

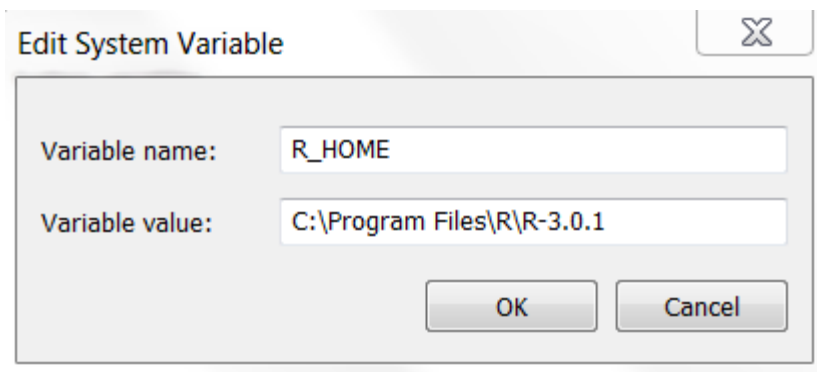
Installation of R-Extension (v1.3) on Windows 7 - 64 bit (but use only 32 bit) for NetLogo (5.0.4) and R (3.0.1)

1. **Download and install R 3.0.1** (<http://cran.r-project.org/bin/windows/base/>), target directory of the installation: C:\Program Files\R\R-3.0.1, Selected components: User installation, Startup options: No

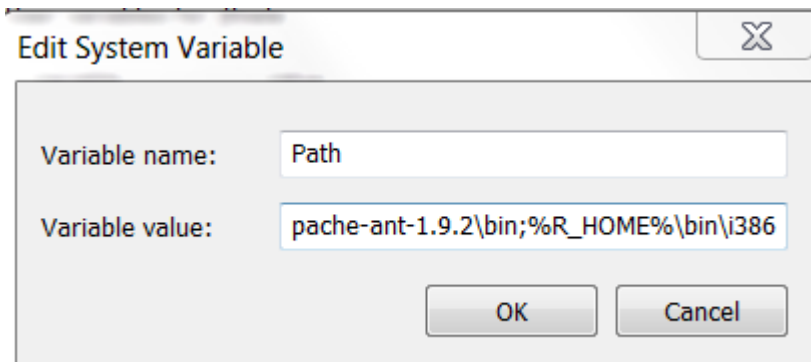
2. **Download and install NetLogo 5.0.4** (standard 32-bit bundled version with Java Runtime Environment) (<http://ccl.northwestern.edu/netlogo/download.shtml>), Destination Directory of the installation: C:\Program Files (x86)\NetLogo 5.0.4

3. **Set environment variables for R:** an R.dll and R.exe should be found in C:\Program Files\R\R-3.0.1\bin\i386 (depends on the path in step 1),

Set at first the R_HOME variable to C:\Program Files\R\R-3.0.1.

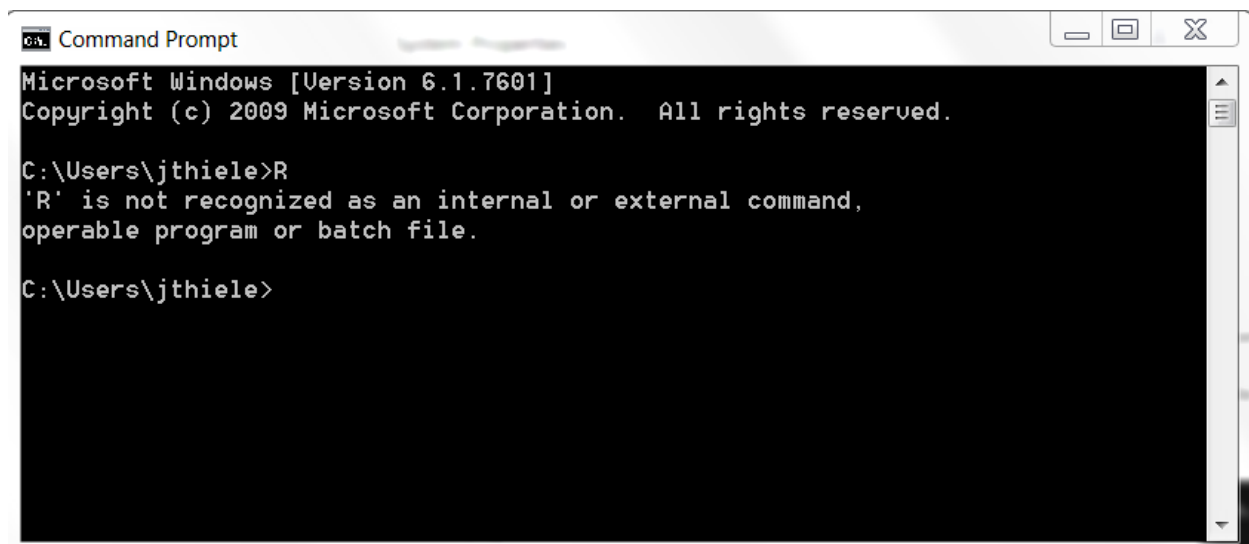


Now, append the PATH variable by %R_HOME%\bin\i386 (or directly by C:\Program Files\R\R-3.0.1\bin\i386).



4. **Test the new environment variables** by opening a MS DOS prompt and type R.

If you see this, your Path environment variable is wrong:

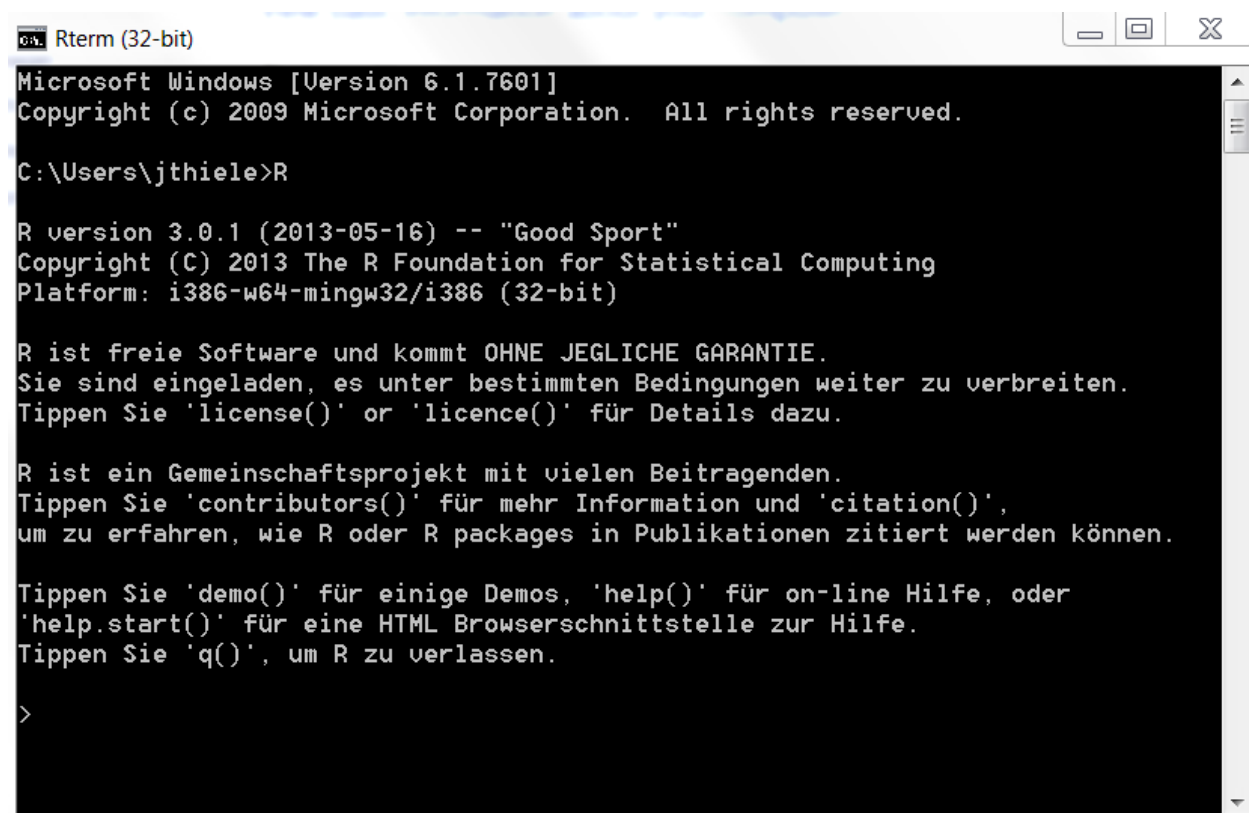


```
Command Prompt
Microsoft Windows [Version 6.1.7601]
Copyright (c) 2009 Microsoft Corporation. All rights reserved.

C:\Users\jthiele>R
'R' is not recognized as an internal or external command,
operable program or batch file.

C:\Users\jthiele>
```

If the Rterm opens, everything until now went ok (don't forget to open a new MS DOS prompt after editing the environment variables):



```
Rterm (32-bit)
Microsoft Windows [Version 6.1.7601]
Copyright (c) 2009 Microsoft Corporation. All rights reserved.

C:\Users\jthiele>R

R version 3.0.1 (2013-05-16) -- "Good Sport"
Copyright (C) 2013 The R Foundation for Statistical Computing
Platform: i386-w64-mingw32/i386 (32-bit)

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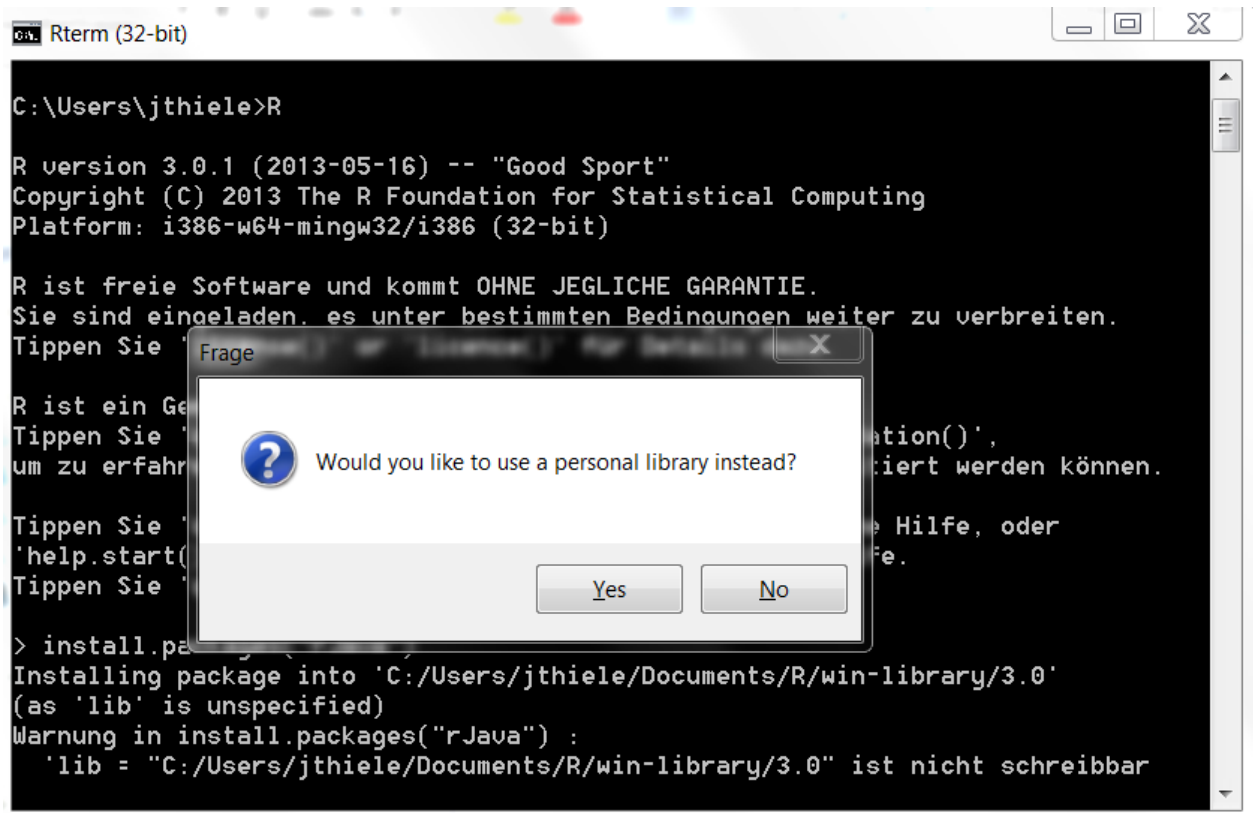
>
```

5. **Install rJava.**

Type into the open Rterm command line (make sure in the start up message of the Rterm there was written: *Platform: ... (32-bit)*):

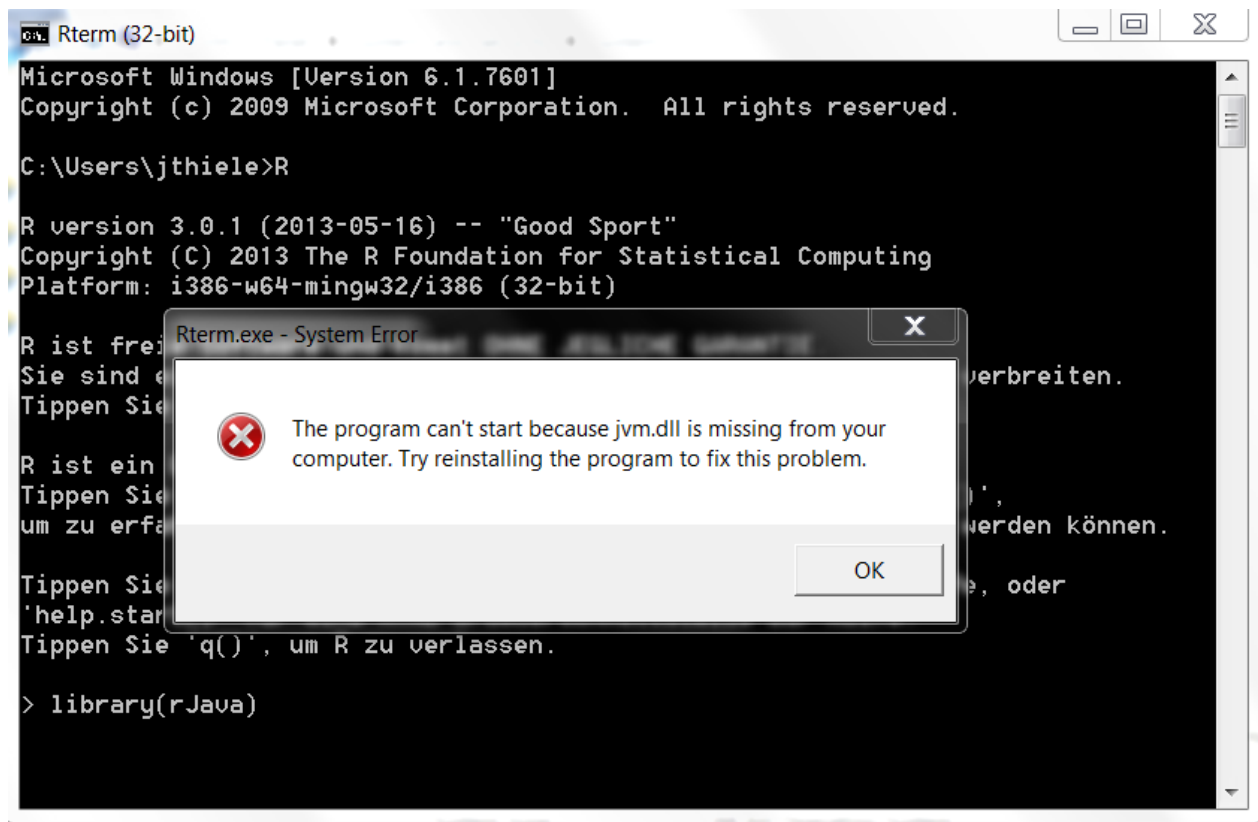
```
install.packages("rJava")
```

If you haven't started the MS DOS prompt as administrator you will be asked to create a personal library. Click "Yes" and keep the path given in mind. We will need it later (here it is C:\Users\jthiele\Documents\R\win-library\2.15):



6. Try to load rJava.

If you type in the Rterm `library(rJava)` and getting an error message that the `jvm.dll` cannot be found, go to step 7, otherwise go to step 9.



7. In case that **rJava cannot be loaded**:

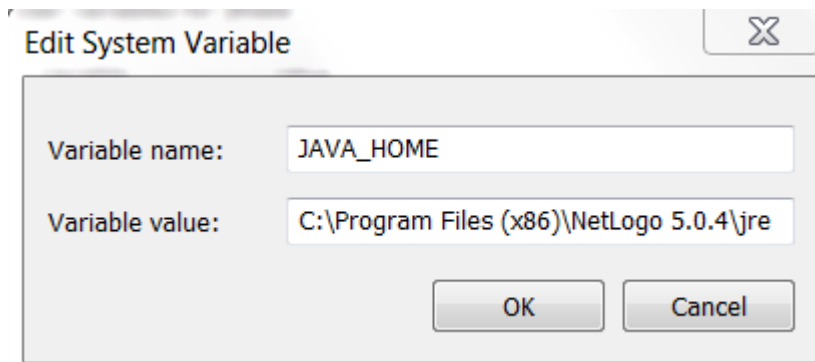
The reason could be that the `JAVA_HOME` environment variable refers to a 64-bit Java (or no Java was found).

First, check if there is a `JAVA_HOME` environment variable. Then check, if you have a 32-bit Java installed (check your `C:\Program Files (x86)` folder for Java installations). If so, go to step 8.

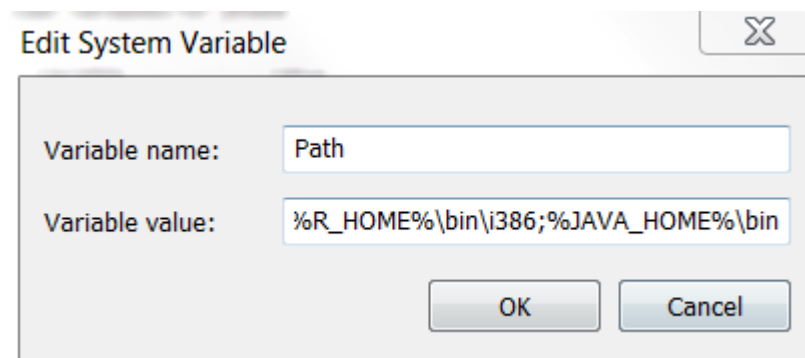
If you don't have a 32-bit Java installed use either the Java Runtime Environment (JRE) delivered together with NetLogo or install a new 32-bit Java.

For the first option do the following:

Set an environment variable `JAVA_HOME` to (adapt this path according to the destination directory in step 2) `C:\Program Files (x86)\NetLogo 5.0.4\jre`.



Now, append the *PATH* environment variable by `;%JAVA_HOME%/bin`.



Go to step 9.

For the second option (install a new 32-bit Java) get a 32-bit Java for example from here:

<http://www.oracle.com/technetwork/java/javase/downloads/index.html>

Do you want to run Java™ programs, or do you want to develop Java programs? If you want to run Java programs, but not develop them, download the Java Runtime Environment, or JRE™.

If you want to develop applications for Java, download the Java Development Kit, or JDK™. The JDK includes the JRE, so you do not have to download both separately.

[JRE MD5 Checksum](#)

Java SE Runtime Environment 7u25

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

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Product / File Description	File Size	Download
Linux x86	35.78 MB	jre-7u25-linux-i586.rpm
Linux x86	46.04 MB	jre-7u25-linux-i586.tar.gz
Linux x64	36.31 MB	jre-7u25-linux-x64.rpm
Linux x64	44.79 MB	jre-7u25-linux-x64.tar.gz
Mac OS X x64	50.62 MB	jre-7u25-macosx-x64.dmg
Mac OS X x64	46.81 MB	jre-7u25-macosx-x64.tar.gz
Solaris x86	45.7 MB	jre-7u25-solaris-i586.tar.gz
Solaris x64	14.93 MB	jre-7u25-solaris-x64.tar.gz
Solaris SPARC	48.92 MB	jre-7u25-solaris-sparc.tar.gz
Solaris SPARC 64-bit	17.5 MB	jre-7u25-solaris-sparcv9.tar.gz
Windows x86 Online	0.86 MB	jre-7u25-windows-i586-iftw.exe
Windows x86 Offline	30.25 MB	jre-7u25-windows-i586.exe
Windows x86	40 MB	jre-7u25-windows-i586.tar.gz
Windows x64	31.61 MB	jre-7u25-windows-x64.exe
Windows x64	41.69 MB	jre-7u25-windows-x64.tar.gz

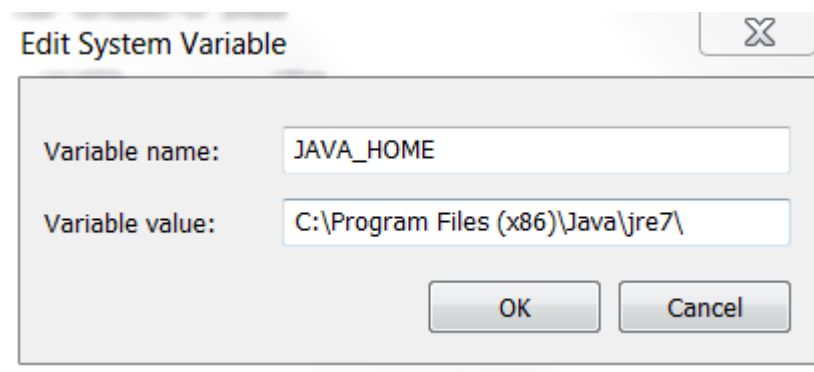
Choose the Windows x86 (32-bit) Online or Offline version.

At the beginning of the installation check the box "Change Destination folder" (or similar) to check, where Java will be installed.

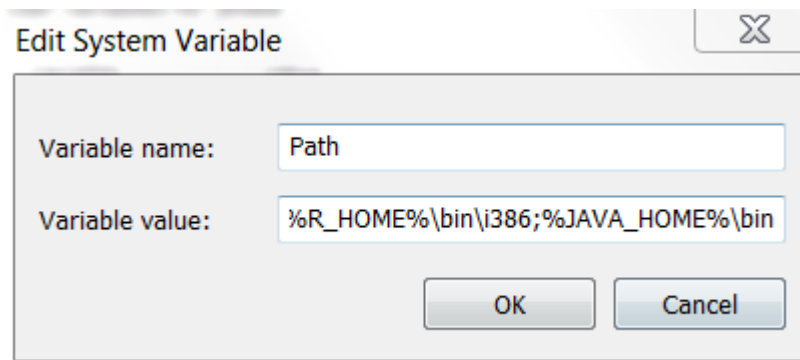
It should be something like the following (*C:\Program Files (x86)\Java\jre7*):



8. Add/Change the *JAVA_HOME* environment variable with the path to the 32-bit Java (maybe not necessary but cleaner).



Now, append the *PATH* environment variable by *;%JAVA_HOME%/bin*.

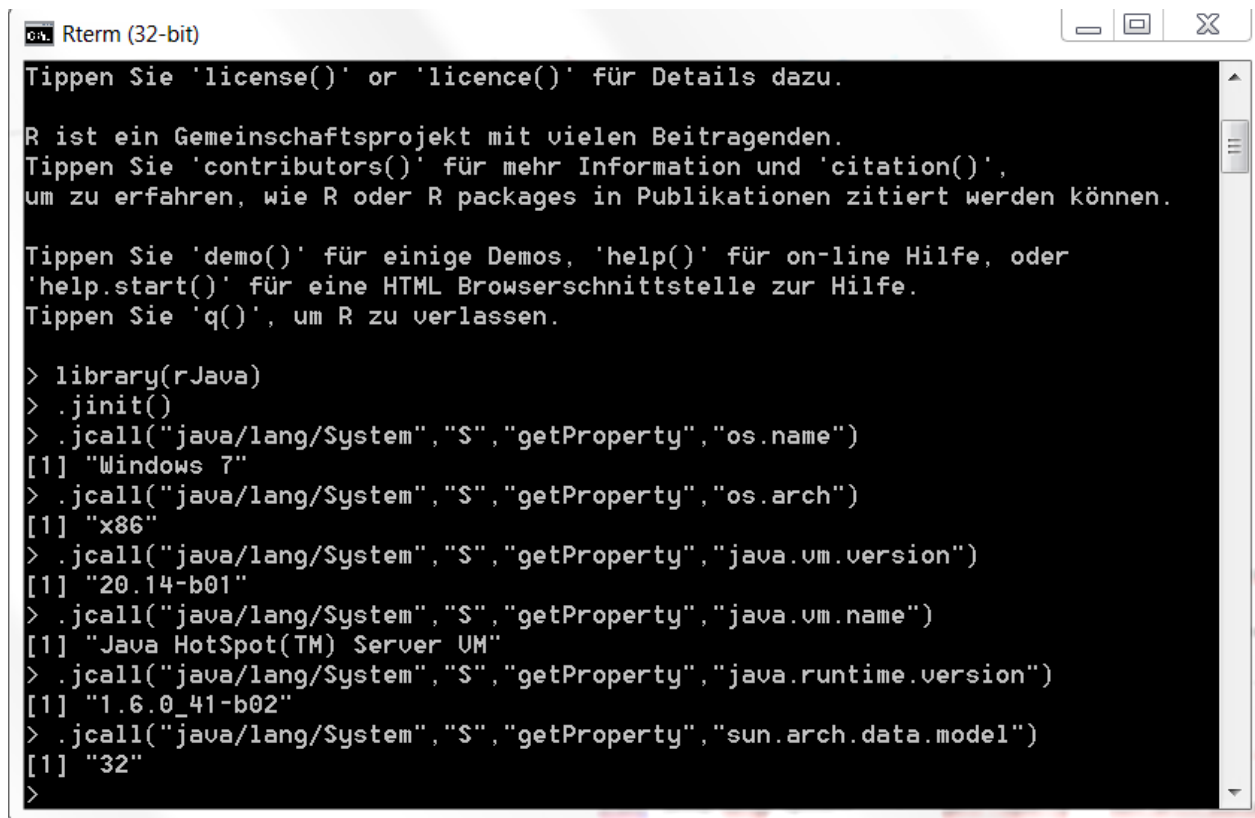


Then, open a new MS DOS prompt and start the Rterm again. Type within the Rterm command line again *library(rJava)*. Should work now (means no error message is shown)!

9. See **which Java version is running with rJava**.

Type in the Rterm (after loading rJava: *library(rJava)*):

```
.jinit()  
.jcall("java/lang/System", "S", "getProperty", "os.name")  
.jcall("java/lang/System", "S", "getProperty", "os.arch")  
.jcall("java/lang/System", "S", "getProperty", "java.vm.version")  
.jcall("java/lang/System", "S", "getProperty", "java.vm.name")  
.jcall("java/lang/System", "S", "getProperty", "java.vm.info")  
.jcall("java/lang/System", "S", "getProperty", "java.runtime.version")  
.jcall("java/lang/System", "S", "getProperty", "sun.arch.data.model")
```

```
Rterm (32-bit)

Tippen Sie 'license()' or 'licence()' für Details dazu.

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'help.start()' für eine HTML Browserschnittstelle zur Hilfe.
Tippen Sie 'q()', um R zu verlassen.

> library(rJava)
> .jinit()
> .jcall("java/lang/System","S","getProperty","os.name")
[1] "Windows 7"
> .jcall("java/lang/System","S","getProperty","os.arch")
[1] "x86"
> .jcall("java/lang/System","S","getProperty","java.vm.version")
[1] "20.14-b01"
> .jcall("java/lang/System","S","getProperty","java.vm.name")
[1] "Java HotSpot(TM) Server VM"
> .jcall("java/lang/System","S","getProperty","java.runtime.version")
[1] "1.6.0_41-b02"
> .jcall("java/lang/System","S","getProperty","sun.arch.data.model")
[1] "32"
>
```

10. Set JRI_HOME environment variable.

Now, come back to the path you have in mind from step 5, the installation path of the rJava package.

Here, it was `C:\Users\jthiele\Documents\R\win-library\3.0`.

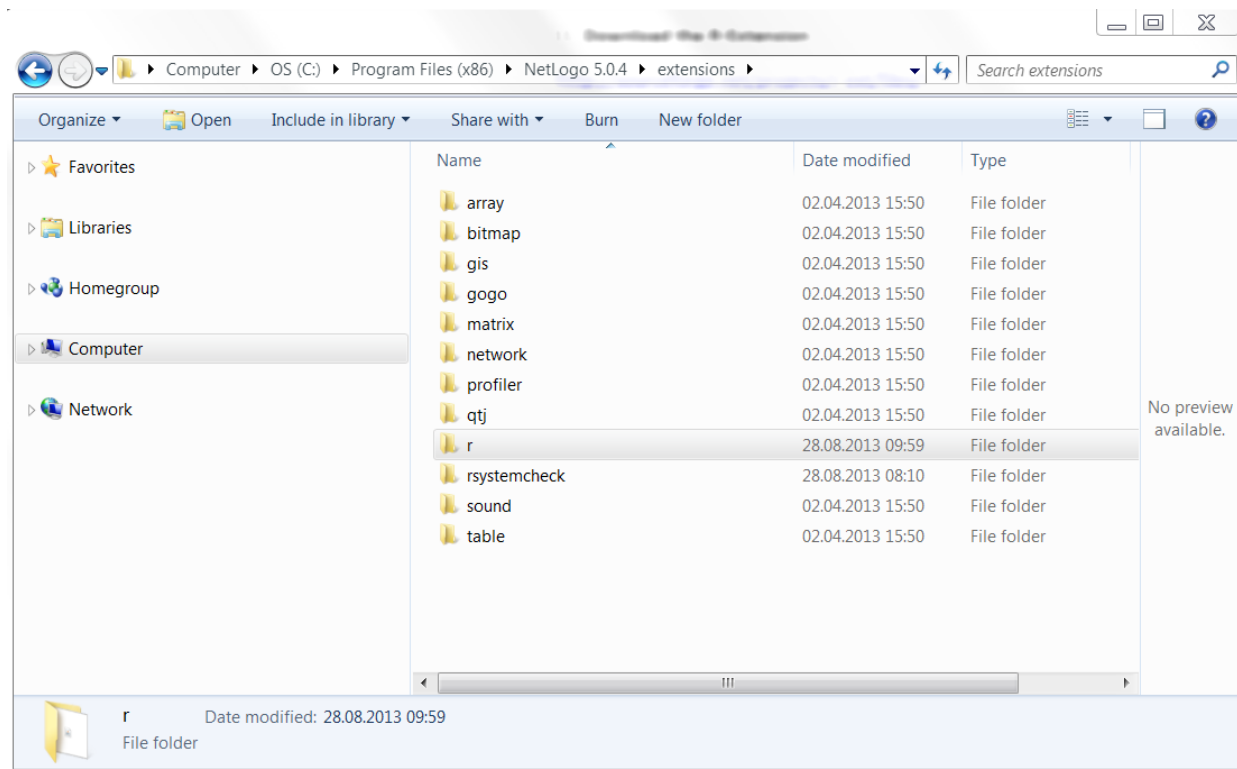
We will create a new environment variable with name `JRI_HOME` and value `C:\Users\jthiele\Documents\R\win-library\3.0\rJava\jri`.



11. Download the R-Extension

(<http://sourceforge.net/projects/r-ext/files/>).

Extract the zip folder and copy only the folder `r` into the extensions folder of the NetLogo installation (here: `C:\Program Files (x86)\NetLogo 5.0.4\extensions`).



12. Test it all together!

Open NetLogo 5.0.4. Write into the Procedures Tab:

```
extensions [r]
```

and press the Check button (If NetLogo closes immediately something with the *R_HOME* and *PATH* variable is wrong). If there is a problem with rJava/JRI you should see an error message.

Otherwise go to the Interface Tab and type into the Command Center:

```
print r:get "rnorm(10)"
```

You should see a list of 10 random values.

