



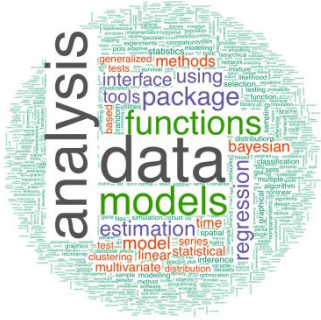
Obtención e Instalación R

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R lenguaje de programación



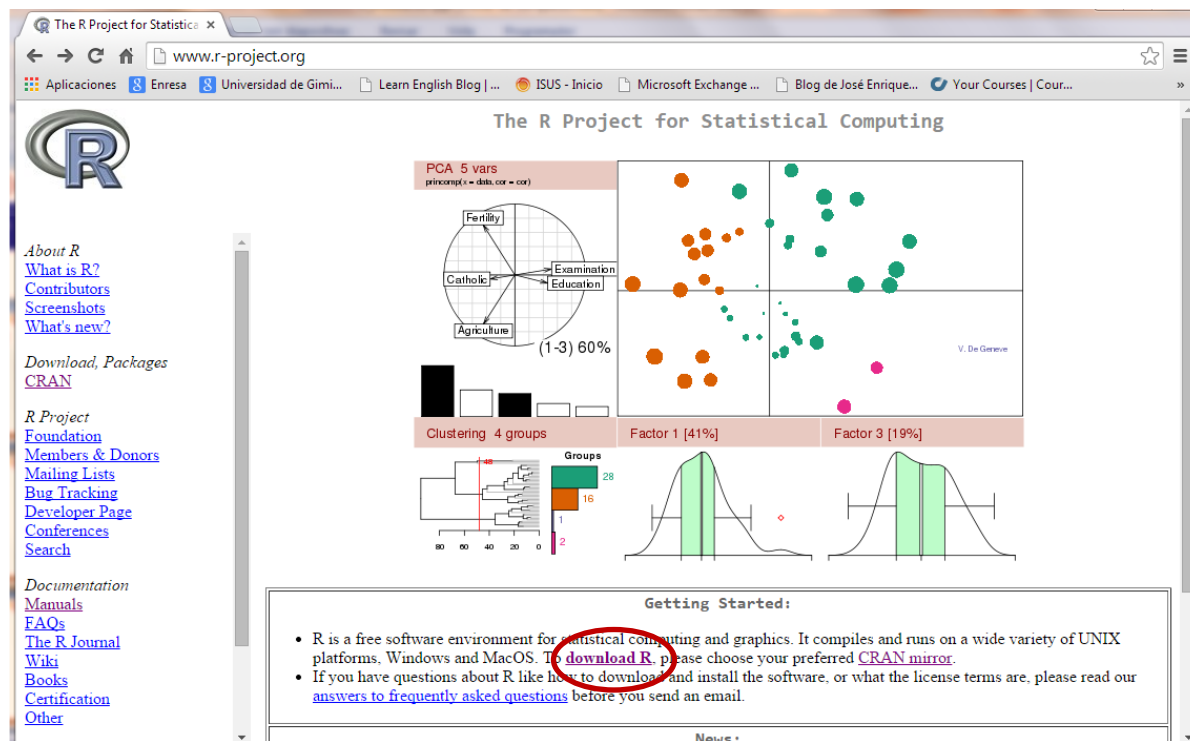
R es un lenguaje y entorno de programación para análisis estadístico y gráfico.

Se trata de un proyecto de software libre, resultado de la implementación GNU del lenguaje S.

Se pueden cargar diferentes bibliotecas o paquetes con finalidades específicas de cálculo o gráfico.

Para instalar R nos vamos a la página web del proyecto y activamos download R

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



The R Project for Statistical Computing

PCA 5 vars
princcomp1 = data.corr = cor

Fertility
Catholic
Agriculture
Examination
Education
(1-3) 60%

Clustering 4 groups

Factor 1 [41%]
Factor 3 [19%]

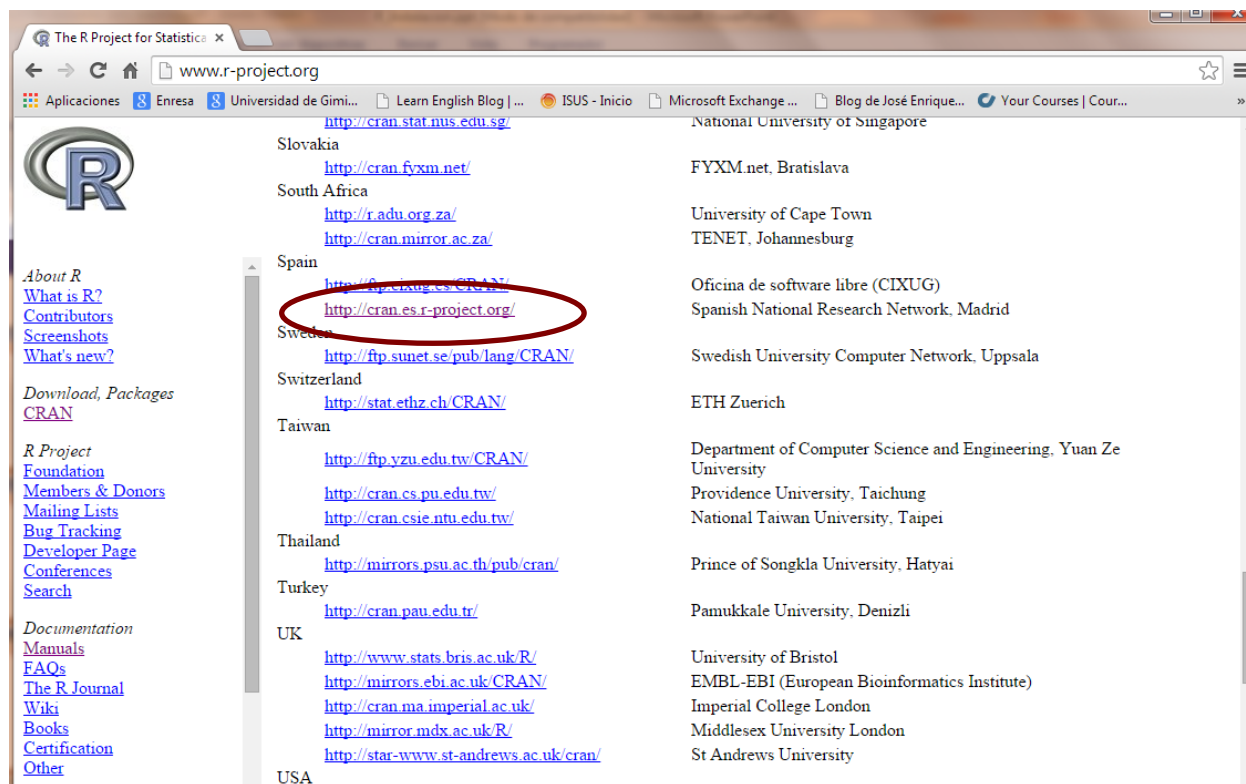
Groups
28
16
2

Getting Started:

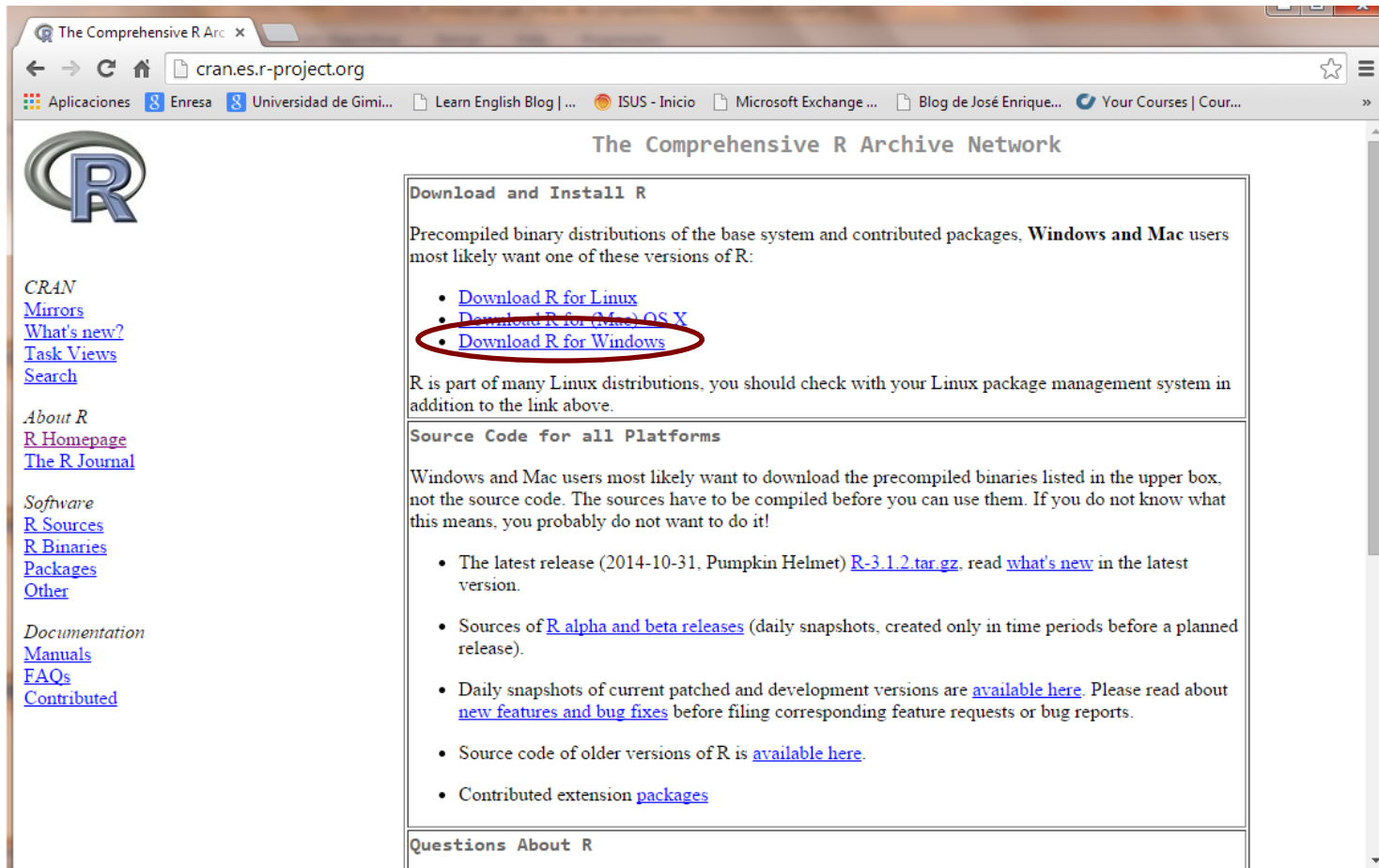
- R is a free software environment for statistical computing and graphics. It compiles and runs on a wide variety of UNIX platforms, Windows and MacOS. To **download R**, please choose your preferred [CRAN mirror](#).
- If you have questions about R like how to download and install the software, or what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

News:

Nos lleva a diferentes repositorios y elegimos por ejemplo Spain



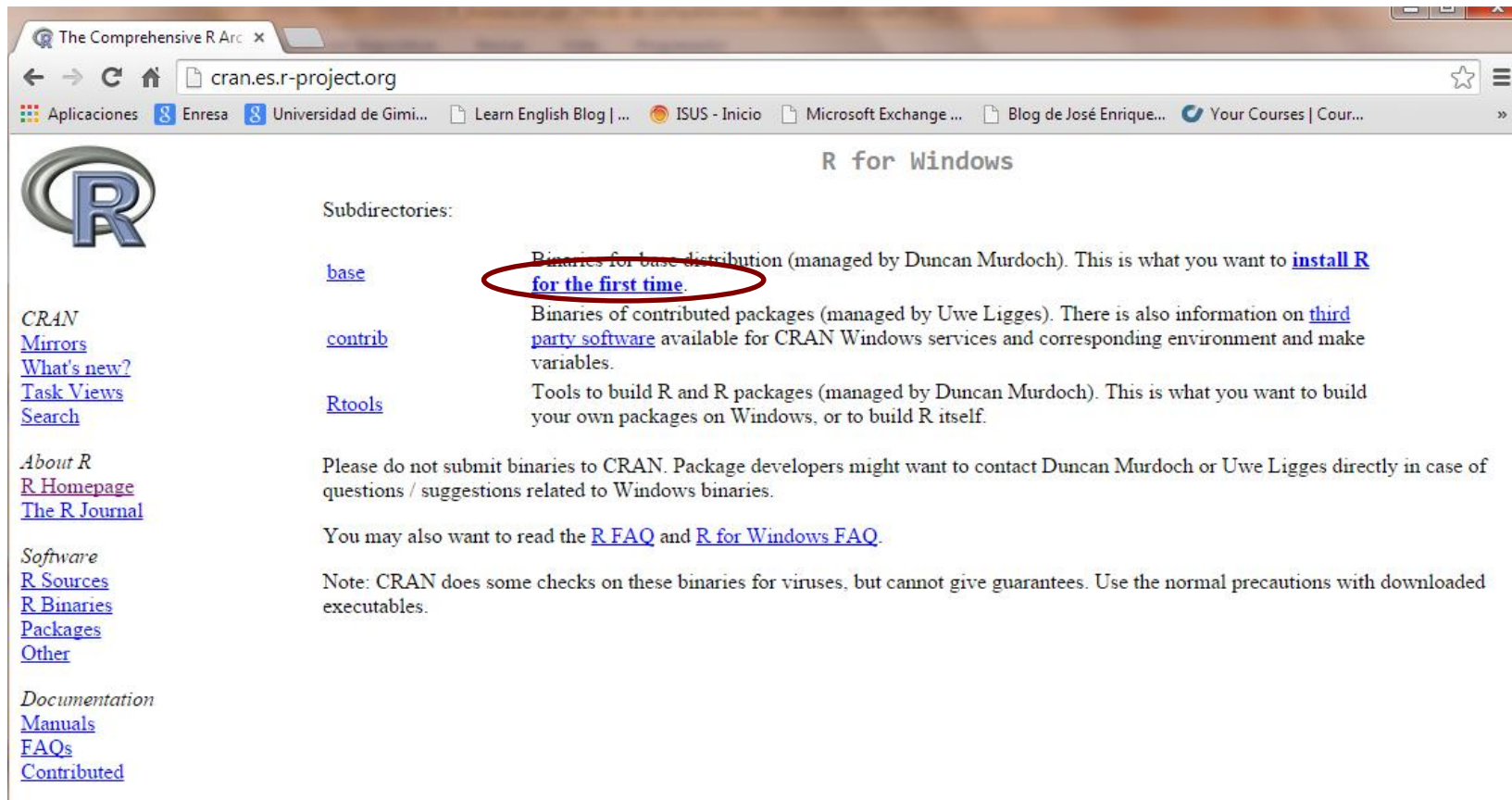
Si queremos descargar R para Windows elegimos la opción



The screenshot shows the CRAN website (cran.es.r-project.org) with the title 'The Comprehensive R Archive Network'. On the left sidebar, there are links for 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, and Contributed. The main content area is titled 'Download and Install R' and contains the text: 'Precompiled binary distributions of the base system and contributed packages, **Windows and Mac** users most likely want one of these versions of R:'. Below this text is a list of three links: 'Download R for Linux', 'Download R for Mac OS X', and 'Download R for Windows'. The 'Download R for Windows' link is circled in red. Below the list, there is a section titled 'Source Code for all Platforms' which explains that Windows and Mac users should download precompiled binaries instead of source code. It lists several options: the latest release (R-3.1.2.tar.gz), sources of R alpha and beta releases, daily snapshots of current patched and development versions, source code of older versions, and contributed extension packages. At the bottom, there is a section titled 'Questions About R'.



Para instalarlo por primera vez elegimos la opción



The screenshot shows a web browser window with the address bar displaying `cran.es.r-project.org`. The page title is "The Comprehensive R Arc" and the main heading is "R for Windows". The page content is organized into sections: "Subdirectories:", "About R", "Software", and "Documentation". The "Subdirectories:" section lists three options: [base](#), [contrib](#), and [Rtools](#). The [base](#) option is circled in red, and its description, "Binaries for base distribution (managed by Duncan Murdoch). This is what you want to [install R for the first time](#)," is highlighted. The [contrib](#) option is described as "Binaries of contributed packages (managed by Uwe Ligges). There is also information on [third party software](#) available for CRAN Windows services and corresponding environment and make variables." The [Rtools](#) option is described as "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." The "About R" section includes links to [R Homepage](#) and [The R Journal](#). The "Software" section includes links to [R Sources](#), [R Binaries](#), [Packages](#), and [Other](#). The "Documentation" section includes links to [Manuals](#), [FAQs](#), and [Contributed](#).

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 packages (managed by Uwe Ligges). There is also information on [third party software](#) available for CRAN Windows services and corresponding environment and make variables.
- [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.

About R

- [R Homepage](#)
- [The R Journal](#)

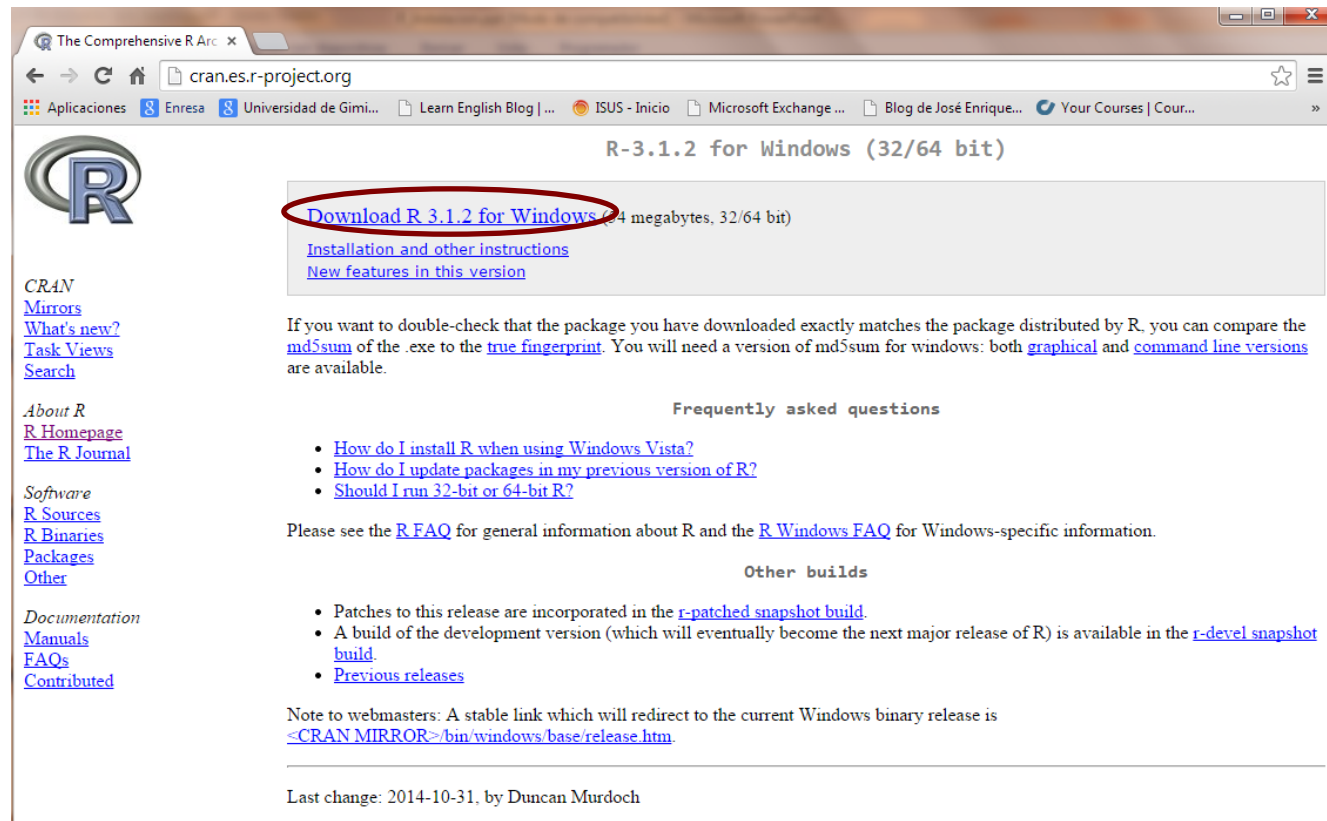
Software

- [R Sources](#)
- [R Binaries](#)
- [Packages](#)
- [Other](#)

Documentation

- [Manuals](#)
- [FAQs](#)
- [Contributed](#)

Instalamos la última versión (en nuestro caso la 3.1.2)



The screenshot shows the CRAN website for R 3.1.2 for Windows (32/64 bit). The main heading is "R-3.1.2 for Windows (32/64 bit)". Below it, the link "Download R 3.1.2 for Windows" is circled in red, followed by "(4 megabytes, 32/64 bit)". Other links include "Installation and other instructions" and "New features in this version".

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](#)

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 see the [R FAQ](#) for general information about R and the [R Windows FAQ](#) for Windows-specific information.

Other builds

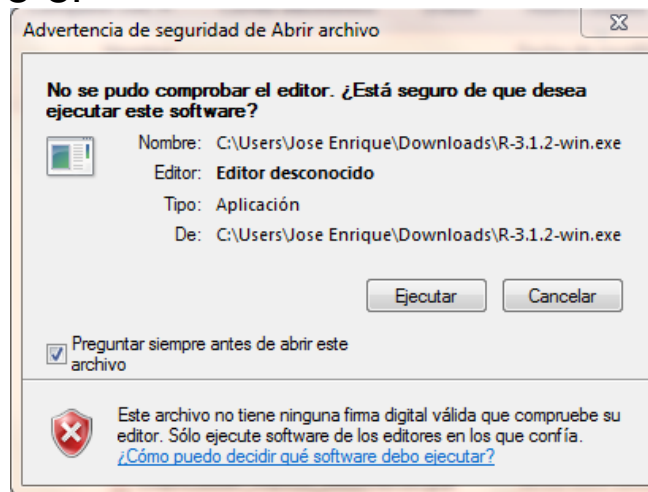
- Patches to this release are incorporated in the [r-patched snapshot build](#).
- A build of the development version (which will eventually become the next major release of R) is available in the [r-devel snapshot build](#).
- [Previous releases](#)

Note to webmasters: A stable link which will redirect to the current Windows binary release is CRAN.MIRROR>/bin/windows/base/release.htm

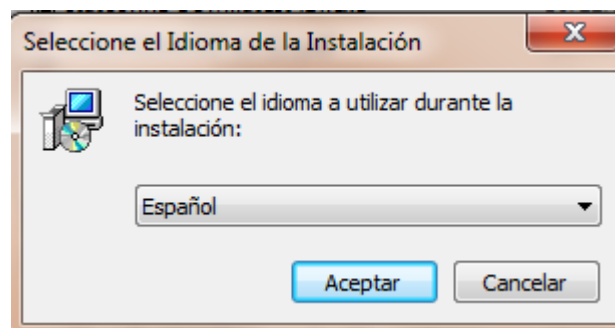
Last change: 2014-10-31, by Duncan Murdoch

Al abrirse la ventana “Abrir archivo-Advertencia de seguridad”, hacemos clic sobre el botón “Ejecutar”

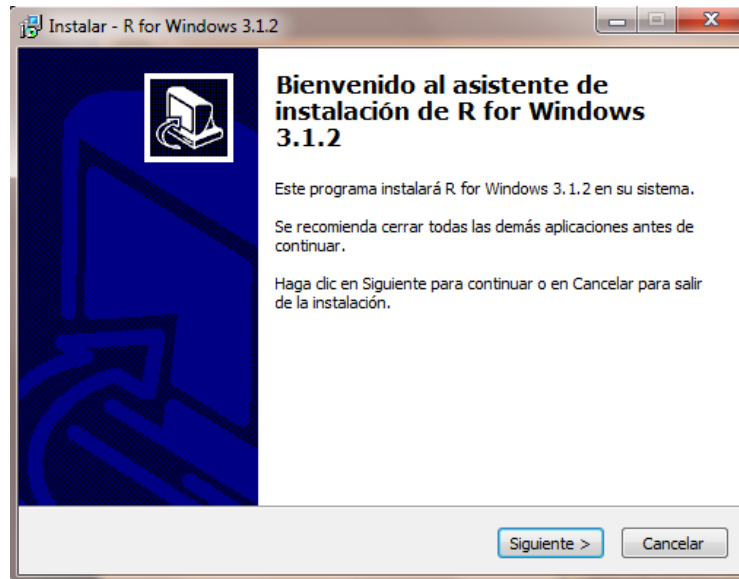
-



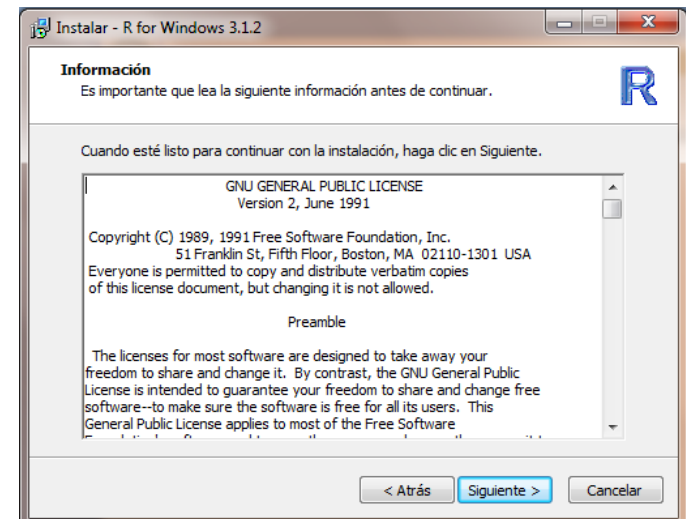
Seleccionamos el idioma de instalación



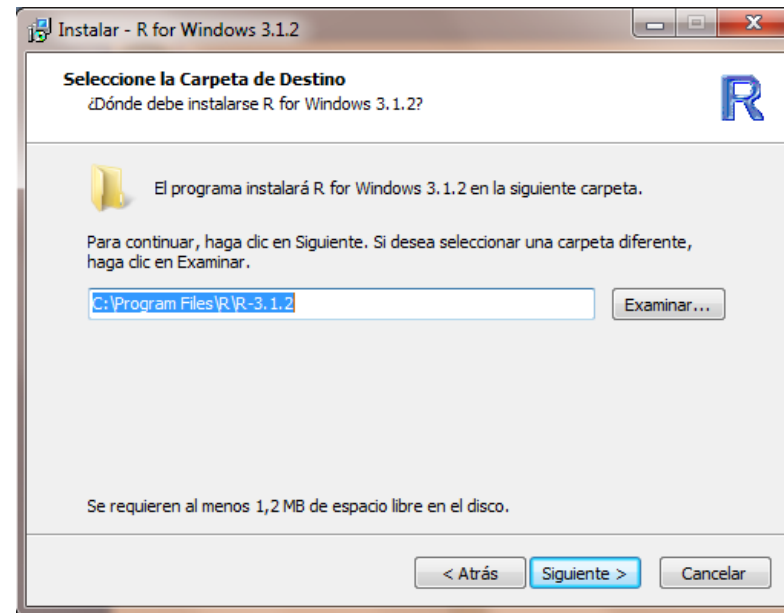
Seguimos las instrucciones del Asistente de Instalación de R



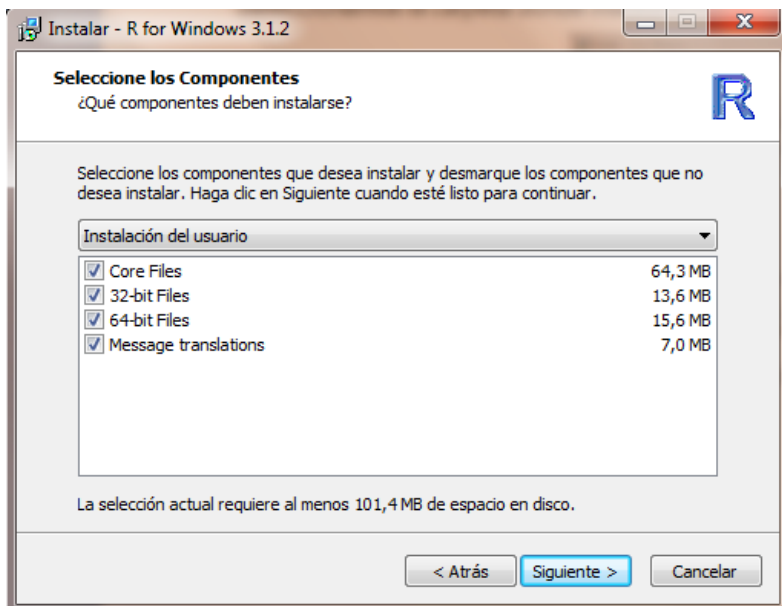
Leemos las condiciones de licencia de R



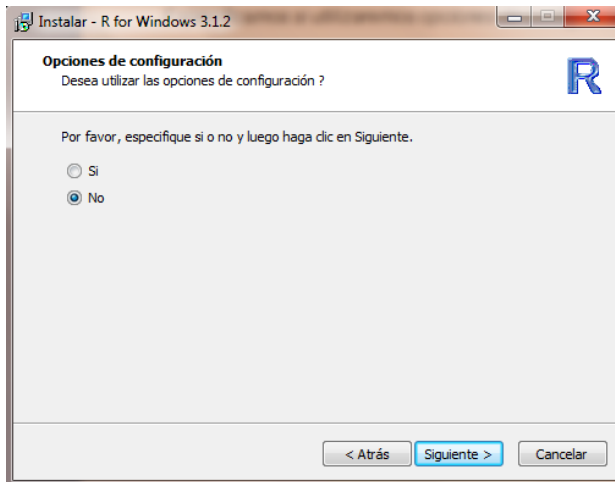
Seleccionamos la carpeta donde instalaremos R



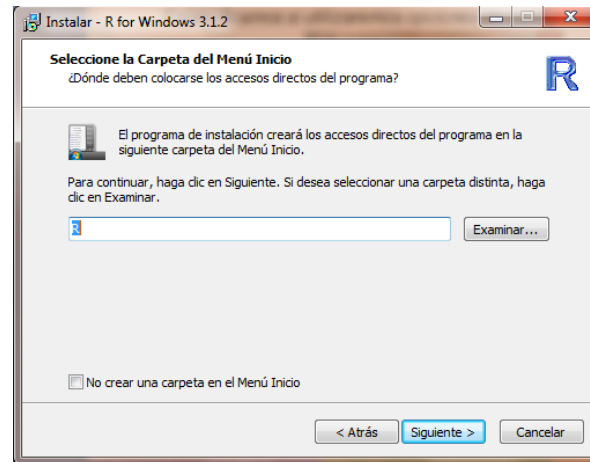
Seleccionamos los componentes a instalar



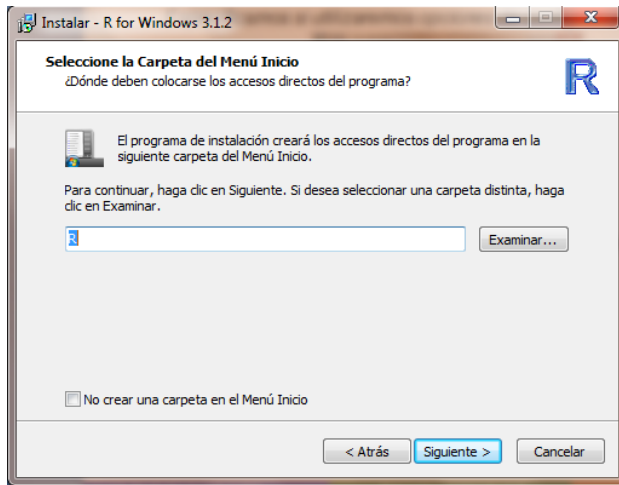
Especificamos si utilizaremos opciones de configuración



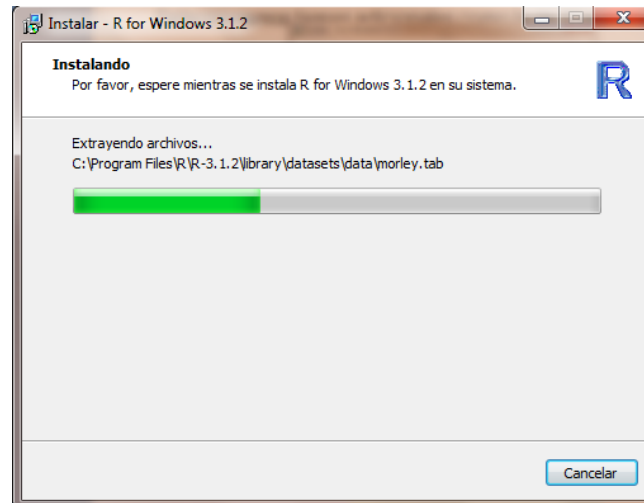
Seleccionamos dónde se crearán accesos directos al programa



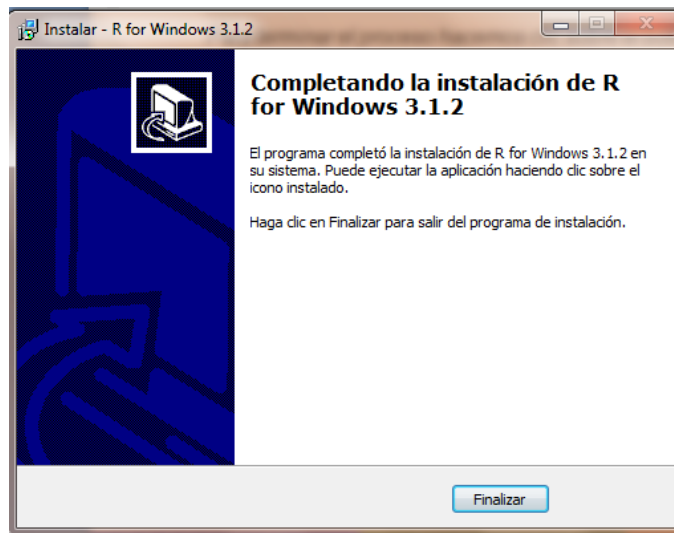
Seleccionamos tareas adicionales como la de “Crear un ícono en el escritorio”



Una vez ejecutadas las acciones anteriores, R se instalará automáticamente



Para terminar el proceso hacemos clic sobre el botón “Finalizar”.

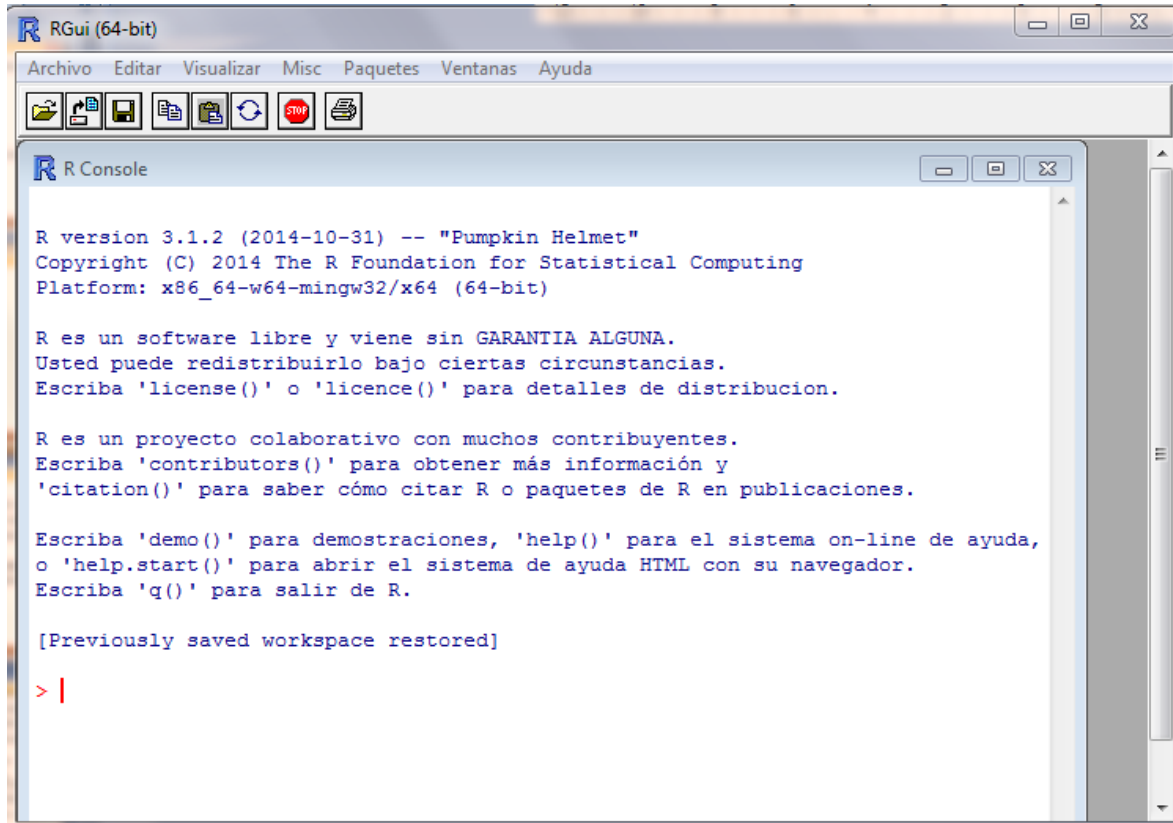


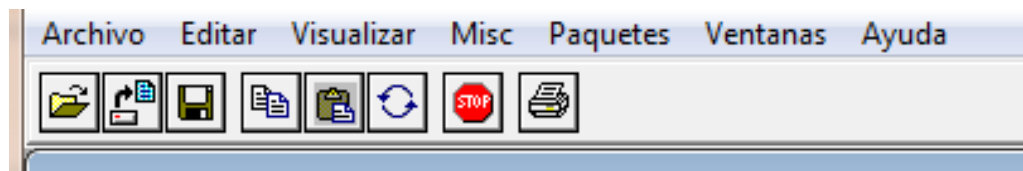
Hacemos doble clic sobre el ícono de R que aparece en el escritorio



El ambiente de trabajo en R

Al abrir R se mostrará la siguiente imagen





En la imagen podemos identificar los siguientes elementos:

- *El menú principal*

Compuesto por los menús: Archivo, Editar, Visualizar, Misc, Paquetes, Ventanas, y Ayuda. Al desplegar estos menús, podemos realizar procedimientos complementarios a la escritura de programas en R.

- *Los íconos de funciones*

Constituyen accesos abreviados o rápidos a las funciones más usadas de R, como: abrir archivos de programas (documentos con extensión *.txt, *.R); cargar espacios de trabajo (archivos con extensión *.RData); copiar; pegar; copiar imprimir.

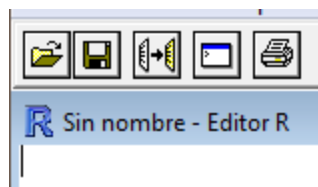
-La consola

La consola es el espacio en donde: en letras rojas, aparecen las instrucciones dadas a R y en letras azules, sus resultados.

Otros elementos de R, son visibles al realizar procedimientos previos:

-La ventana Script

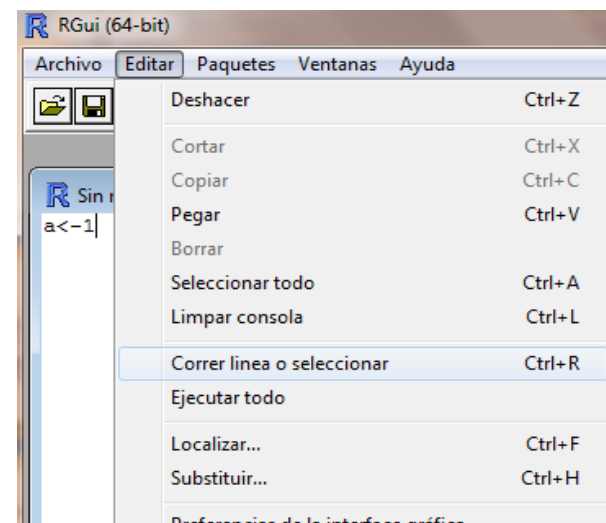
Para obtener esta ventana, desplegamos el menú Fichero ->Nuevo Script. Como podemos observar, al activar la ventana Script, los menús Fichero y Editar muestran opciones sólo de esta ventana. También se reduce el número de íconos disponibles y se presentan los íconos: Ejecutar, y cambiar a Consola



La ventana Script es un espacio en donde podemos escribir instrucciones. Para que R las ejecute primero debemos seleccionarlasy luego realizar cualquiera de las acciones siguientes: desplegar el menú: Editar-> Corre Línea orselection; presionar la tecla F5; presionar simultáneamente las teclas CTRL+R; o presionar el siguiente ícono:

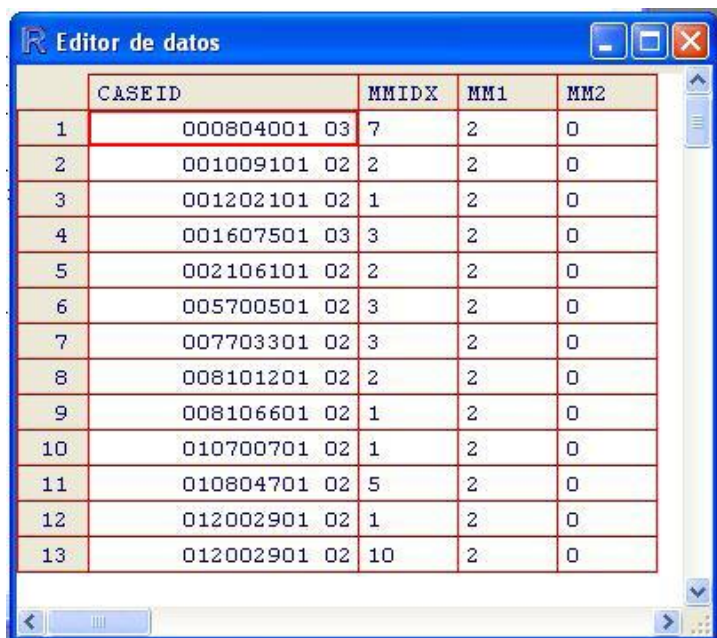


Aunque las instrucciones para R, también pueden escribirse en la Consola, una de las ventajas de escribirlas en la ventana Script es que podemos introducir modificaciones, fácilmente y que podemos guardarlas en un archivo, para uso futuro.

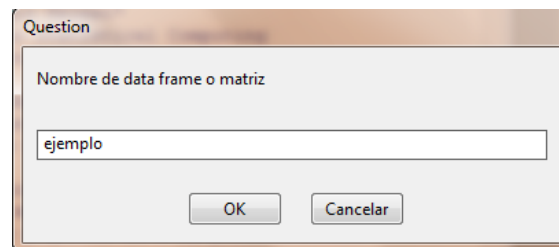


El editor de datos

Para acceder a esta ventana, previamente debemos haber pedido a R que haga la lectura de un archivo de datos. Luego desplegamos el menú Editar->Editor de Datos, y escribimos el nombre del conjunto de datos que deseamos editar:



	CASEID	MMIDX	MM1	MM2
1	000804001 03	7	2	0
2	001009101 02	2	2	0
3	001202101 02	1	2	0
4	001607501 03	3	2	0
5	002106101 02	2	2	0
6	005700501 02	3	2	0
7	007703301 02	3	2	0
8	008101201 02	2	2	0
9	008106601 02	1	2	0
10	010700701 02	1	2	0
11	010804701 02	5	2	0
12	012002901 02	1	2	0
13	012002901 02	10	2	0



Question

Nombre de data frame o matriz

ejemplo

OK Cancelar