

統計軟體 R  
安裝說明

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Date: 2006/7/27

## ● 安裝／下載 R 程式

1. 先至 R 首頁 <http://www.r-project.org/> 點選左側「CRAN」。

The R Project for Statistical Computing

PCA 5 vars  
princeps - dby, cor = cor

Clustering 4 groups

Factor 1 [41%]

Factor 3 [19%]

Getting Started:

- R is a free software environment for statistical computing and graphics. It compiles and runs on a wide variety of UNIX platforms, Windows and MacOS. To download R, please choose your preferred [CRAN mirror](#).
- If you have questions about R like how to download and install the software, or what the license terms are, please read our [answers to frequently asked questions](#) before you send an email.

News :

- **R version 2.3.1** has been released on 2006-06-01.
- **R News 6/2** has been published on 2006-05-31.
- **user! 2006**, the second R user conference, June 15-17, 2006, Vienna, Austria.
- **The R Wiki** provides an online forum where useRs can help other useRs.

2. 選擇最近的下載位址。

http://www.r-project.org/

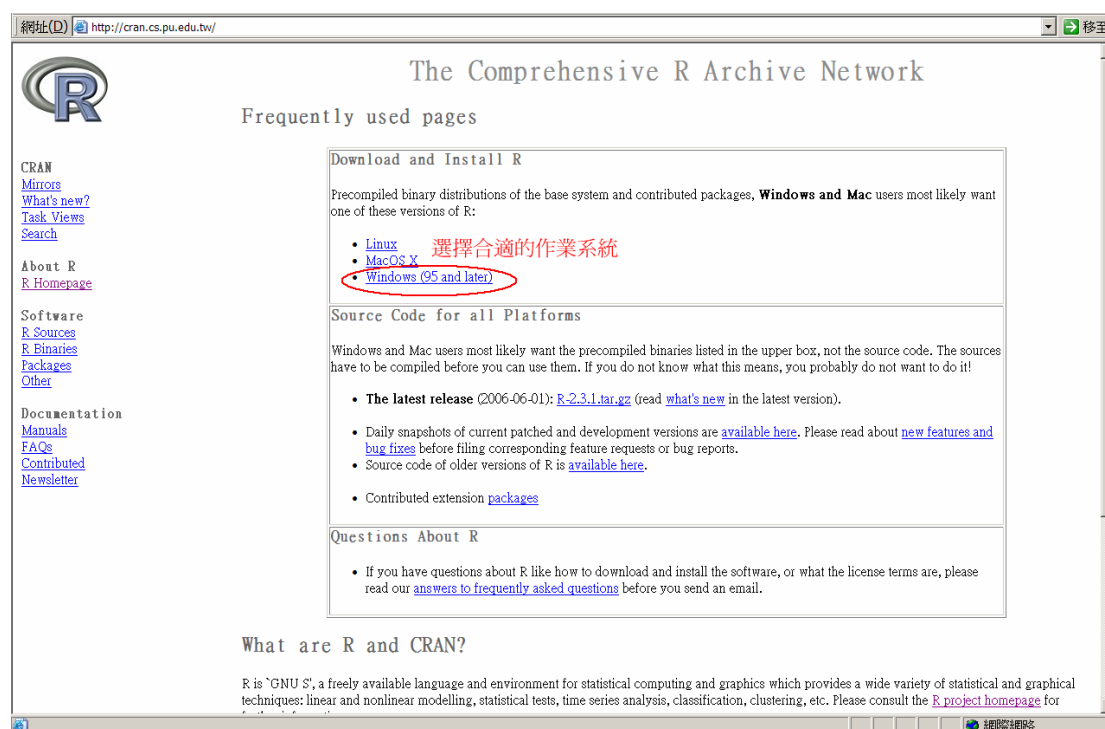
Spain	<a href="http://cran.za.r-project.org/">http://cran.za.r-project.org/</a>	Khodes University
	<a href="http://cran.cdmon.org/">http://cran.cdmon.org/</a>	NumismaticProject, Alicante
	<a href="http://cran.es.r-project.org/">http://cran.es.r-project.org/</a>	Spanish National Research Network, Madrid
Switzerland	<a href="http://cran.ch.r-project.org/">http://cran.ch.r-project.org/</a>	ETH Zuerich
	<a href="http://www.imsv.unibe.ch/cran/">http://www.imsv.unibe.ch/cran/</a>	Universitaet Bern
	<a href="http://cran.prokmu.com/">http://cran.prokmu.com/</a>	Prokmu Hosting, Bern
Turkey	<a href="http://godel.cs.bilgi.edu.tr/mirror/cran/">http://godel.cs.bilgi.edu.tr/mirror/cran/</a>	Istanbul Bilgi University
Taiwan	<a href="http://cran.cs.pu.edu.tw/">http://cran.cs.pu.edu.tw/</a>	Providence University, Taichung
	<a href="http://cran.cste.ntu.edu.tw/">http://cran.cste.ntu.edu.tw/</a>	National Taiwan University, Taipei
UK	<a href="http://cran.uk.r-project.org/">http://cran.uk.r-project.org/</a>	University of Bristol
	<a href="http://www.sourcekeg.co.uk/cran/">http://www.sourcekeg.co.uk/cran/</a>	Sourcekeg, London
USA	<a href="http://cran.cnr.Berkeley.edu">http://cran.cnr.Berkeley.edu</a>	University of California, Berkeley, CA
	<a href="http://cran.stat.ucla.edu/">http://cran.stat.ucla.edu/</a>	University of California, Los Angeles, CA
	<a href="http://cran.sds.ucdavis.edu/">http://cran.sds.ucdavis.edu/</a>	University of California, Davis, CA
	<a href="http://fh-mirror.linux.iastate.edu/CRAN/">http://fh-mirror.linux.iastate.edu/CRAN/</a>	Iowa State University, Ames, IA
	<a href="http://www.biometrics.mtu.edu/CRAN/">http://www.biometrics.mtu.edu/CRAN/</a>	Michigan Technological University, Houghton, MI
	<a href="http://cran.wustl.edu/">http://cran.wustl.edu/</a>	Washington University, St. Louis, MO
	<a href="http://www.jbiblio.org/pub/languages/R/CRAN/">http://www.jbiblio.org/pub/languages/R/CRAN/</a>	University of North Carolina, Chapel Hill, NC
	<a href="http://cran.us.r-project.org/">http://cran.us.r-project.org/</a>	Fair Networks, Pittsburgh, PA
	<a href="http://lib.stat.cmu.edu/R/CRAN/">http://lib.stat.cmu.edu/R/CRAN/</a>	Stalib, Carnegie Mellon University, Pittsburgh, PA
	<a href="http://cran.hostingzero.com/">http://cran.hostingzero.com/</a>	Hosting Zero, Dallas, TX
	<a href="http://cran.fhrc.org/">http://cran.fhrc.org/</a>	Fred Hutchinson Cancer Research Center, Seattle, WA

Many of these sites can also be accessed using FTP. In addition, several [StatLib](#) mirrors around the world provide a complete CRAN mirror.

If you want to host a new mirror at your institution, please have a look at the [CRAN Mirror HOWTO](#).

To "submit" to CRAN, simply upload to <http://cran.r-project.org/incoming> and send email to [cran@r-project.org](mailto:cran@r-project.org). Please indicate the copyright situation (GPL, ...) in your submission.

### 3. 選擇合適的作業系統，本例以 Windows 為主。



The screenshot shows the CRAN website with the following content:

**The Comprehensive R Archive Network**

Frequently used pages

**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:

- [Linux](#)
- [MacOS X](#)
- [Windows \(95 and later\)](#)

*Note: The 'Windows (95 and later)' link is circled in red in the original image, with the red text '選擇合適的作業系統' next to it.*

**Source Code for all Platforms**

Windows and Mac users most likely want 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** (2006-06-01): [R-2.3.1.tar.gz](#) (read [what's new](#) in the latest version).
- 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.
- Source code of older versions of R is [available here](#).
- Contributed extension [packages](#)

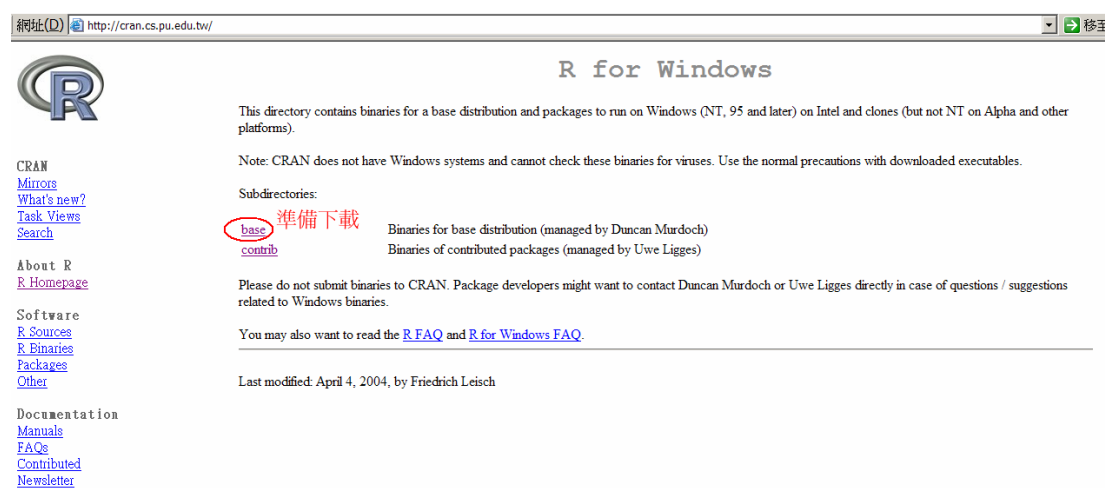
**Questions About R**

- If you have questions about R like how to download and install the software, or what the license terms are, please read our [answers to frequently asked questions](#) before you send an email.

**What are R and CRAN?**

R is `GNU S`, a freely available language and environment for statistical computing and graphics which provides a wide variety of statistical and graphical techniques: linear and nonlinear modelling, statistical tests, time series analysis, classification, clustering, etc. Please consult the [R project homepage](#) for

### 4. 點選主程式「base」。



The screenshot shows the CRAN website with the following content:

**R for Windows**

This directory contains binaries for a base distribution and packages to run on Windows (NT, 95 and later) on Intel and clones (but not NT on Alpha and other platforms).

Note: CRAN does not have Windows systems and cannot check these binaries for viruses. Use the normal precautions with downloaded executables.

Subdirectories:

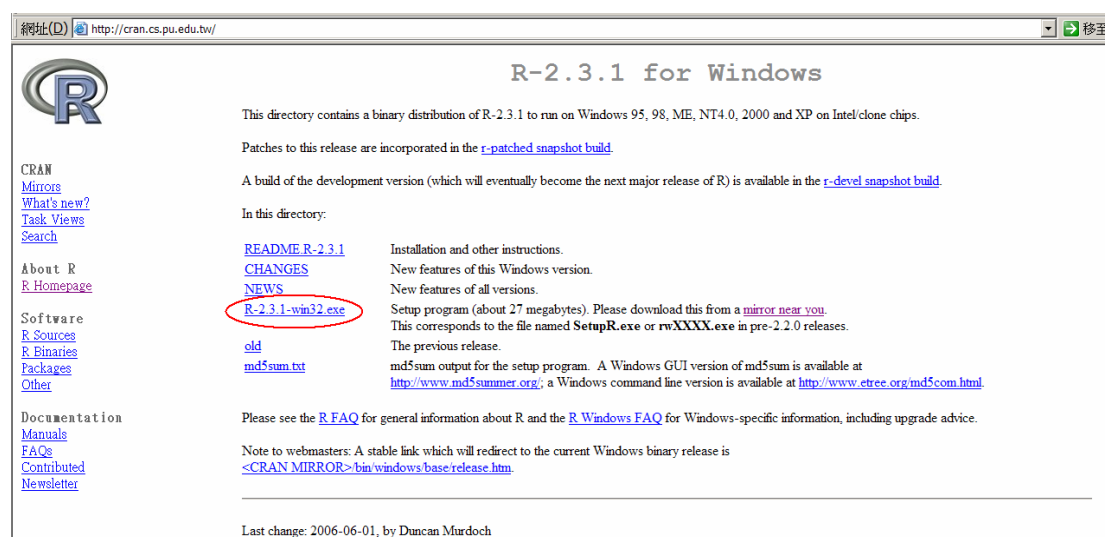
- [base](#) *準備下載* Binaries for base distribution (managed by Duncan Murdoch)
- [contrib](#) Binaries of contributed packages (managed by Uwe Ligges)

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.

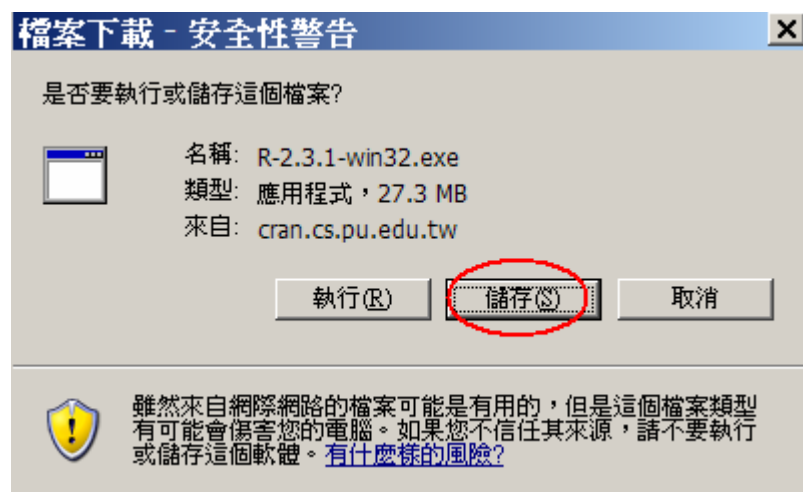
You may also want to read the [R FAQ](#) and [R for Windows FAQ](#).

Last modified: April 4, 2004, by Friedrich Leisch

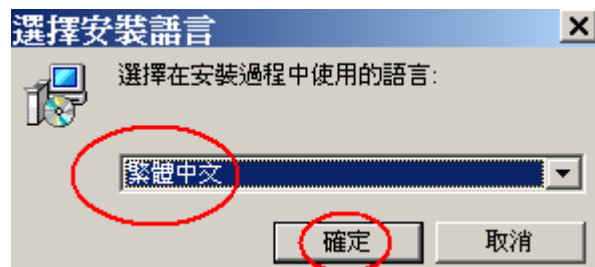
## 5. 點選主程式「R-2.3.1-win32.exe」。



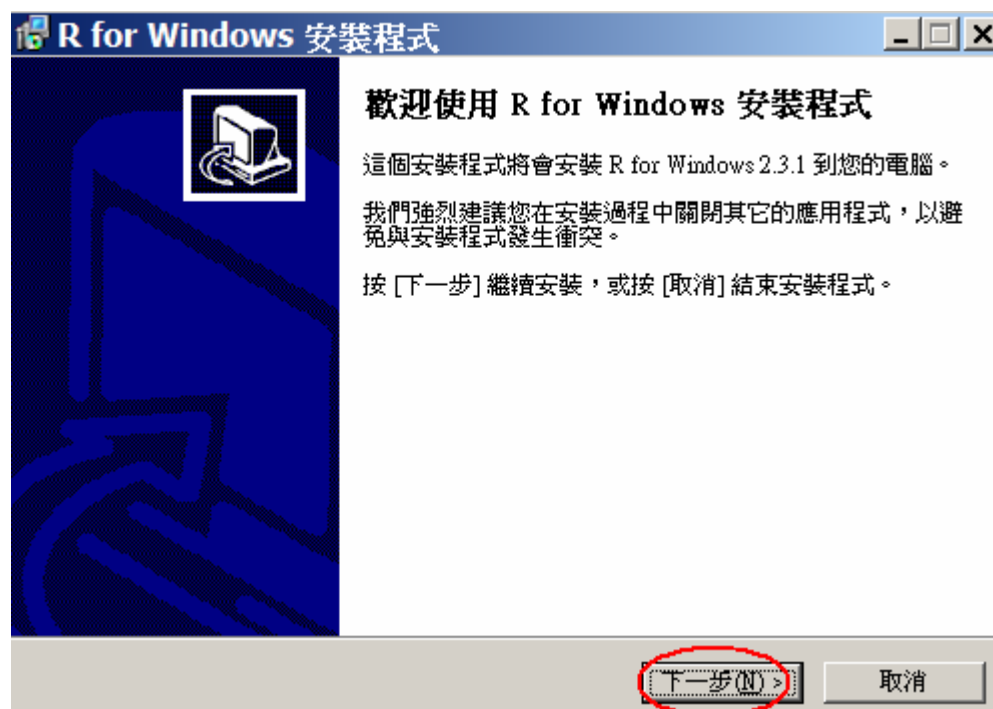
## 6. 按「儲存」並下載程式。



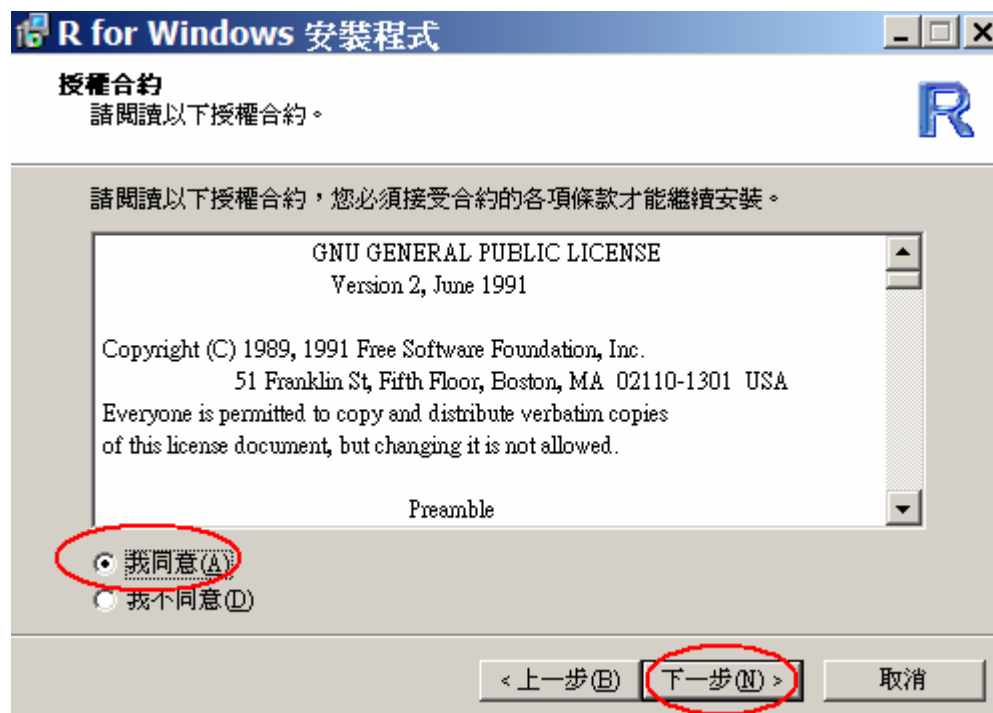
## 7. 點選下載的程式, 準備開始安裝。選擇合適的安裝過程中使用的語言。



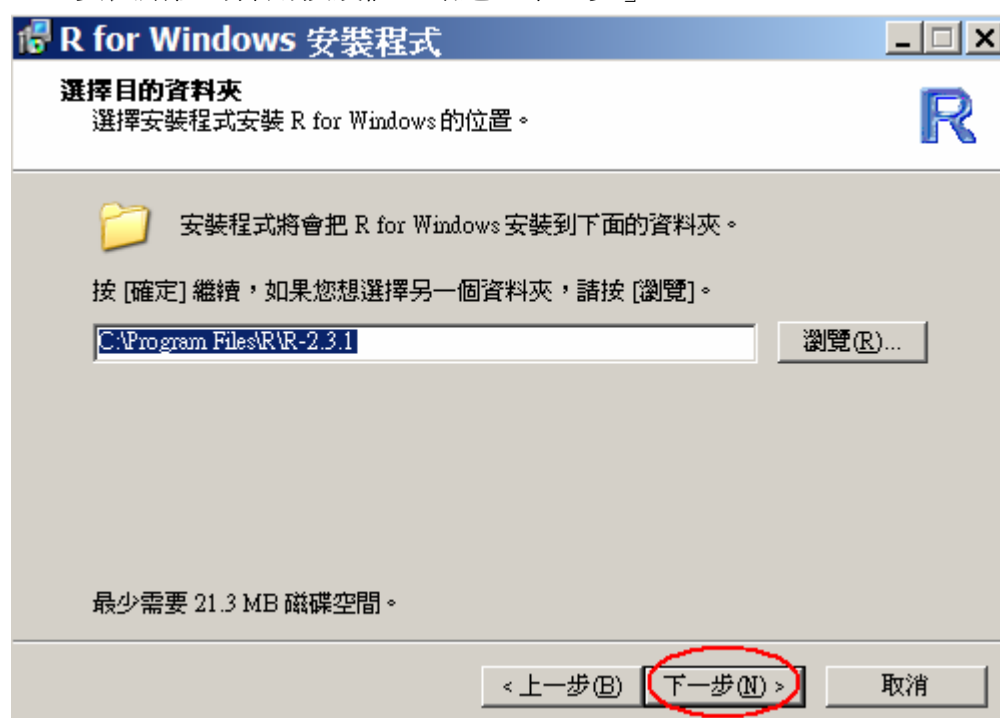
8. 點選「下一步」。



9. 點選「我同意」，按「下一步」。



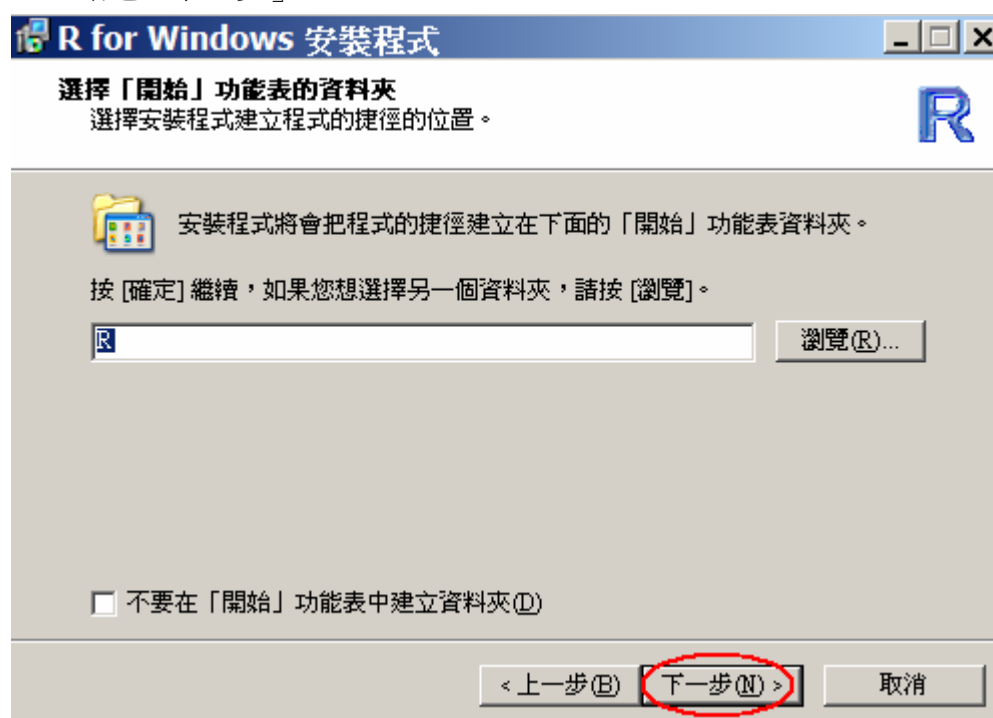
10. 安裝路徑可採用預設值，點選「下一步」。



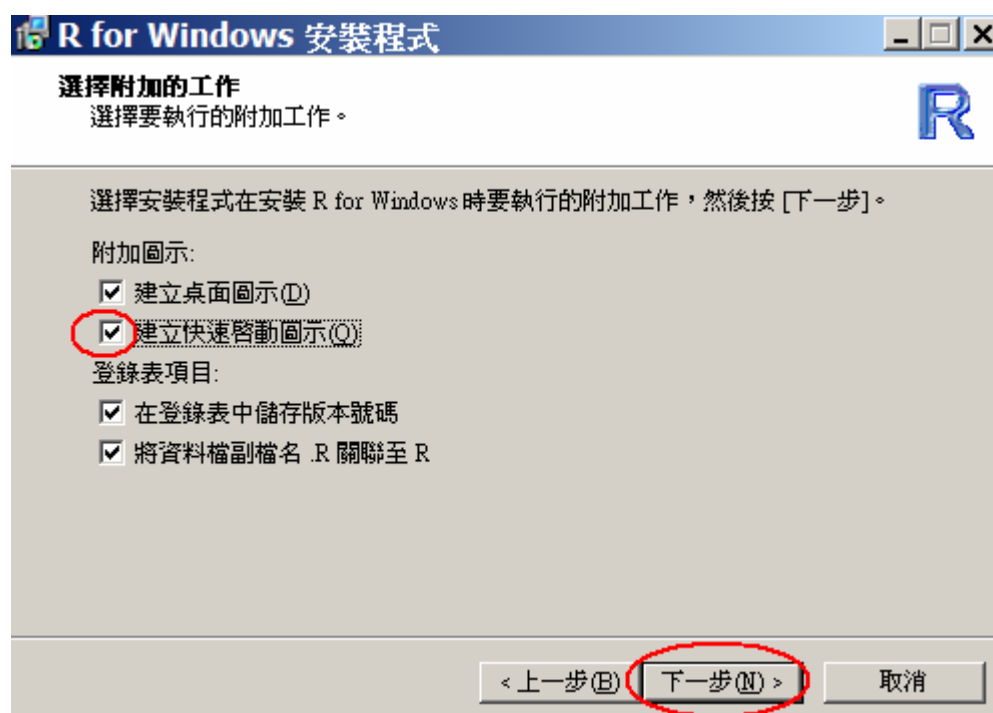
11. 選取全部安裝的元件，點選「下一步」。



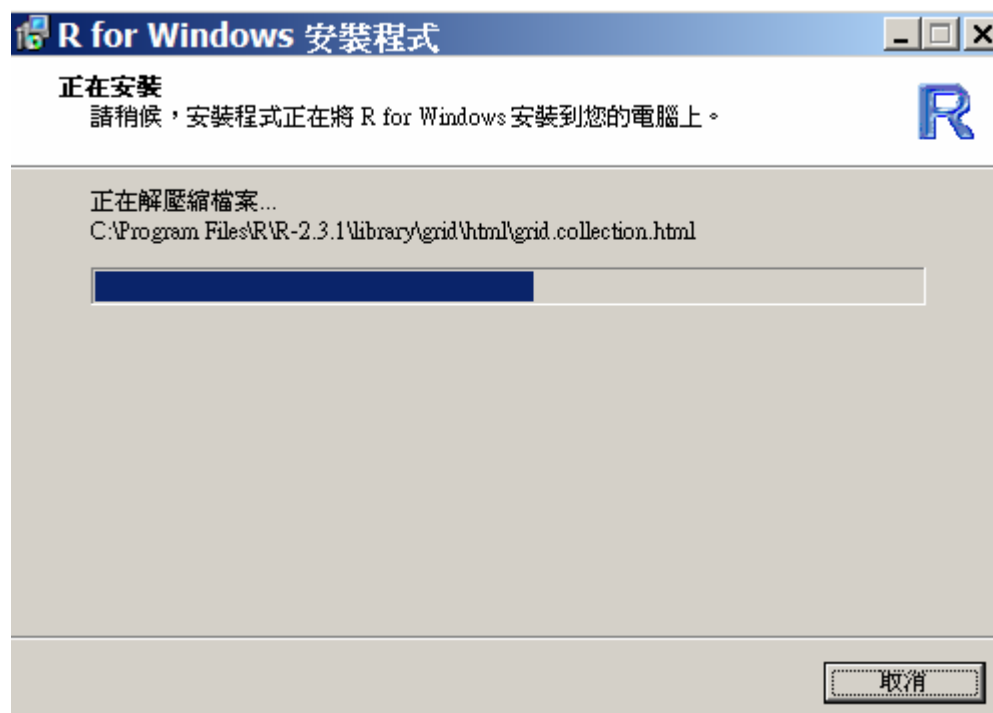
12. 點選「下一步」。



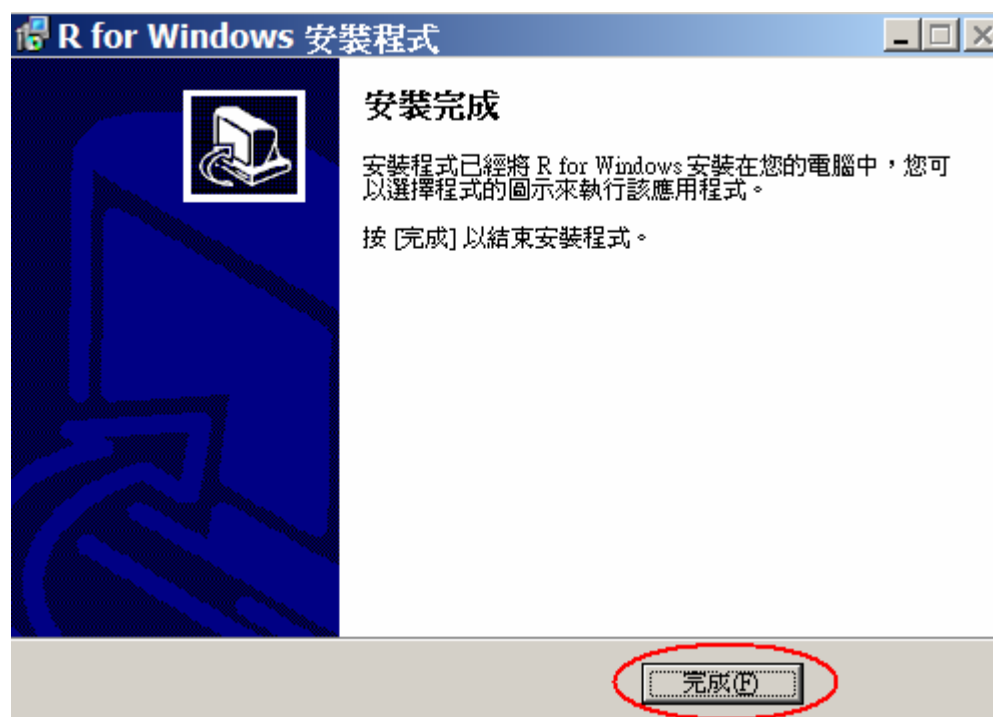
13. 將「建立快速啓動圖示」打勾可於工作列建立捷徑，點選「下一步」。



14. 安裝過程中須稍後一下。



15. 點選「完成」。



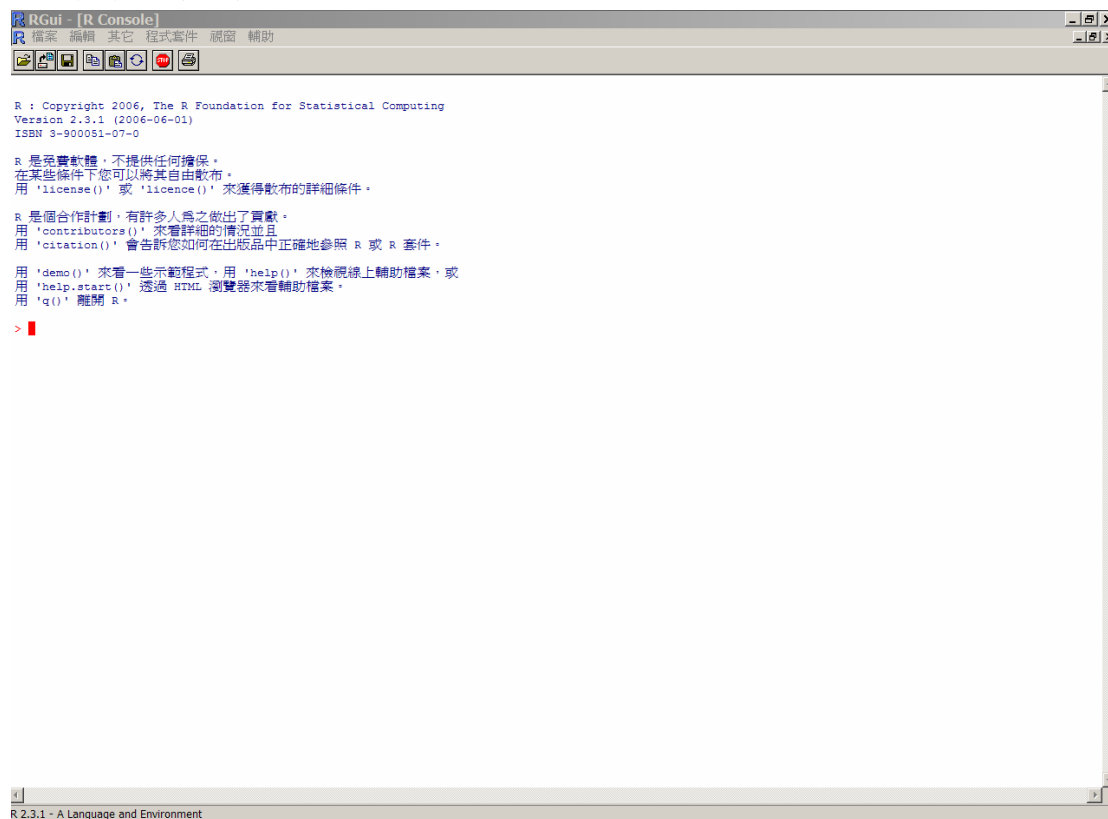


- 測試 R 是否可正常執行

1. 點選「程式集」中的 R 2.3.1。



2. 開啓 R 程式



3. 在 `>` 後面輸入「`x <- c(1:100)`」並按下 `enter` 鍵，表示將數值{1,2,...,100} 以物件 `x` 表示。注意在大，小寫的物件名稱不相同，「`>`」表示提示字元。
4. 輸入「`x`」，顯示剛才輸入之內容。如果輸入 大寫 `X` 則會顯示錯誤訊息「錯誤: 找不到目的物件 "X"」。
5. 輸入「`summary(x)`」並顯示 6 個基本統計值。
6. 輸入「`q()`」關閉 R。如果詢問是否儲存，可先按 否(N)。



測試結果參考下圖所示。

```

R : Copyright 2006, The R Foundation for Statistical Computing
Version 2.3.1 (2006-06-01)
ISBN 3-900051-07-0

R 是免費軟體，不提供任何擔保。
在某些條件下您可以將其自由散布。
用 'license()' 或 'licence()' 來獲得散布的詳細條件。

R 是個合作計劃，有許多人為之做出了貢獻。
用 'contributors()' 來看詳細的情況並且
用 'citation()' 會告訴您如何在出版品中正確地參照 R 或 R 套件。

用 'demo()' 來看一些示範程式，用 'help()' 來檢視線上輔助檔案，或
用 'help.start()' 透過 HTML 瀏覽器來看輔助檔案。
用 'q()' 離開 R =

> x <- c(1:100)
> x
 [1]  1  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16
[17] 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32
[33] 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48
[49] 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64
[65] 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80
[81] 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96
[97] 97 98 99 100
> summary(x)
  Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
  1.00  25.75   50.50   50.50  75.25  100.00
>

```

>符號表示提示字元,等待使用者輸入資料  
輸入 `x <- c(1:100)` 按下 `enter` //輸入資料  
輸入 `x` // 顯示 `x` 之內容  
輸入 `summary(x)` // 利用函數 `summary` 顯示6個基本統計值

下回介紹如何有效輸入／匯入資料 ...[未完]