
 - [R Sources](#)
 - [R Binaries](#)
 - [Packages](#)
 - [Other](#)
- Documentation
 - [Manuals](#)
 - [FAQs](#)
 - [Contributed](#)

R 윈도우용 프로그램 페이지에서 base "install R for the first time" 클릭합니다.



The screenshot shows a web browser window with the address bar displaying <https://cran.r-project.org>. The page title is "R for Windows". The main content area lists subdirectories: [base](#), [contrib](#), [old contrib](#), and [Rtools](#). The [base](#) link is highlighted with a red box, and the text "install R for the first time" is written inside it. The page also includes a sidebar with links to CRAN resources, a disclaimer about submitting binaries, and a note about virus checks.

R for Windows

Subdirectories:

- [base](#): Binaries for base distribution (managed by Duncan Murdoch). This is what you want to **install R for the first time.**
- [contrib](#): Binaries of contributed CRAN packages (for R \geq 2.11.x; managed by Uwe Ligges). There is also information on [third party software](#) available for CRAN Windows services and corresponding environment and make variables.
- [old contrib](#): Binaries of contributed CRAN packages for outdated versions of R (for R $<$ 2.11.x; managed by Uwe Ligges).
- [Rtools](#): Tools to build R and R packages (managed by Duncan Murdoch). This is what you want to build your own packages on Windows, or to build R itself.

Please do not submit binaries to CRAN. Package developers might want to contact Duncan Murdoch or Uwe Ligges directly in case of questions / suggestions related to Windows binaries.

You may also want to read the [R FAQ](#) and [R for Windows FAQ](#).

Note: CRAN does some checks on these binaries for viruses, but cannot give guarantees. Use the normal precautions with downloaded executables.

CRAN
[Mirrors](#)
[What's new?](#)
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[R Homepage](#)
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[FAQs](#)
[Contributed](#)

R 프로그램을 클릭하여 다운로드 합니다.(현재 제가 강의하는 시점에서 최신버전은 3.2.4 입니다. 계속 업데이트가 진행될 거 예요.)



CRAN

[Mirrors](#)

[What's new?](#)

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About R

[R Homepage](#)

[The R Journal](#)

Software

[R Sources](#)

[R Binaries](#)

[Packages](#)

[Other](#)

Documentation

[Manuals](#)

[FAQs](#)

[Contributed](#)

R-3.2.4 for Windows (32/64 bit)

[Download R 3.2.4 for Windows](#) 62 megabytes, 32/64 bit)

[Installation and other instructions](#)

[New features in this version](#)

클릭

If you want to double-check that the package you have downloaded exactly matches the package distributed by R, you can compare the [md5sum](#) of the .exe to the [true fingerprint](#). You will need a version of md5sum for windows: both [graphical](#) and [command line versions](#) are available.

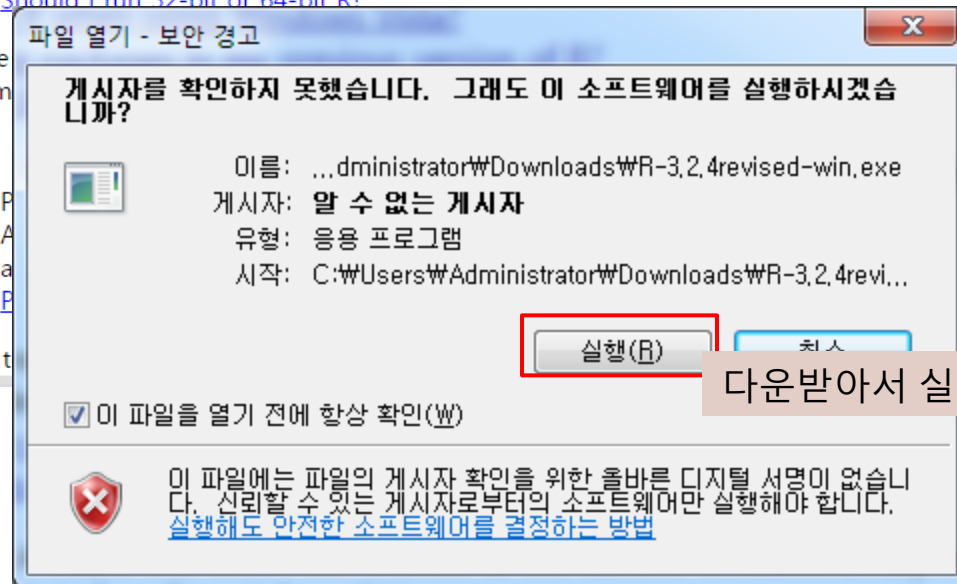
Frequently asked questions

- [How do I install R when using Windows Vista?](#)
- [How do I update packages in my previous version of R?](#)
- [Should I run 32-bit or 64-bit R?](#)

Please
inform

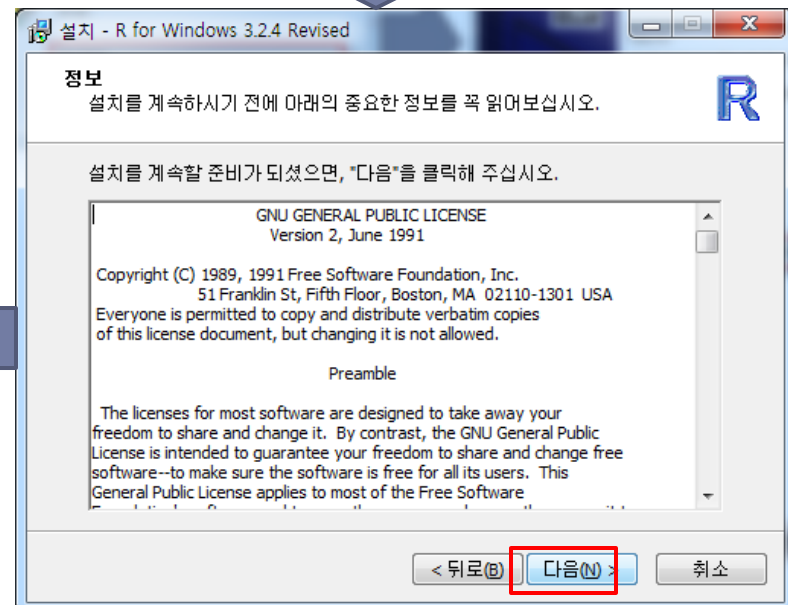
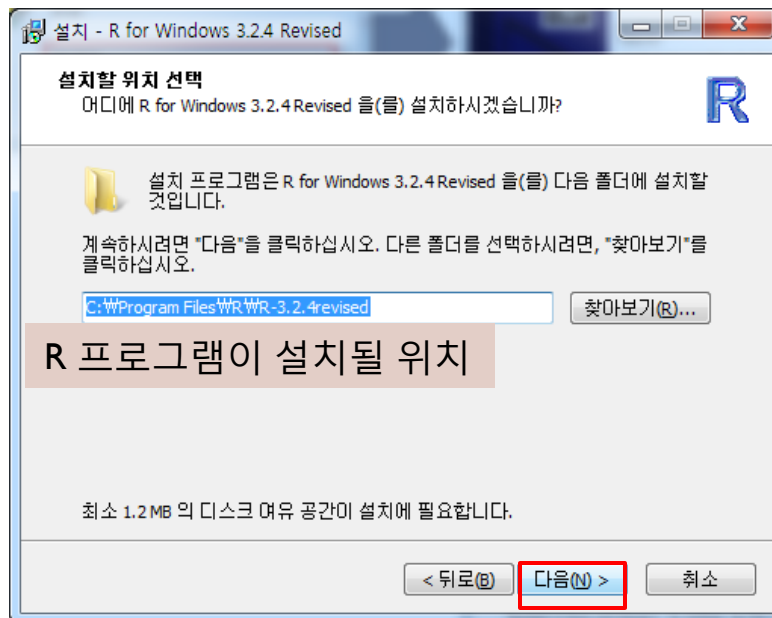
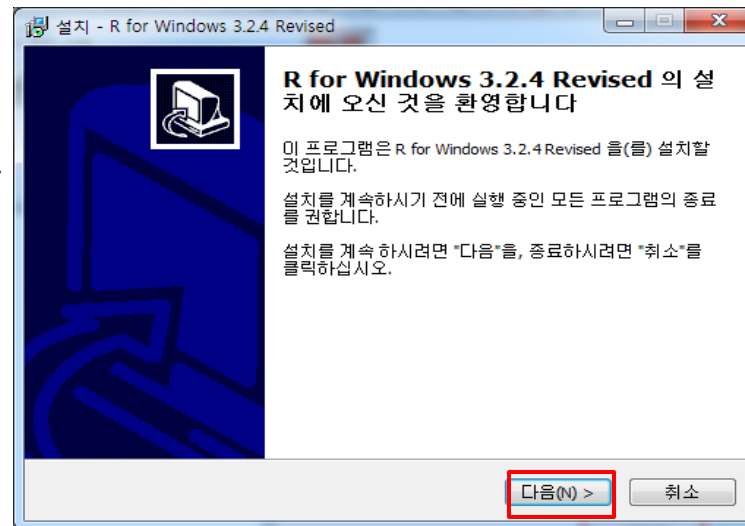
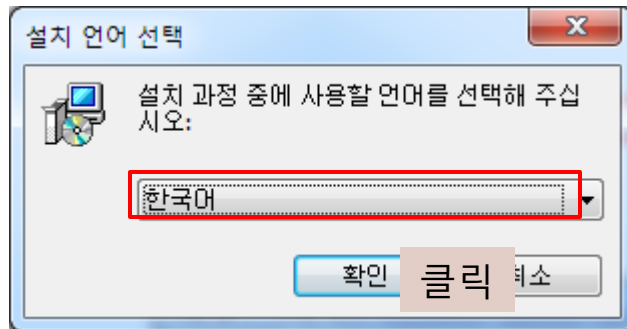
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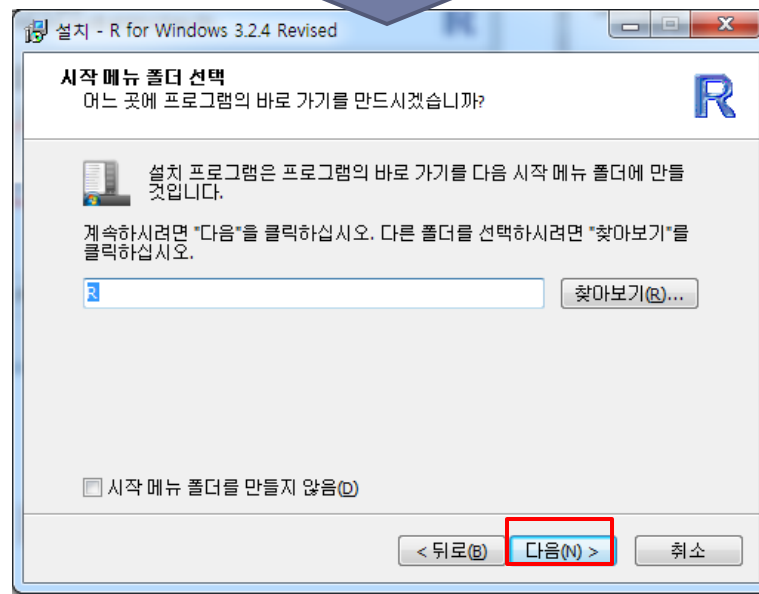
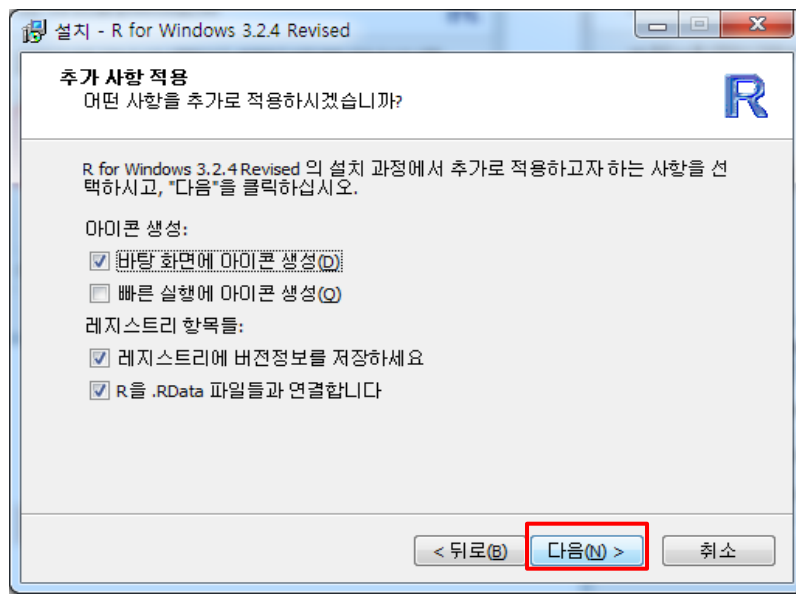
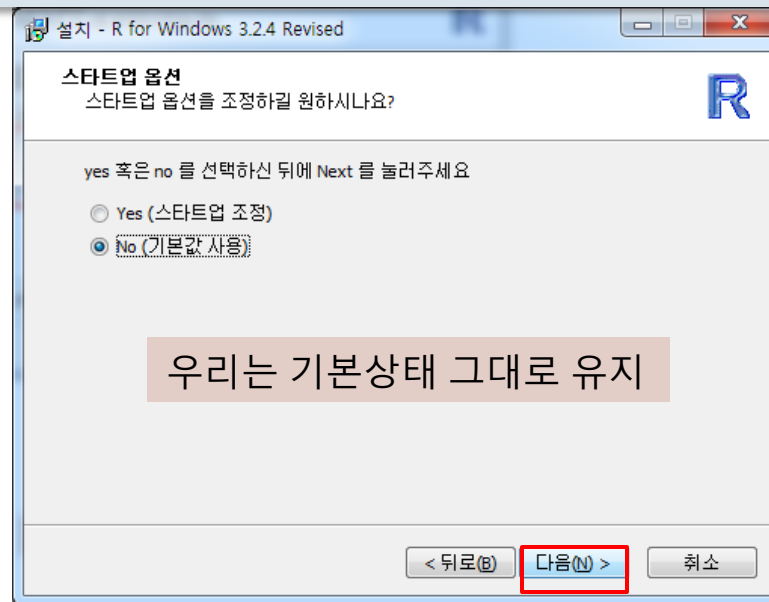
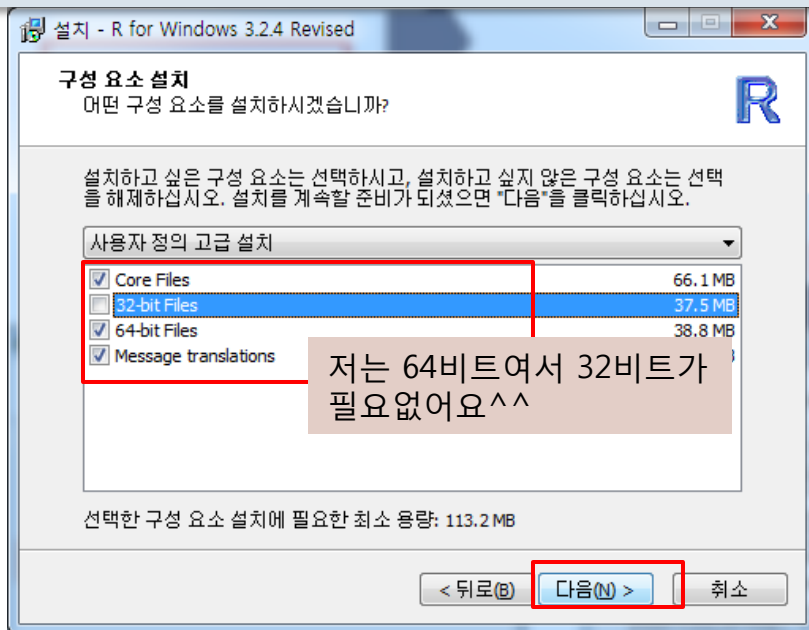


다운받아서 실행

이제 프로그램을 우리 시스템에 설치합니다. "한국어"를 선택하고 "확인" 클릭.그리고, 계속 "다음" 선택

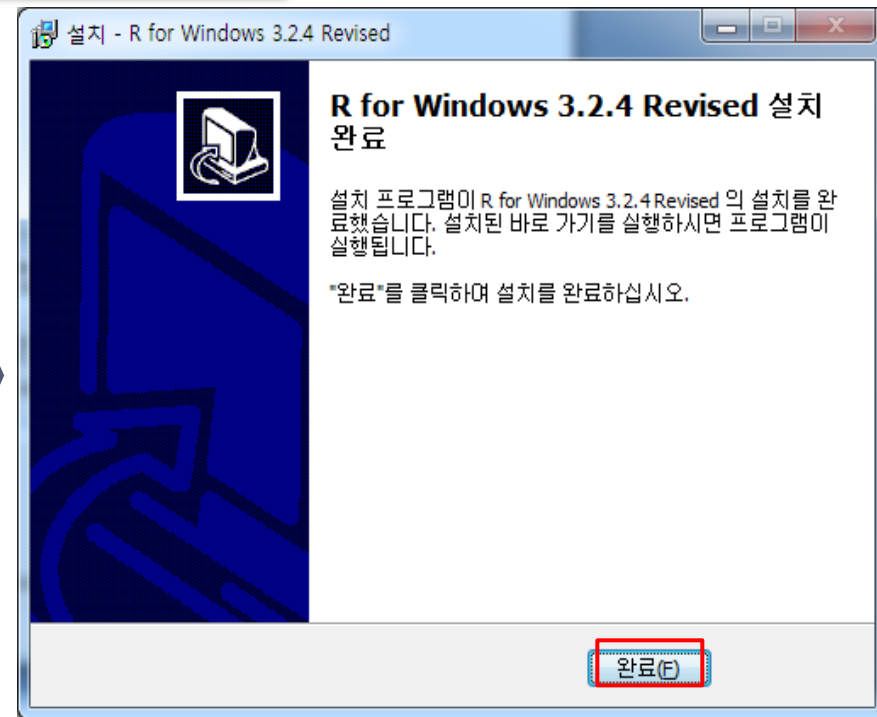
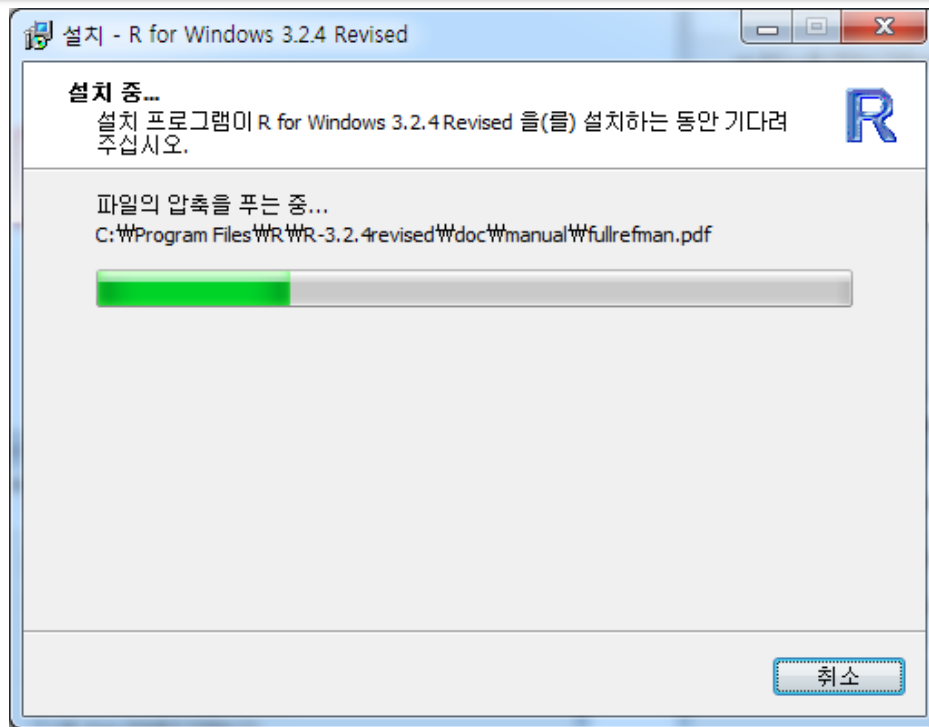


구성요소에서 여러분의 시스템이 32비트라면 "64비트"를 체크해제 하고 "다음" 그 반대라면 그림처럼 체크해제한 후 "다음"단추를 클릭합니다.






그림처럼 문제가 없다면 설치가 진행되고 설치완료 대화상자가 나타납니다.



JDK 설치하기


- _R에서 자바 프로그램과의 인터페이스를 원활하게 하기위해 JDK를 설치
- <http://www.oracle.com/technetwork/java/javase/downloads/index-jsp-138363.html> 링크로 이동

Java SE Downloads



DOWNLOAD

Java Platform (JDK) 8u73 / 8u74



DOWNLOAD

NetBeans with JDK 8

Java Platform, Standard Edition

Java SE 8u73 / 8u74
Java SE 8u73 includes important security fixes. Oracle strongly recommends that all Java SE 8 users upgrade to this release. Java SE 8u74 is a patch-set update, including all of 8u73 plus additional features (described in the release notes).
[Learn more](#)

- Installation Instructions
- Release Notes
- Oracle License
- Java SE Products
- Third Party Licenses
- Certified System Configurations
- Readme Files
 - JDK ReadMe
 - JRE ReadMe

JDK
DOWNLOAD

Server JRE
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JRE
DOWNLOAD

- [Java EE and Glassfish](#)
- [Java ME](#)
- [Java Card](#)
- [NetBeans IDE](#)
- [Java Mission Control](#)

Java Resources

- [Java APIs](#)
- [Technical Articles](#)
- [Demos and Videos](#)
- [Forums](#)
- [Java Magazine](#)
- [Java.net](#)
- [Developer Training](#)
- [Tutorials](#)
- [Java.com](#)

➤ 8U73 또는 8U74 중 하나를 "Accept license agreement" 체크하고 다운로드 받습니다. 윈도우 32비트이면 x86, 64비트이면 x64를 받으시면 됩니다.

Java SE Development Kit 8u73

You must accept the [Oracle Binary Code License Agreement for Java SE](#) to download this software.

Thank you for accepting the Oracle Binary Code License Agreement for Java SE; you may now download this software.

Product / File Description	File Size	Download
Linux ARM 32 Hard Float ABI	77.73 MB	jdk-8u73-linux-arm32-vfp-hflt.tar.gz
Linux ARM 64 Hard Float ABI	74.68 MB	jdk-8u73-linux-arm64-vfp-hflt.tar.gz
Linux x86	154.75 MB	jdk-8u73-linux-i586.rpm
Linux x86	174.91 MB	jdk-8u73-linux-i586.tar.gz
Linux x64	152.73 MB	jdk-8u73-linux-x64.rpm
Linux x64	172.91 MB	jdk-8u73-linux-x64.tar.gz
Mac OS X x64	227.25 MB	jdk-8u73-macosx-x64.dmg
Solaris SPARC 64-bit (SVR4 package)	139.7 MB	jdk-8u73-solaris-sparcv9.tar.Z
Solaris SPARC 64-bit	99.08 MB	jdk-8u73-solaris-sparcv9.tar.gz
Solaris x64 (SVR4 package)	140.36 MB	jdk-8u73-solaris-x64.tar.Z
Solaris x64	96.78 MB	jdk-8u73-solaris-x64.tar.gz
Windows x86	181.5 MB	jdk-8u73-windows-i586.exe
Windows x64	186.84 MB	jdk-8u73-windows-x64.exe



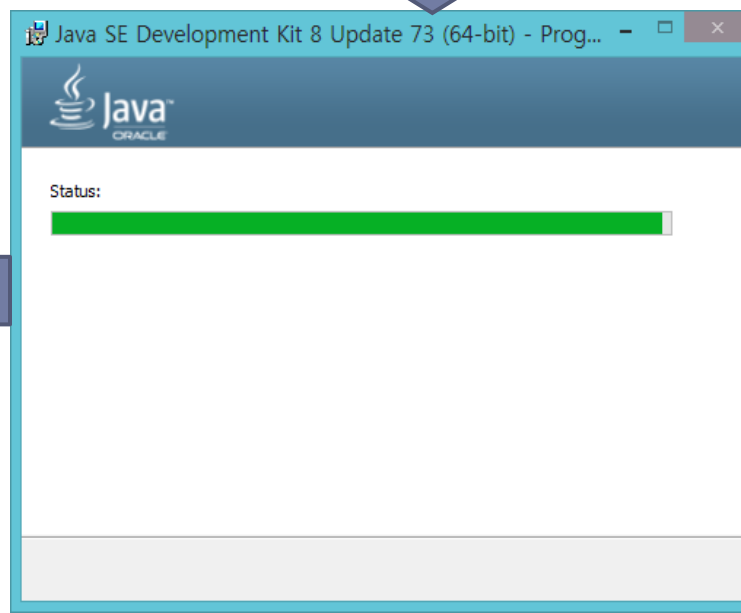
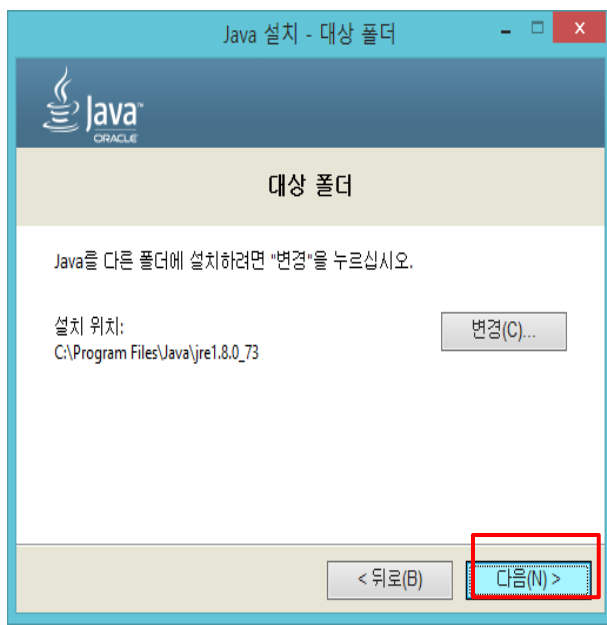
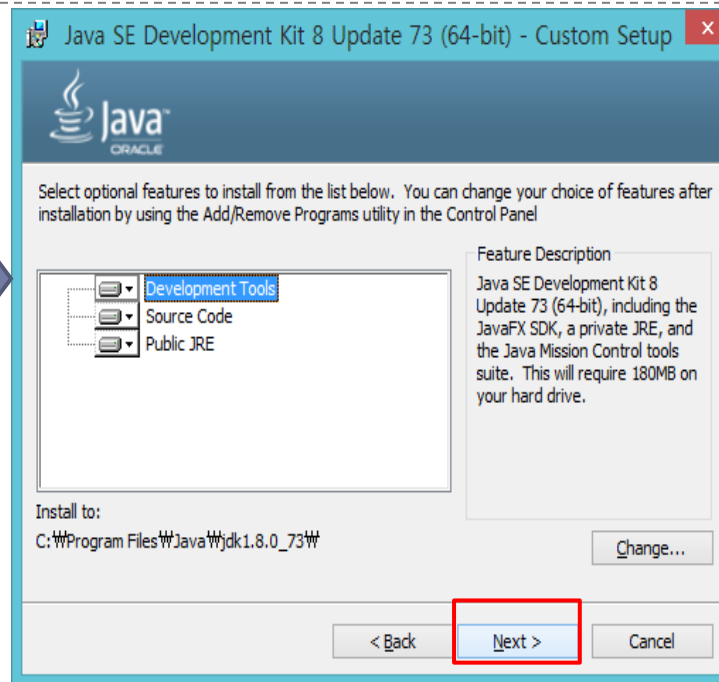
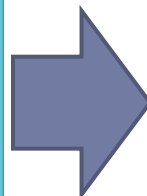
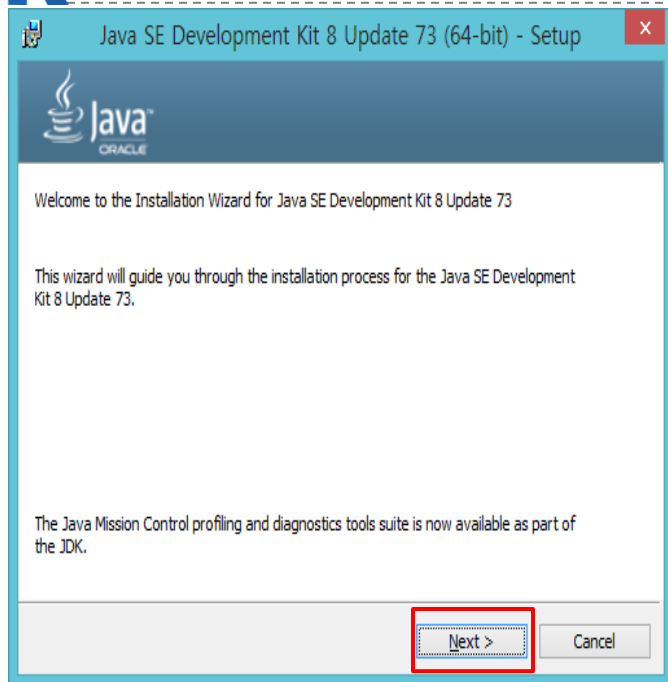
기존 응용프로그램과의
호환을 원한다면 8u73을
신버전을 원한다면 8u74
를 받으세요 ^^ (32 비트
사용자라면 WINDOWS
X86을 다운받으세요 ^^)

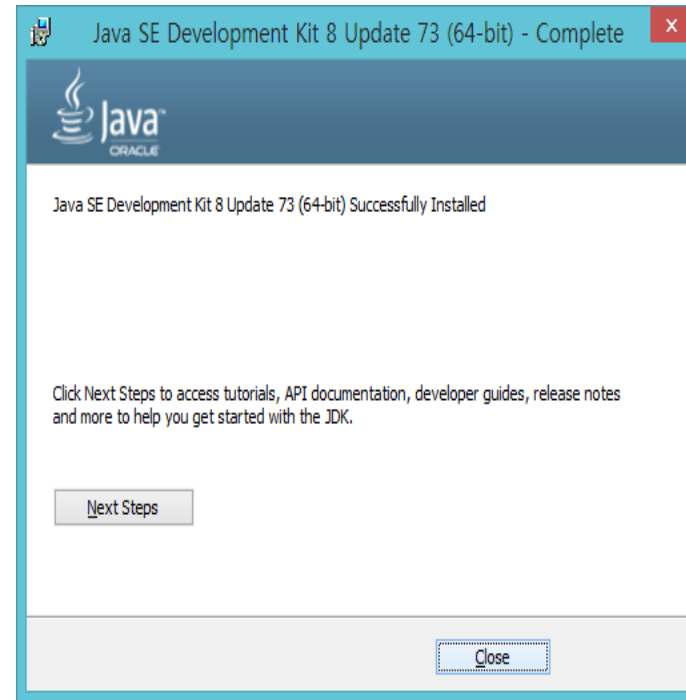
Java SE Development Kit 8u74

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Product / File Description	File Size	Download
Linux x86	154.74 MB	jdk-8u74-linux-i586.rpm
Linux x86	174.92 MB	jdk-8u74-linux-i586.tar.gz
Linux x64	152.74 MB	jdk-8u74-linux-x64.rpm
Linux x64	172.9 MB	jdk-8u74-linux-x64.tar.gz
Mac OS X x64	227.27 MB	jdk-8u74-macosx-x64.dmg
Solaris SPARC 64-bit (SVR4 package)	139.72 MB	jdk-8u74-solaris-sparcv9.tar.Z
Solaris SPARC 64-bit	99.09 MB	jdk-8u74-solaris-sparcv9.tar.gz
Solaris x64 (SVR4 package)	140.02 MB	jdk-8u74-solaris-x64.tar.Z
Solaris x64	96.19 MB	jdk-8u74-solaris-x64.tar.gz
Windows x86	182.01 MB	jdk-8u74-windows-i586.exe
Windows x64	187.31 MB	jdk-8u74-windows-x64.exe

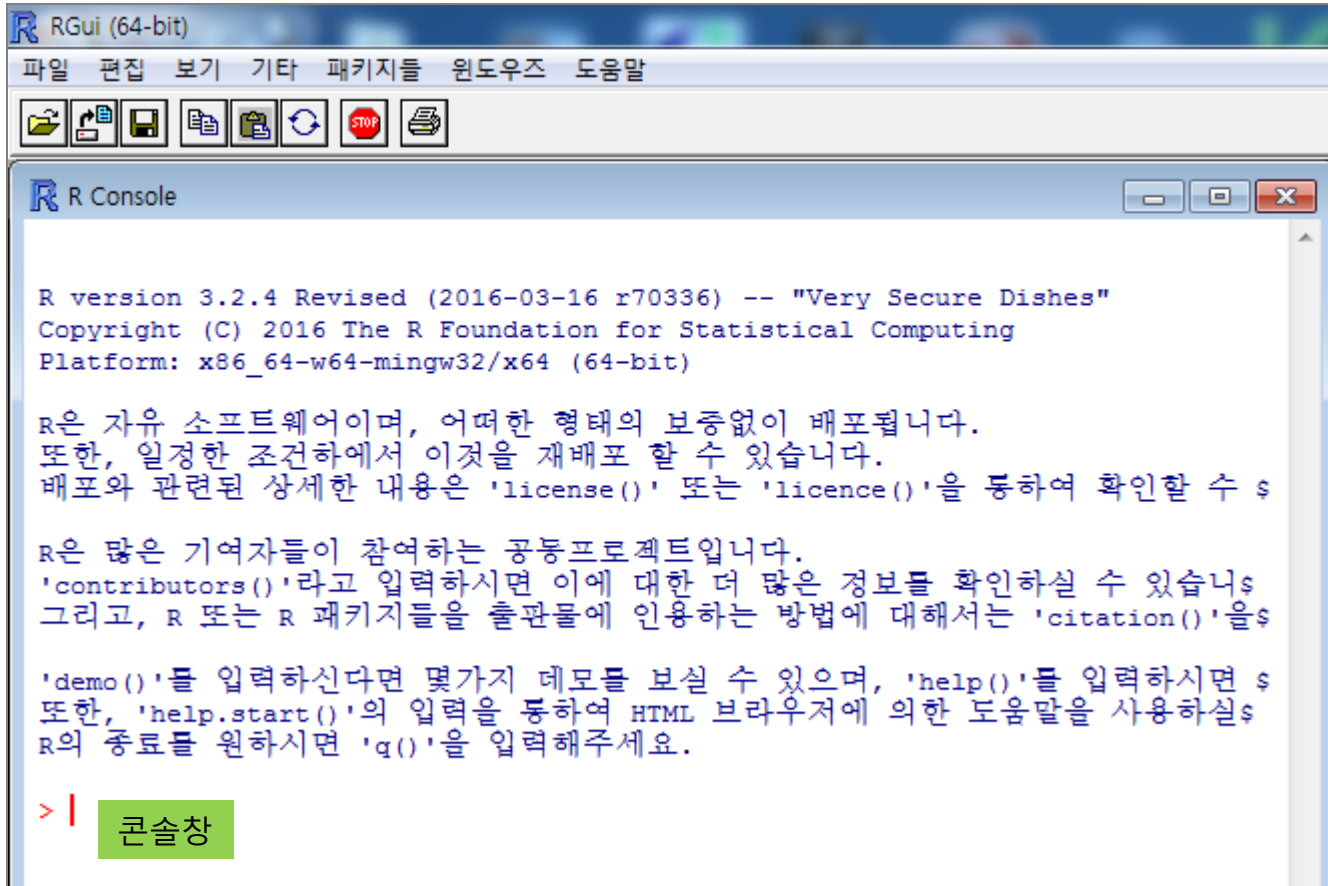




이로써 r프로그램을 학습하기 위한 모든 작업이 마무리되었습니다!!

2. R 프로그램 실행하기

1. R 콘솔창의 프롬프트(">")에서 명령어를 입력하고 엔터를 치면 명령이 실행됩니다.



The screenshot shows the RGui (64-bit) window. The title bar says "RGui (64-bit)". The menu bar includes "파일", "편집", "보기", "기타", "패키지를", "윈도우즈", and "도움말". The toolbar contains icons for file operations and execution. The R Console window is open, displaying the following text:

```
R version 3.2.4 Revised (2016-03-16 r70336) -- "Very Secure Dishes"
Copyright (C) 2016 The R Foundation for Statistical Computing
Platform: x86_64-w64-mingw32/x64 (64-bit)

R은 자유 소프트웨어이며, 어떠한 형태의 보증없이 배포됩니다.
또한, 일정한 조건하에서 이것을 재배포 할 수 있습니다.
배포와 관련된 상세한 내용은 'license()' 또는 'licence()'을 통하여 확인할 수 $

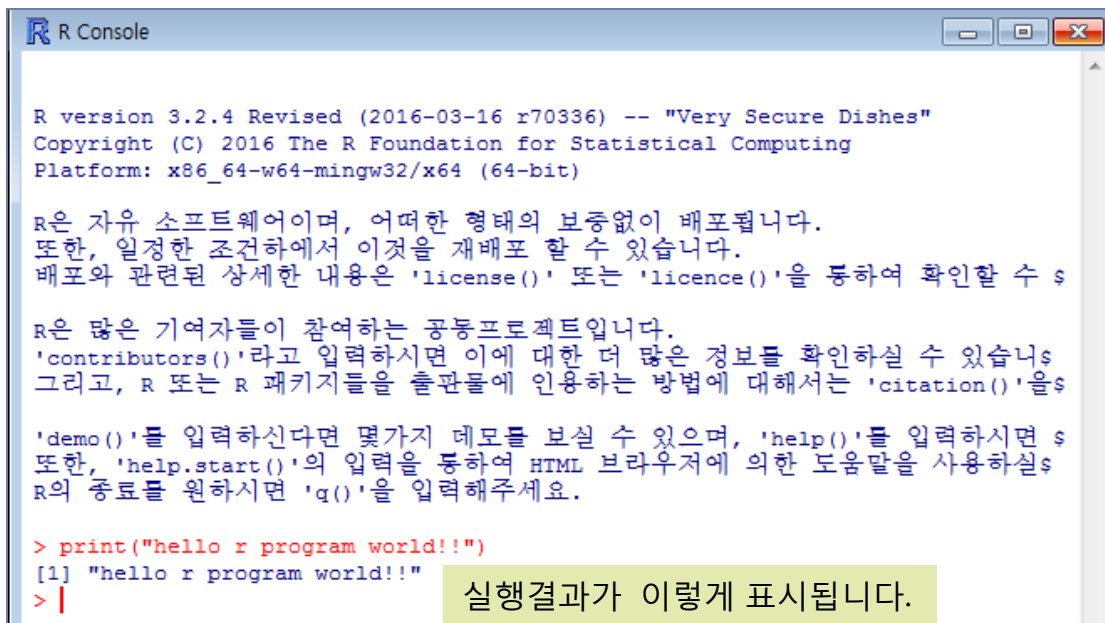
R은 많은 기여자들이 참여하는 공동프로젝트입니다.
'contributors()'라고 입력하시면 이에 대한 더 많은 정보를 확인하실 수 있습니다$
그리고, R 또는 R 패키지를 출판물에 인용하는 방법에 대해서는 'citation()'을$

'demo()'를 입력하신다면 몇가지 데모를 보실 수 있으며, 'help()'를 입력하시면 $
또한, 'help.start()'의 입력을 통하여 HTML 브라우저에 의한 도움말을 이용하실$
R의 종료를 원하시면 'q()'을 입력해주세요.
```

At the bottom of the console, there is a red prompt character ">" followed by a vertical bar "|". A green box with the text "콘솔창" (Console) is positioned over the prompt.



그림처럼 프롬프트에 `print` 명령어를 입력하고 엔터를 쳐보세요. 어때요?



```
R Console

R version 3.2.4 Revised (2016-03-16 r70336) -- "Very Secure Dishes"
Copyright (C) 2016 The R Foundation for Statistical Computing
Platform: x86_64-w64-mingw32/x64 (64-bit)

R은 자유 소프트웨어이며, 어떠한 형태의 보증없이 배포됩니다.
또한, 일정한 조건하에서 이것을 재배포 할 수 있습니다.
배포와 관련된 상세한 내용은 'license()' 또는 'licence()'을 통하여 확인할 수 $

R은 많은 기여자들이 참여하는 공동프로젝트입니다.
'contributors()'라고 입력하시면 이에 대한 더 많은 정보를 확인하실 수 있습니$
그리고, R 또는 R 패키지들을 출판물에 인용하는 방법에 대해서는 'citation()'을$

'demo()'를 입력하신다면 몇가지 데모를 보실 수 있으며, 'help()'를 입력하시면 $
또한, 'help.start()'의 입력을 통하여 HTML 브라우저에 의한 도움말을 사용하실$
R의 종료를 원하시면 'q()'을 입력해주세요.

> print("hello r program world!!")
[1] "hello r program world!!"
> |
```

실행결과가 이렇게 표시됩니다.