



Data Science Academy

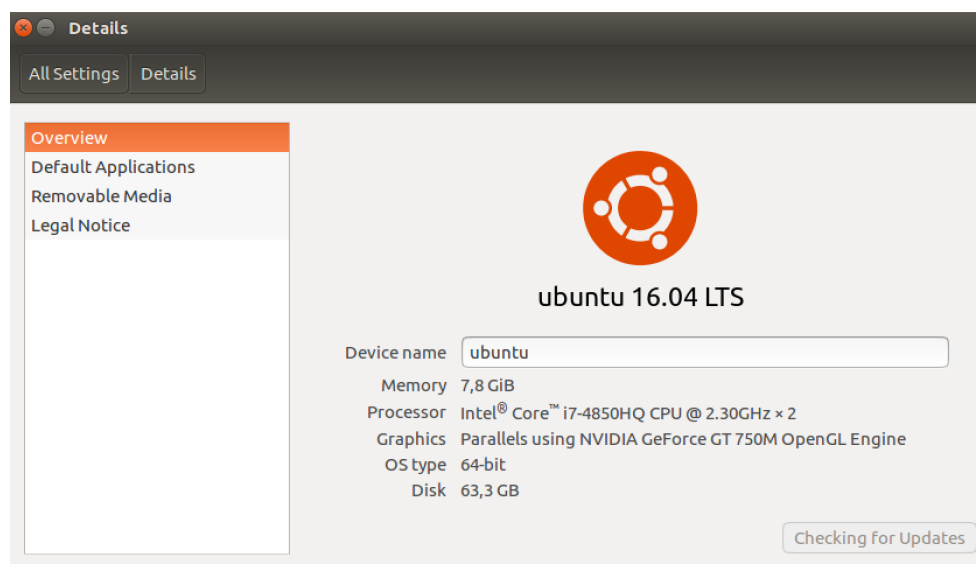
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R – Fundamentos para Análise de Dados

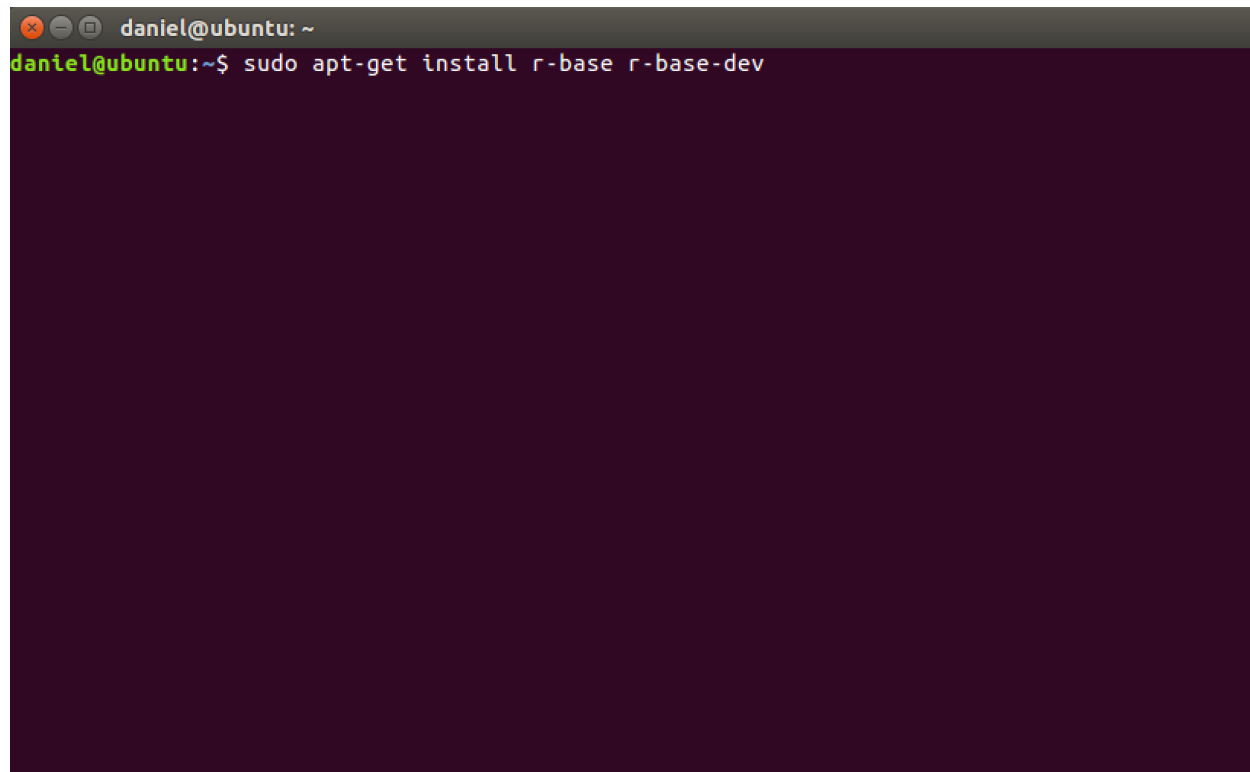
Instalando R e R Studio no Linux

1. A instalação do R e R Studio abaixo foi realizada no Ubuntu 16.04 LTS. A instalação pode ser feita em outras distribuições Linux, com algumas possíveis variações no procedimento de instalação.

```
Distributor ID: Ubuntu
Description:   Ubuntu 16.04 LTS
Release:       16.04
Codename:      xenial
```

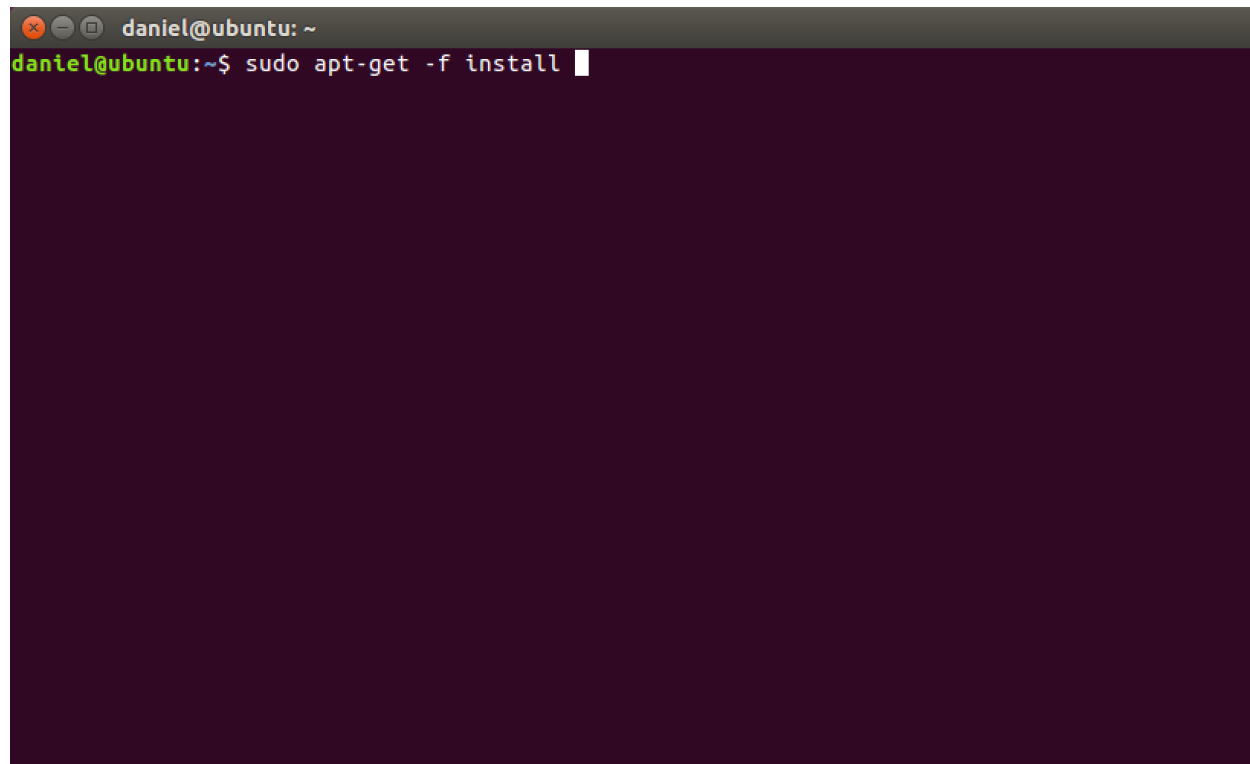


2. Abra o terminal e digite o comando conforme tela abaixo, para instalar os pacotes r-base e o r-base-dev.

A terminal window with a dark background and light text. The title bar at the top shows a window icon, a close button, and the text 'daniel@ubuntu: ~'. The terminal content shows the prompt 'daniel@ubuntu:~\$' followed by the command 'sudo apt-get install r-base r-base-dev'.

```
daniel@ubuntu: ~  
daniel@ubuntu:~$ sudo apt-get install r-base r-base-dev
```

3. Pode ser necessário ter que executar o comando abaixo, no caso de algumas dependências não estarem instaladas.

A terminal window with a dark purple background. The title bar at the top shows three window control icons (close, minimize, maximize) and the text 'daniel@ubuntu: ~'. The terminal content shows the prompt 'daniel@ubuntu:~\$' followed by the command 'sudo apt-get -f install' and a white cursor at the end of the line.

```
daniel@ubuntu:~$ sudo apt-get -f install
```

4. Instalação do R concluída com sucesso.

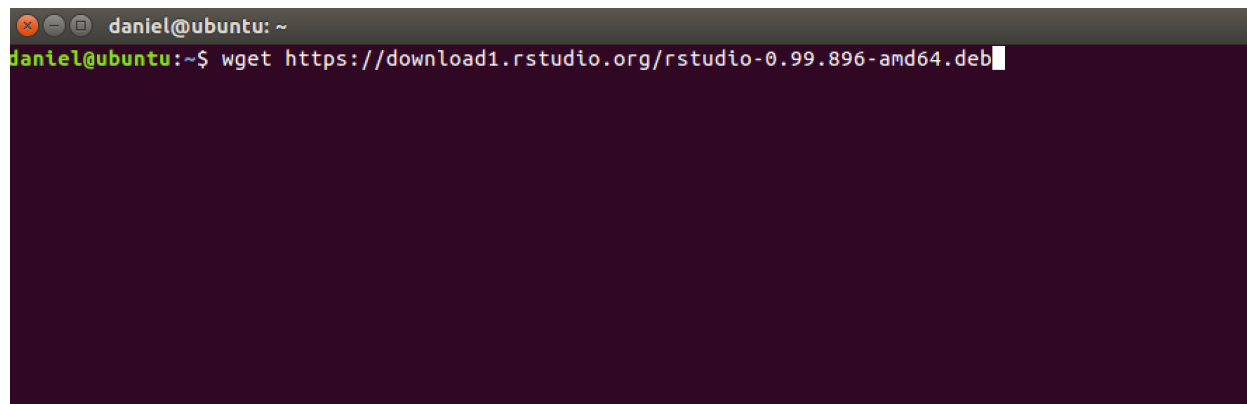
```
daniel@ubuntu: ~  
Creating config file /etc/R/Renviron with new version  
Setting up r-cran-boot (1.3-17-1) ...  
Setting up r-cran-cluster (2.0.3-1) ...  
Setting up r-cran-foreign (0.8.66-1) ...  
Setting up r-cran-mass (7.3-45-1) ...  
Setting up r-cran-kernsmooth (2.23-15-1) ...  
Setting up r-cran-lattice (0.20-33-1) ...  
Setting up r-cran-nlme (3.1.124-1) ...  
Setting up r-cran-matrix (1.2-3-1) ...  
Setting up r-cran-mgcv (1.8-11-1) ...  
Setting up r-cran-survival (2.38-3-1) ...  
Setting up r-cran-rpart (4.1-10-1) ...  
Setting up r-cran-class (7.3-14-1) ...  
Setting up r-cran-nnet (7.3-12-1) ...  
Setting up r-cran-spatial (7.3-11-1) ...  
Setting up r-cran-codetools (0.2-14-1) ...  
Setting up r-recommended (3.2.3-4) ...  
Setting up r-base (3.2.3-4) ...  
Setting up liblzma-dev:amd64 (5.1.1alpha+20120614-2ubuntu2) ...  
Setting up r-doc-html (3.2.3-4) ...  
Setting up r-base-html (3.2.3-4) ...  
Setting up dh-strip-nondeterminism (0.015-1) ...  
Setting up debhelper (9.20160115ubuntu3) ...  
Setting up dh-translations (129) ...  
Setting up cdb (0.4.130ubuntu2) ...  
Setting up r-base-dev (3.2.3-4) ...  
Processing triggers for libc-bin (2.23-0ubuntu3) ...  
daniel@ubuntu:~$
```

5. Para a instalação do RStudio, abra o terminal e digite o comando conforme tela abaixo.

```
daniel@ubuntu: ~  
daniel@ubuntu:~$ sudo apt-get install gdebi-core
```

```
daniel@ubuntu: ~  
daniel@ubuntu:~$ sudo apt-get install gdebi-core  
Reading package lists... Done  
Building dependency tree  
Reading state information... Done  
The following NEW packages will be installed:  
  gdebi-core  
0 upgraded, 1 newly installed, 0 to remove and 234 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://us.archive.ubuntu.com/ubuntu xenial/main amd64 gdebi-core all 0.9.5.7ubuntu1 [9.716 B  
]  
Fetched 9.716 B in 0s (45,4 kB/s)  
Selecting previously unselected package gdebi-core.  
(Reading database ... 210800 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) ...  
daniel@ubuntu:~$
```

6. Fazendo o download do RStudio.

A terminal window with a dark background and light text. The title bar at the top reads 'daniel@ubuntu: ~'. The command prompt shows 'daniel@ubuntu:~\$' followed by the command 'wget https://download1.rstudio.org/rstudio-0.99.896-amd64.deb' with a cursor at the end of the line.

```
daniel@ubuntu: ~  
daniel@ubuntu:~$ wget https://download1.rstudio.org/rstudio-0.99.896-amd64.deb
```

7. Download em andamento.

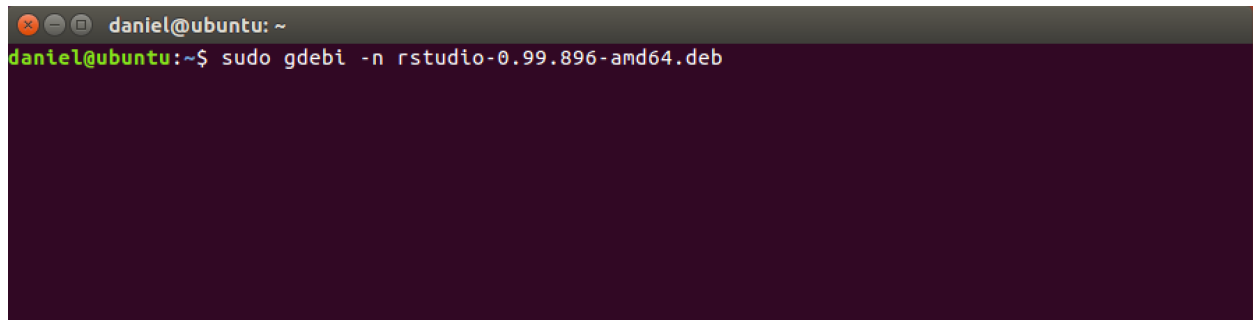
```
daniel@ubuntu: ~  
daniel@ubuntu:~$ wget https://download1.rstudio.org/rstudio-0.99.896-amd64.deb  
--2016-06-26 16:53:07-- https://download1.rstudio.org/rstudio-0.99.896-amd64.deb  
Resolving download1.rstudio.org (download1.rstudio.org)... 52.84.24.59, 52.84.24.187, 52.84.24.104  
, ...  
Connecting to download1.rstudio.org (download1.rstudio.org)|52.84.24.59|:443... connected.  
HTTP request sent, awaiting response... 200 OK  
Length: 92526262 (88M) [application/x-deb]  
Saving to: 'rstudio-0.99.896-amd64.deb'  
  
rstudio-0.99.896-amd64.d  34%[=====>                ] 30,54M  3,36MB/s   eta 19s
```


8. Download concluído.



```
daniel@ubuntu: ~  
daniel@ubuntu:~$ wget https://download1.rstudio.org/rstudio-0.99.896-amd64.deb  
--2016-06-26 16:53:07-- https://download1.rstudio.org/rstudio-0.99.896-amd64.deb  
Resolving download1.rstudio.org (download1.rstudio.org)... 52.84.24.59, 52.84.24.187, 52.84.24.104  
, ...  
Connecting to download1.rstudio.org (download1.rstudio.org)|52.84.24.59|:443... connected.  
HTTP request sent, awaiting response... 200 OK  
Length: 92526262 (88M) [application/x-deb]  
Saving to: 'rstudio-0.99.896-amd64.deb'  
  
rstudio-0.99.896-amd64.d 100%[=====>] 88,24M 3,52MB/s in 26s  
2016-06-26 16:53:34 (3,35 MB/s) - 'rstudio-0.99.896-amd64.deb' saved [92526262/92526262]  
  
daniel@ubuntu:~$
```

9. Instalando o RStudio.

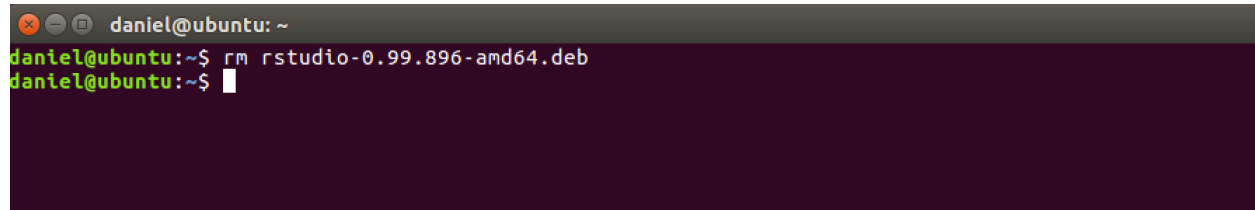
A terminal window with a dark background and light text. The title bar shows 'daniel@ubuntu: ~'. The command 'sudo gdebi -n rstudio-0.99.896-amd64.deb' has been entered and executed. The rest of the terminal area is empty.

```
daniel@ubuntu: ~  
daniel@ubuntu:~$ sudo gdebi -n rstudio-0.99.896-amd64.deb
```

10. Instalação concluída com sucesso.

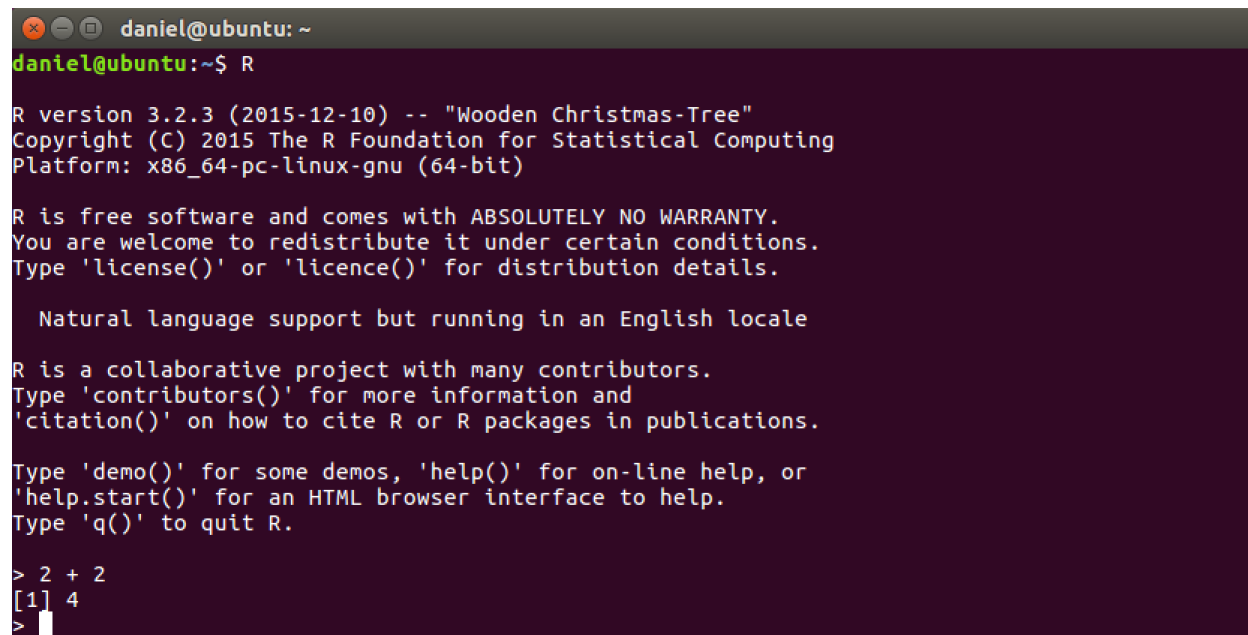
```
daniel@ubuntu: ~  
Preparing to unpack .../libgstreamer0.10-0_0.10.36-1.5ubuntu1_amd64.deb ...  
Unpacking libgstreamer0.10-0:amd64 (0.10.36-1.5ubuntu1) ...  
Selecting previously unselected package libgstreamer-plugins-base0.10-0:amd64.  
Preparing to unpack .../libgstreamer-plugins-base0.10-0_0.10.36-2_amd64.deb ...  
Unpacking libgstreamer-plugins-base0.10-0:amd64 (0.10.36-2) ...  
Selecting previously unselected package libjpeg62:amd64.  
Preparing to unpack .../libjpeg62_1%3a6b2-2_amd64.deb ...  
Unpacking libjpeg62:amd64 (1:6b2-2) ...  
Setting up libgstreamer0.10-0:amd64 (0.10.36-1.5ubuntu1) ...  
Setting up libgstreamer-plugins-base0.10-0:amd64 (0.10.36-2) ...  
Setting up libjpeg62:amd64 (1:6b2-2) ...  
Processing triggers for libc-bin (2.23-0ubuntu3) ...  
Selecting previously unselected package rstudio.  
(Reading database ... 210880 files and directories currently installed.)  
Preparing to unpack rstudio-0.99.896-amd64.deb ...  
Unpacking rstudio (0.99.896) ...  
Setting up rstudio (0.99.896) ...  
Processing triggers for shared-mime-info (1.5-2) ...  
Processing triggers for hicolor-icon-theme (0.15-0ubuntu1) ...  
Processing triggers for gnome-menus (3.13.3-6ubuntu3) ...  
Processing triggers for desktop-file-utils (0.22-1ubuntu5) ...  
Processing triggers for bamfdaemon (0.5.3~b2r0+16.04.20160415-0ubuntu1) ...  
Rebuilding /usr/share/applications/bamf-2.index...  
Processing triggers for mime-support (3.59ubuntu1) ...  
daniel@ubuntu:~$
```

11. Remover o arquivo de instalação.

A terminal window with a dark background and light text. The title bar shows 'daniel@ubuntu: ~'. The prompt is 'daniel@ubuntu:~\$'. The command 'rm rstudio-0.99.896-amd64.deb' has been entered and executed. The prompt is now 'daniel@ubuntu:~\$' with a cursor.

```
daniel@ubuntu: ~  
daniel@ubuntu:~$ rm rstudio-0.99.896-amd64.deb  
daniel@ubuntu:~$
```

12. Testando o console do R.

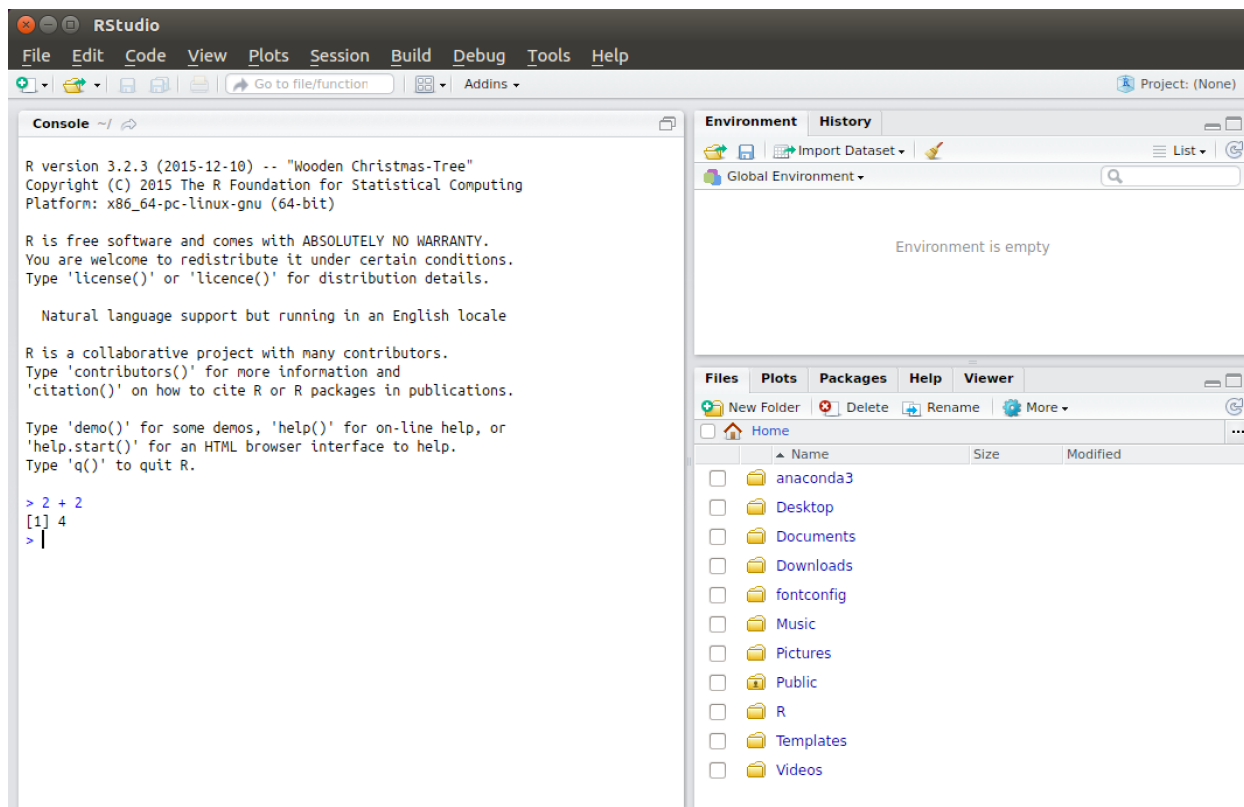


```
daniel@ubuntu: ~  
daniel@ubuntu:~$ R  
  
R version 3.2.3 (2015-12-10) -- "Wooden Christmas-Tree"  
Copyright (C) 2015 The R Foundation for Statistical Computing  
Platform: x86_64-pc-linux-gnu (64-bit)  
  
R is free software and comes with ABSOLUTELY NO WARRANTY.  
You are welcome to redistribute it under certain conditions.  
Type 'license()' or 'licence()' for distribution details.  
  
Natural language support but running in an English locale  
  
R is a collaborative project with many contributors.  
Type 'contributors()' for more information and  
'citation()' on how to cite R or R packages in publications.  
  
Type 'demo()' for some demos, 'help()' for on-line help, or  
'help.start()' for an HTML browser interface to help.  
Type 'q()' to quit R.  
  
> 2 + 2  
[1] 4  
> 
```

13. Testando a instalação do RStudio. Instalação feita com sucesso!

Abra o terminal e digite:

```
daniel@ubuntu: ~  
daniel@ubuntu:~$ rstudio
```



Parabéns!

Sua máquina está pronta para iniciar o curso!