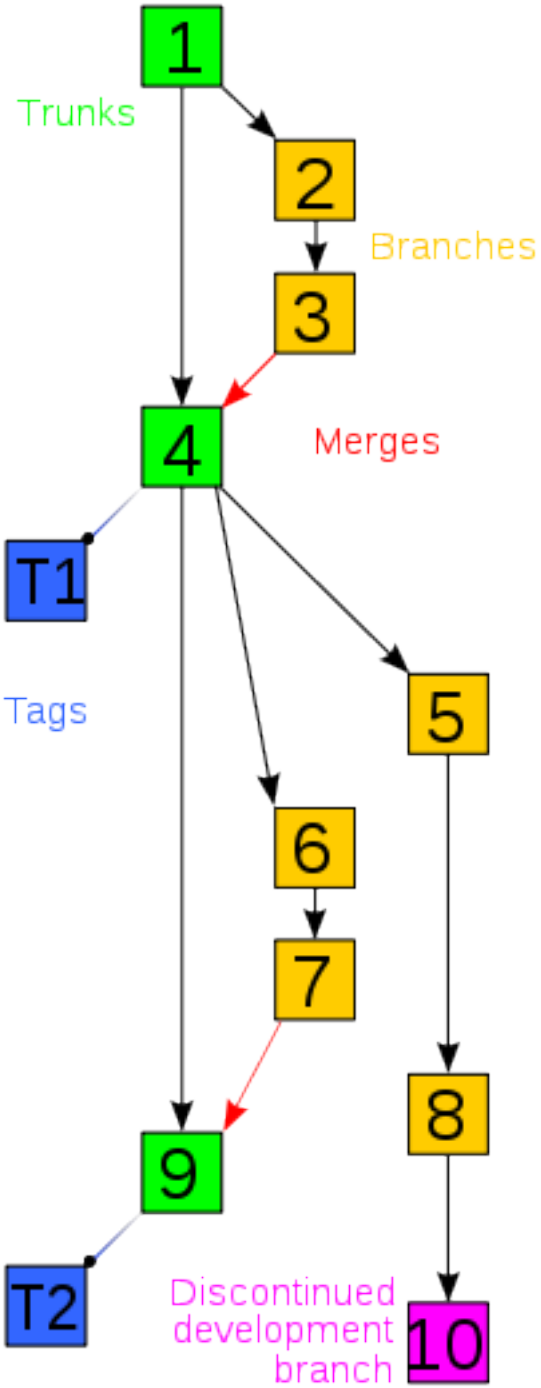
GIT

Uma Pequena Introdução ao GIT

Rodrigo Sol

Controle de Versão



Centralizado x Distribuído

X

Microsoft Visual SourceSafe 2005

SNV

Connecting People's Capacities

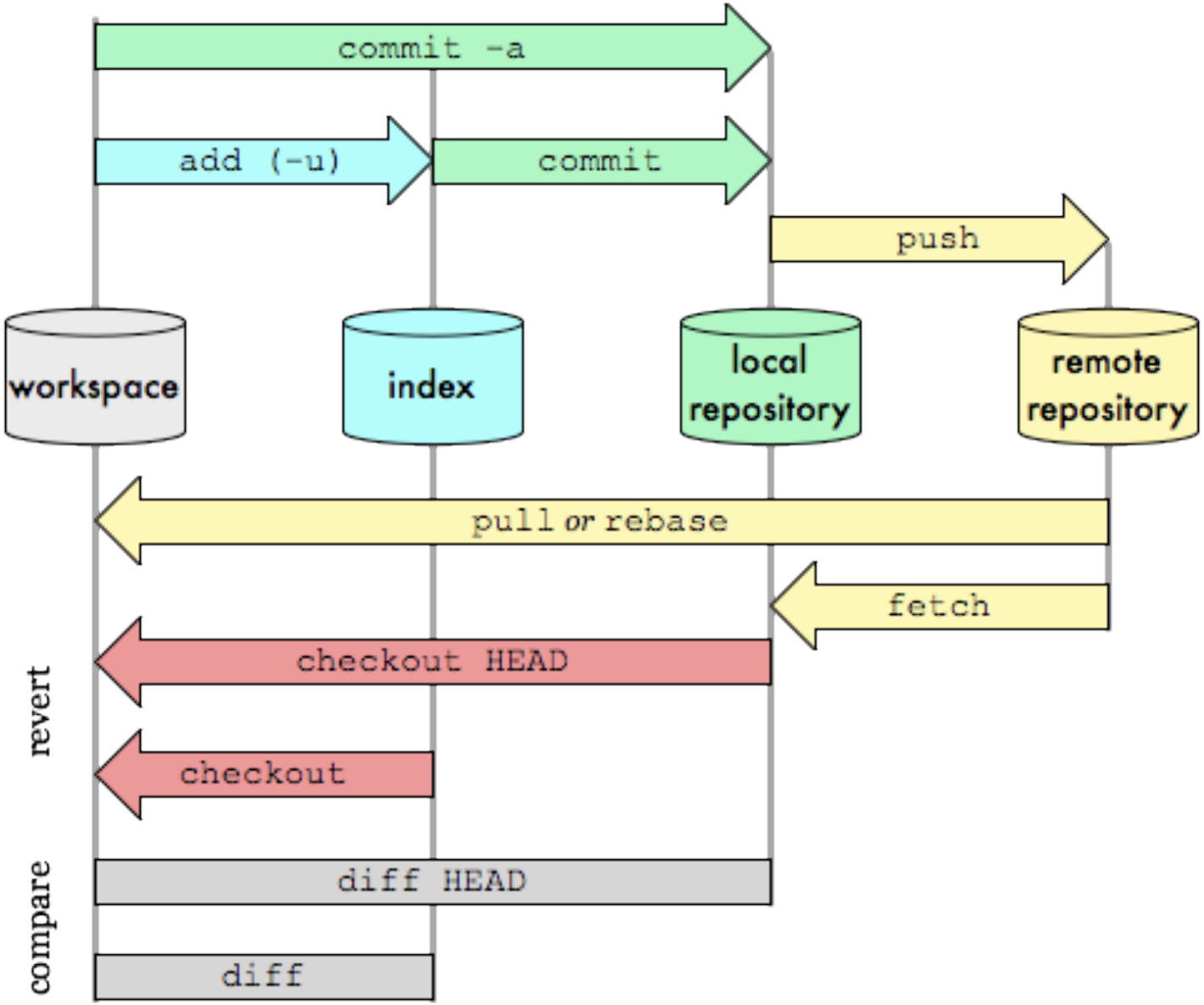
Git is...

- Git is **a free & open source, distributed version control system** designed to handle everything from small to very large projects with speed and efficiency


TRANSMETA
SOFTWARE

Git Data Transport Commands

http://osteele.com



Conceitos Básicos

- Diretório de Trabalho
  - O diretório de trabalho é o diretório que mantém os arquivos que você está trabalhando
- Index
  - O Index é utilizado como uma área intermediária entre o diretório de trabalho e o repositório
- Repositório
  - Contém todas as versões de todos as artefatos

Criando um Repositório

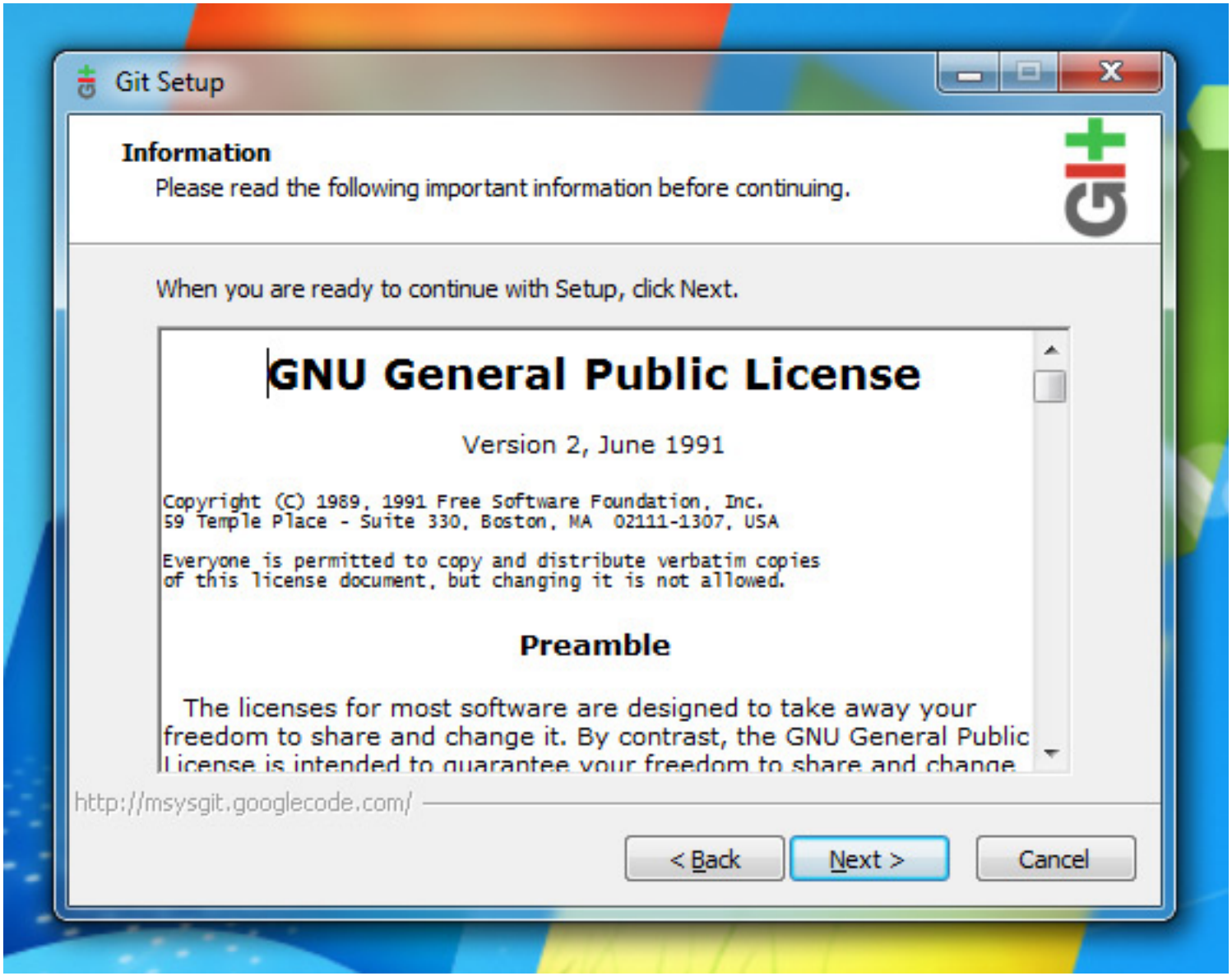
- git init .
  - Initialized empty Git repository in /Users/rodrigosol/opt/academia/Cursos/.git/
- cd my_repo

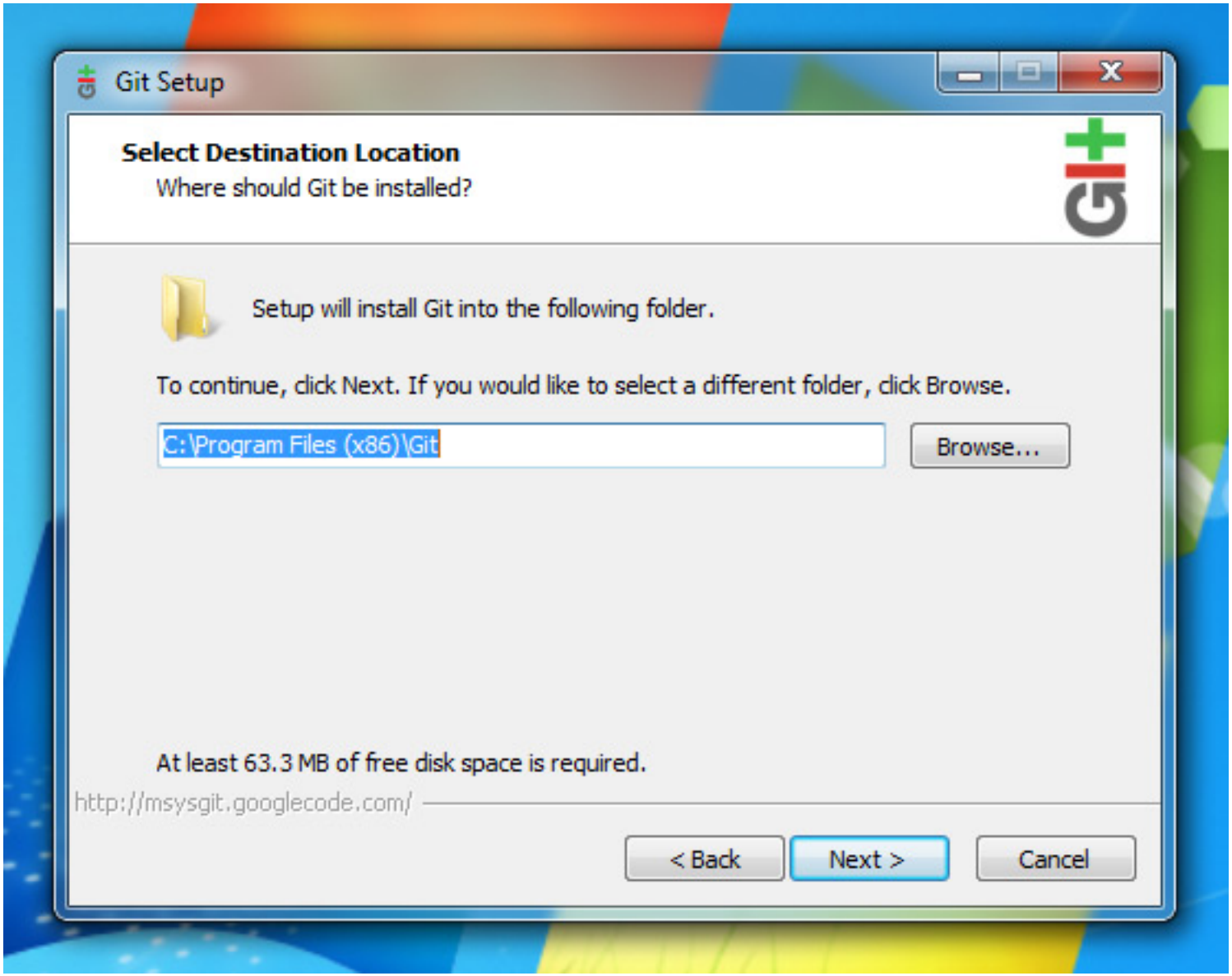
$>**git status**
On branch master
Your branch is behind 'origin/master' by 11 commits, and can be fast-forwarded.
#
 # Changes to be committed:
(use "git reset HEAD <file>..." to unstage)
#
modified: daemon.c
#
 # Changed but not updated:
(use "git add <file>..." to update what will be committed)
#
modified: grep.c
modified: grep.h
#
 # Untracked files:
(use "git add <file>..." to include in what will be committed)
#
blametree
blametree-init
git-gui/git-citool

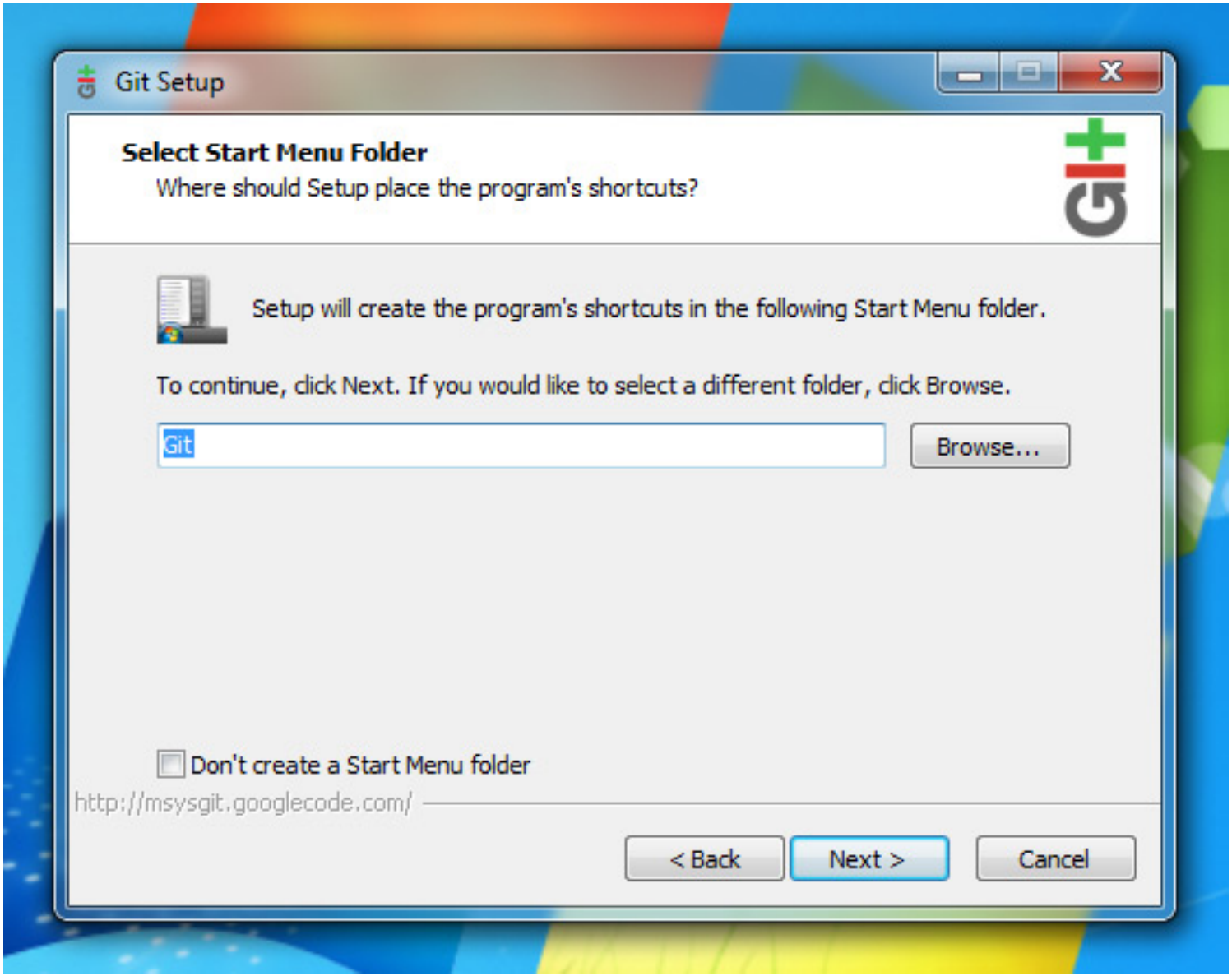
Instalando o git no Windows

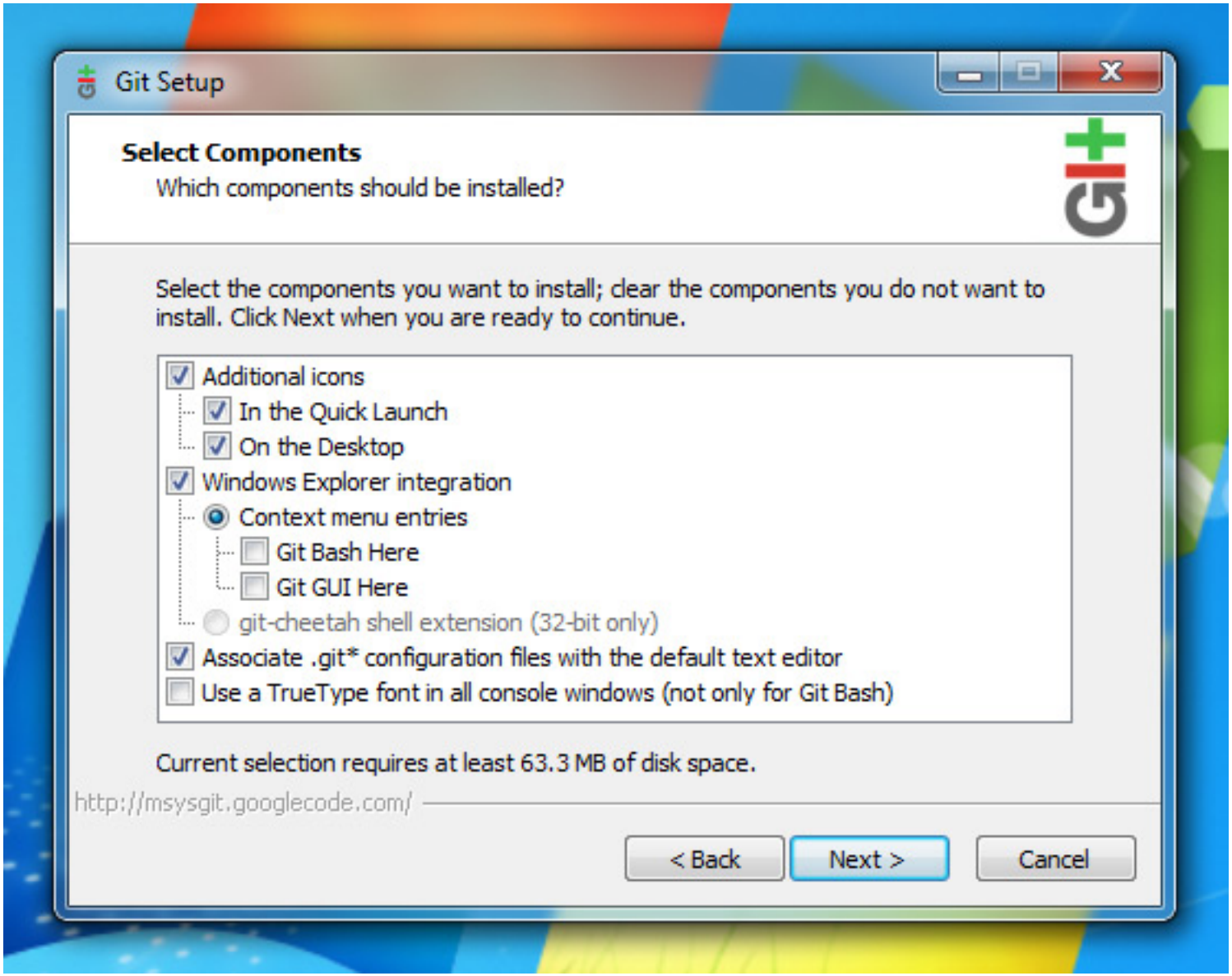
- Baixe o **git for windows**
  - **http://code.google.com/p/msysgit/downloads/list**

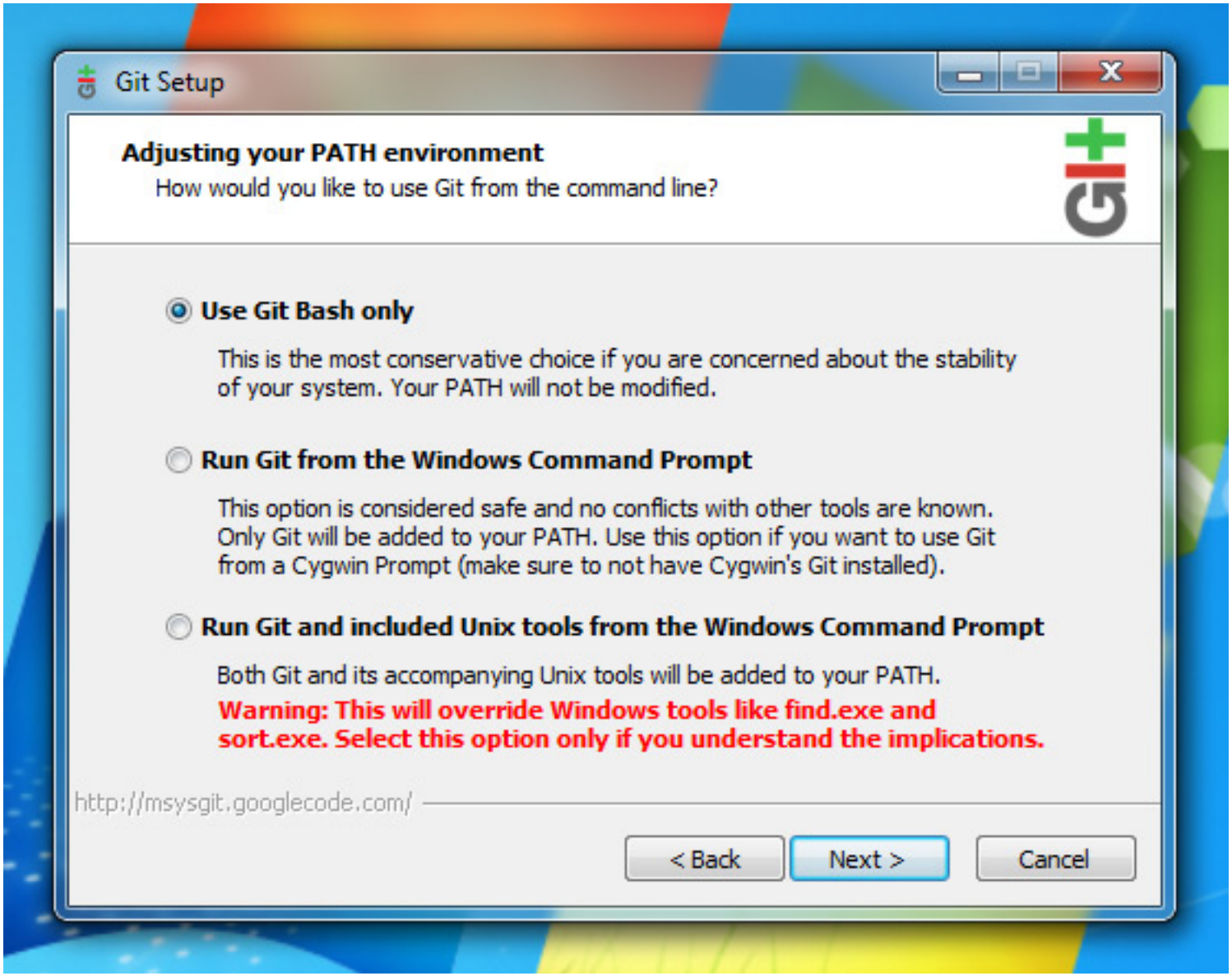

Git Setup
Welcome to the Git Setup Wizard
This will install Git version 1.7.4-preview20110204 on your computer.
It is recommended that you close all other applications before continuing.
Click Next to continue, or Cancel to exit Setup.
Next >
Cancel

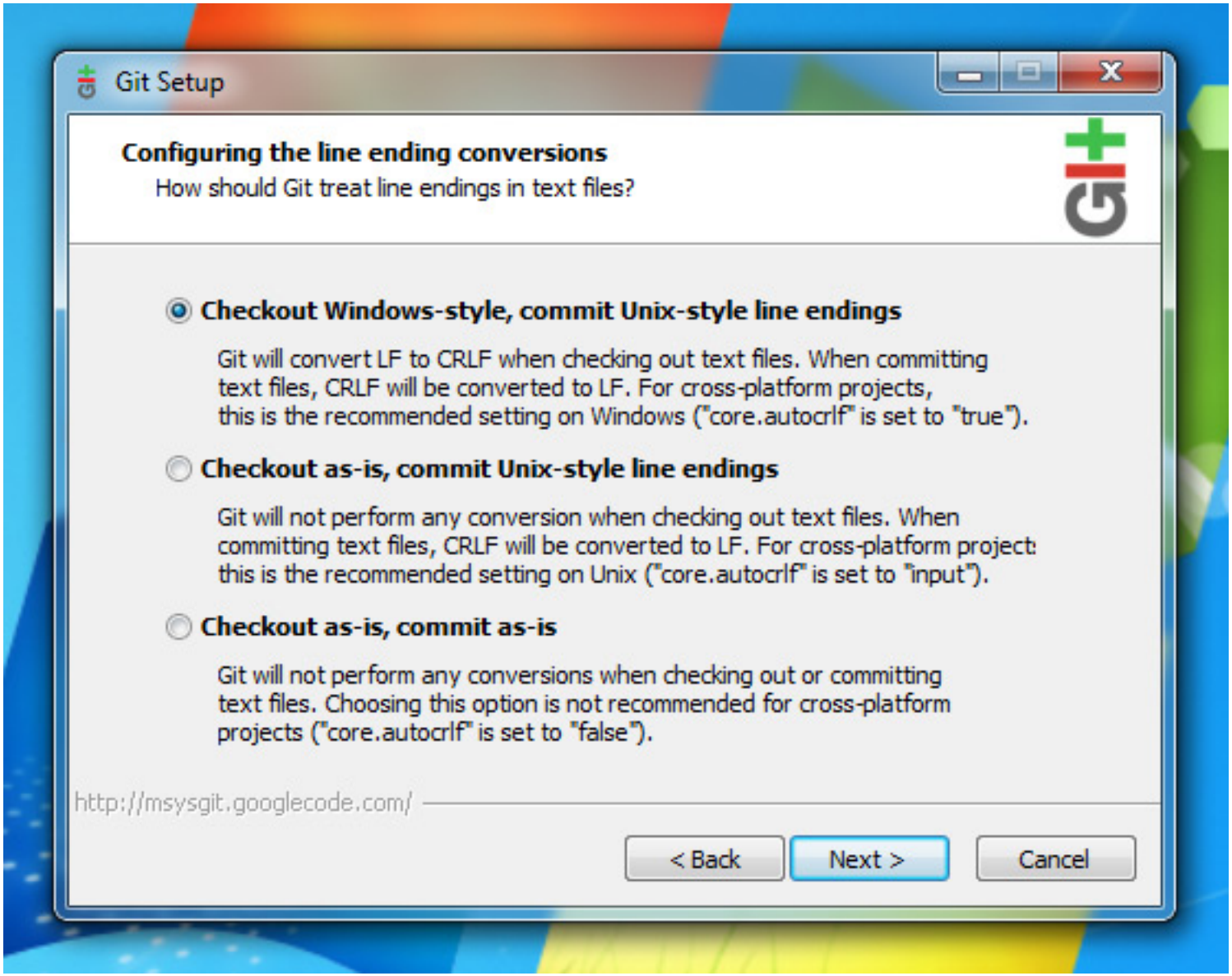

Git Setup
Information
Please read the following important information before continuing.
When you are ready to continue with Setup, click Next.
GNU General Public License
Version 2, June 1991
Copyright (C) 1989, 1991 Free Software Foundation, Inc.
59 Temple Place - Suite 330, Boston, MA 02111-1307, USA
Everyone is permitted to copy and distribute verbatim copies
of this license document, but changing it is not allowed.
Preamble
The licenses for most software are designed to take away your
freedom to share and change it. By contrast, the GNU General Public
License is intended to guarantee your freedom to share and change
http://msysgit.googlecode.com/
< Back
Next >
Cancel

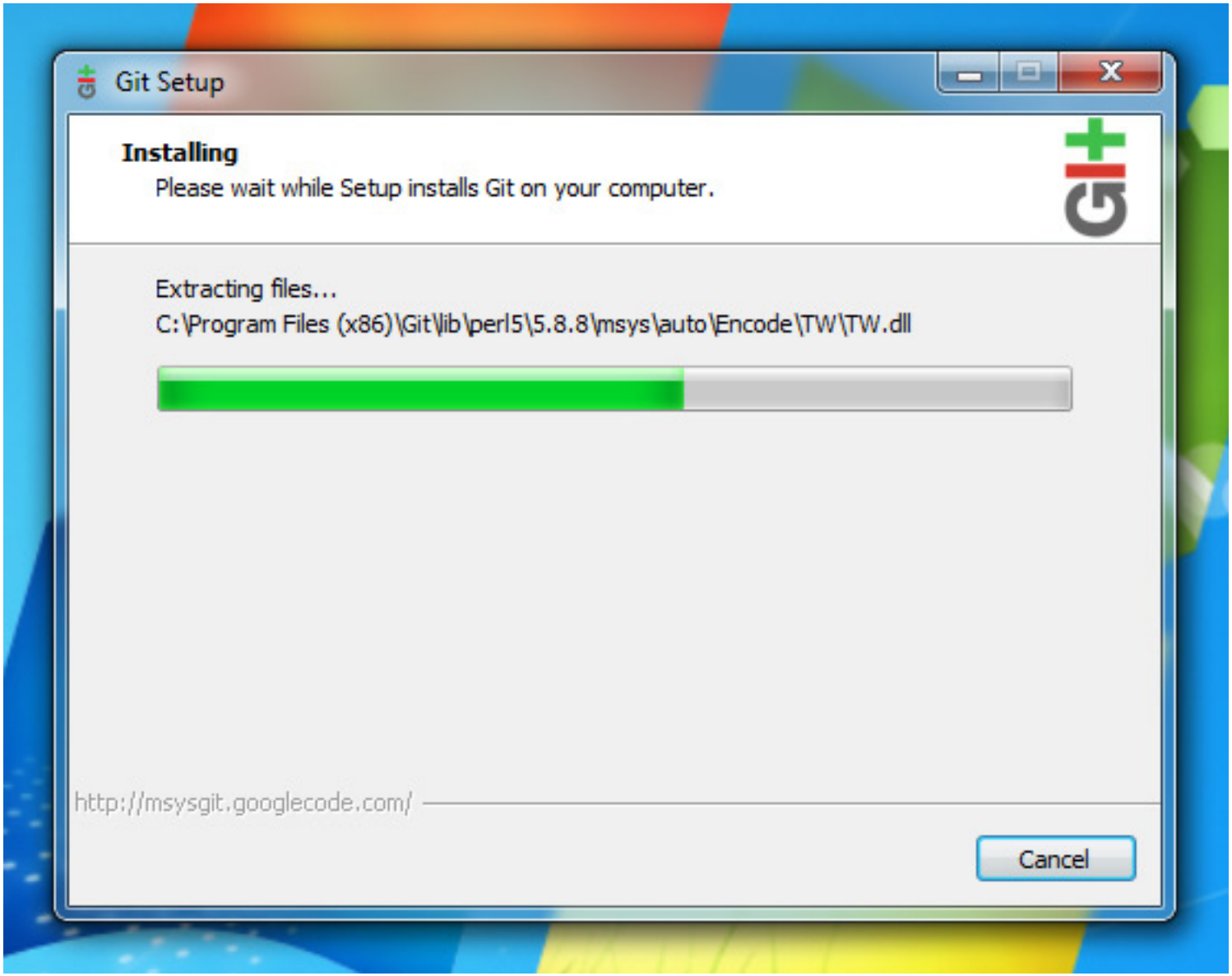

Git Setup
Select Destination Location
Where should Git be installed?
Setup will install Git into the following folder.
To continue, click Next. If you would like to select a different folder, click Browse.
C:\Program Files (x86)\Git
Browse...
At least 63.3 MB of free disk space is required.
http://msysgit.googlecode.com/
< Back
Next >
Cancel

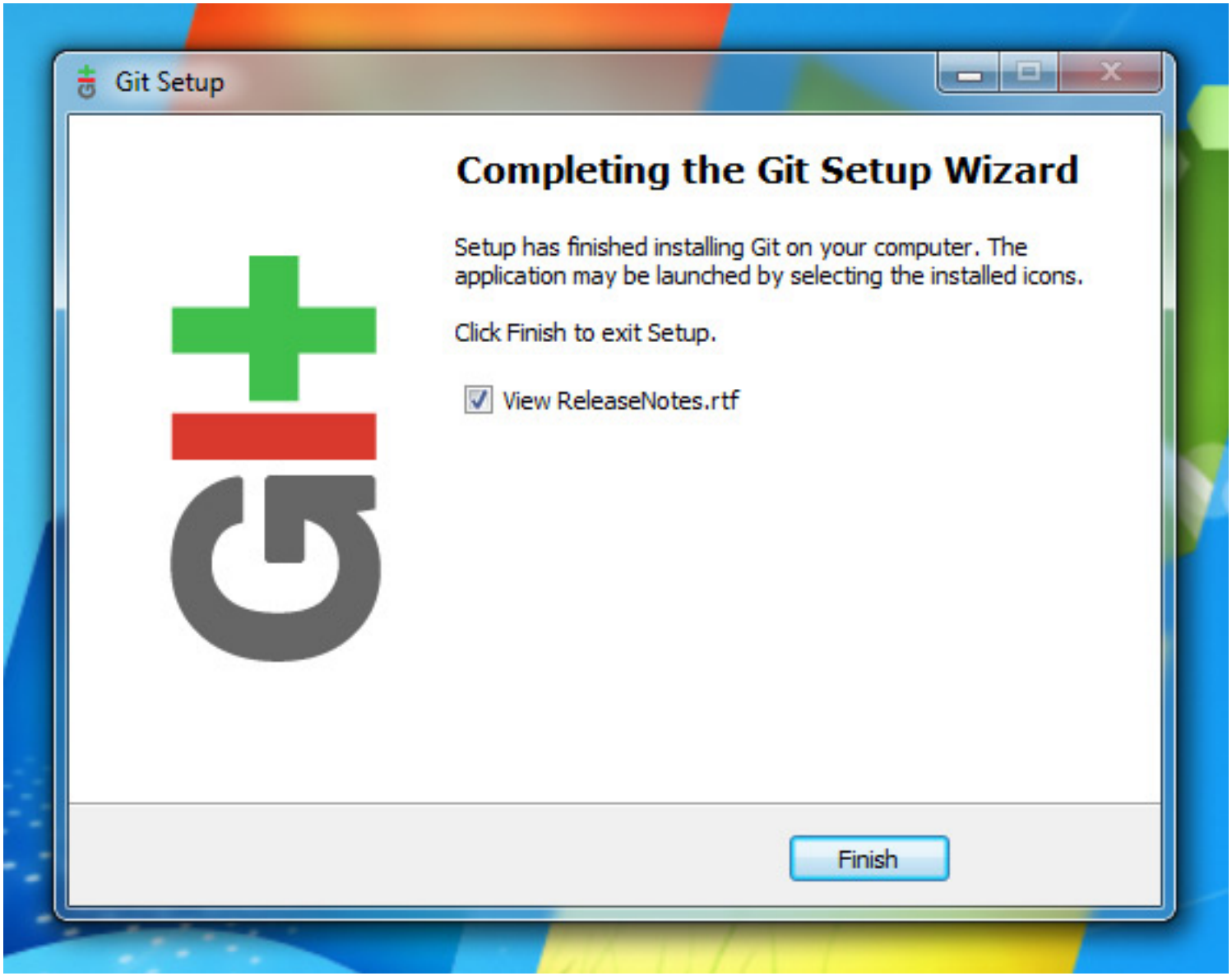

Git Setup
Select Start Menu Folder
Where should Setup place the program's shortcuts?
Setup will create the program's shortcuts in the following Start Menu folder.
To continue, click Next. If you would like to select a different folder, click Browse.
Git
Browse...
Don't create a Start Menu folder
http://msysgit.googlecode.com/
< Back
Next >
Cancel


Git Setup
Select Components
Which components should be installed?
Select the components you want to install; clear the components you do not want to install. Click Next when you are ready to continue.
Additional icons
In the Quick Launch
On the Desktop
Windows Explorer integration
Context menu entries
Git Bash Here
Git GUI Here
git-cheetah shell extension (32-bit only)
Associate .git* configuration files with the default text editor
Use a TrueType font in all console windows (not only for Git Bash)
Current selection requires at least 63.3 MB of disk space.
http://msysgit.googlecode.com/
< Back
Next >
Cancel

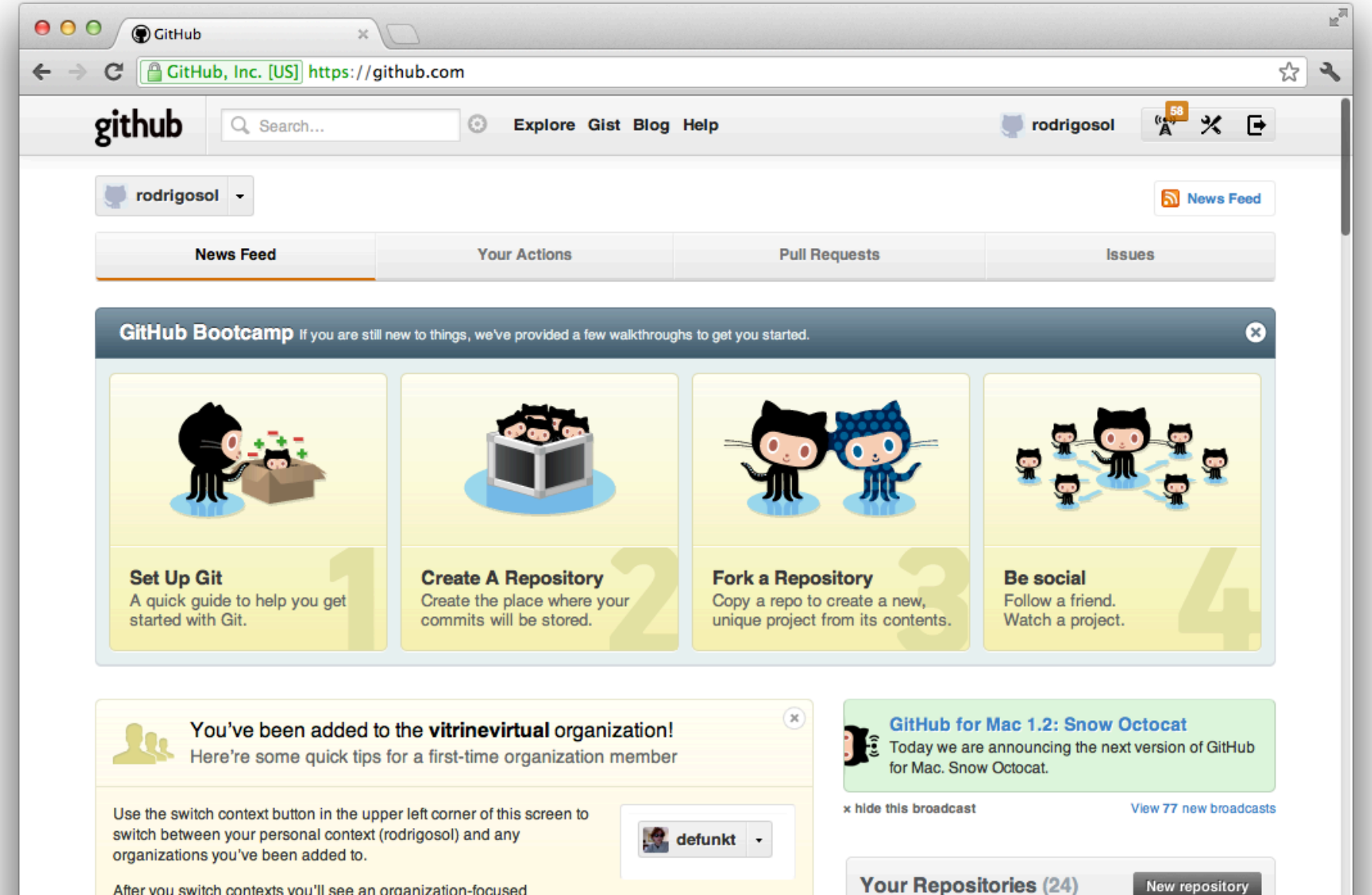

Git Setup
Adjusting your PATH environment
How would you like to use Git from the command line?
Use Git Bash only
This is the most conservative choice if you are concerned about the stability of your system. Your PATH will not be modified.
Run Git from the Windows Command Prompt
This option is considered safe and no conflicts with other tools are known. Only Git will be added to your PATH. Use this option if you want to use Git from a Cygwin Prompt (make sure to not have Cygwin's Git installed).
Run Git and included Unix tools from the Windows Command Prompt
Both Git and its accompanying Unix tools will be added to your PATH.
Warning: This will override Windows tools like find.exe and sort.exe. Select this option only if you understand the implications.
http://msysgit.googlecode.com/
< Back
Next >
Cancel


Git Setup
Configuring the line ending conversions
How should Git treat line endings in text files?
Checkout Windows-style, commit Unix-style line endings
Git will convert LF to CRLF when checking out text files. When committing text files, CRLF will be converted to LF. For cross-platform projects, this is the recommended setting on Windows ("core.autocrlf" is set to "true").
Checkout as-is, commit Unix-style line endings
Git will not perform any conversion when checking out text files. When committing text files, CRLF will be converted to LF. For cross-platform project: this is the recommended setting on Unix ("core.autocrlf" is set to "input").
Checkout as-is, commit as-is
Git will not perform any conversions when checking out or committing text files. Choosing this option is not recommended for cross-platform projects ("core.autocrlf" is set to "false").
http://msysgit.googlecode.com/
< Back
Next >
Cancel

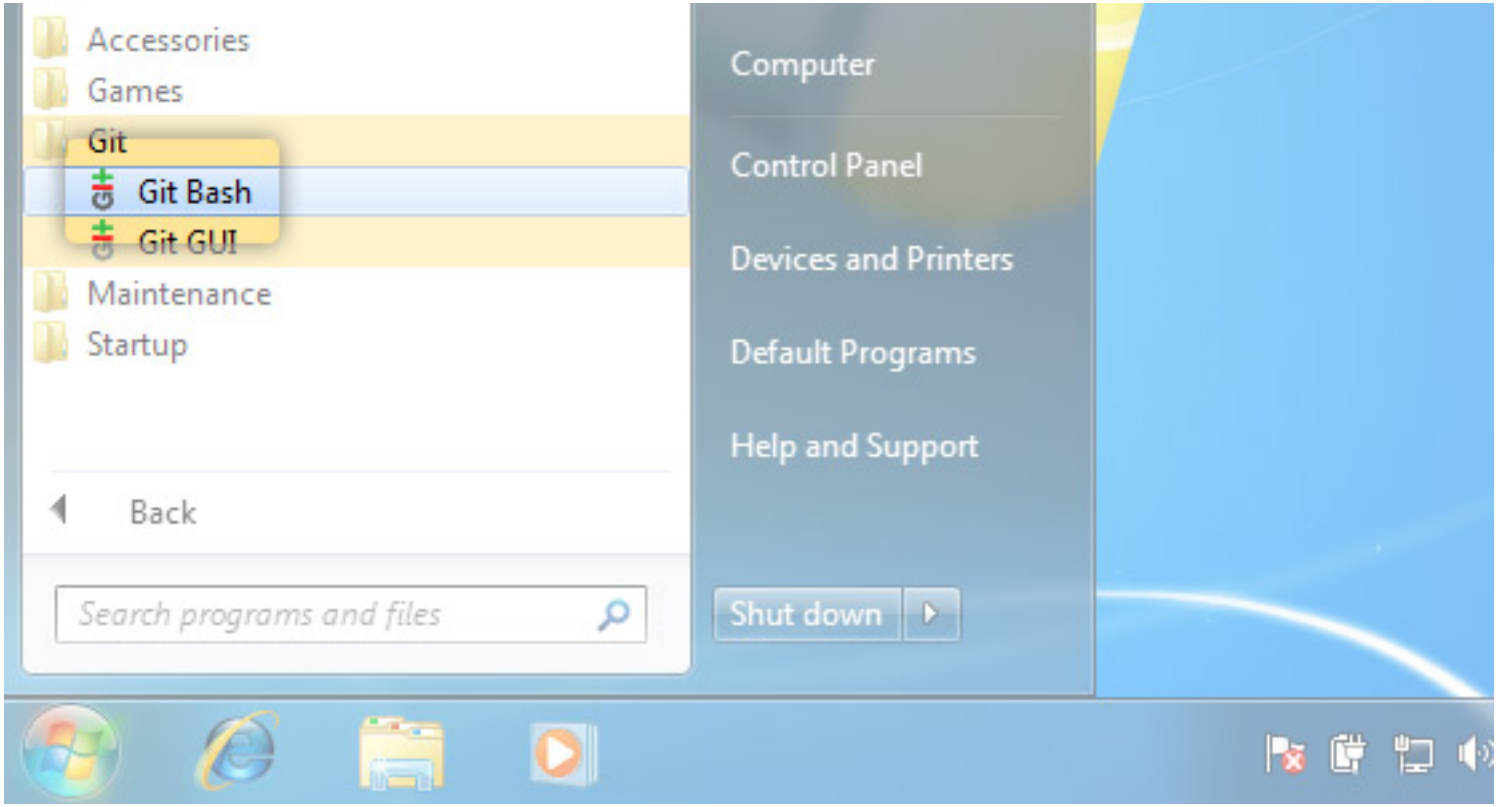

Git Setup
Installing
Please wait while Setup installs Git on your computer.
Extracting files...
C:\Program Files (x86)\Git\lib\perl5\5.8.8\msys\auto\Encode\TW\TW.dll
http://msysgit.googlecode.com/
Cancel


Git Setup
Completing the Git Setup Wizard
Setup has finished installing Git on your computer. The application may be launched by selecting the installed icons.
Click Finish to exit Setup.
View ReleaseNotes.rtf
Finish

github


GitHub
GitHub, Inc. [US] https://github.com
github
Search...
Explore Gist Blog Help
rodrigosol
58
rodrigosol
News Feed
News Feed
Your Actions
Pull Requests
Issues
GitHub Bootcamp If you are still new to things, we've provided a few walkthroughs to get you started.
Set Up Git
A quick guide to help you get started with Git.
1
Create A Repository
Create the place where your commits will be stored.
2
Fork a Repository
Copy a repo to create a new, unique project from its contents.
3
Be social
Follow a friend.
Watch a project.
4
You've been added to the vitrinevirtual organization!
Here're some quick tips for a first-time organization member
Use the switch context button in the upper left corner of this screen to switch between your personal context (rodrigosol) and any organizations you've been added to.
defunkt
After you switch contexts you'll see an organization-focused
GitHub for Mac 1.2: Snow Octocat
Today we are announcing the next version of GitHub for Mac. Snow Octocat.
× hide this broadcast
View 77 new broadcasts
Your Repositories (24)
New repository

Geração das Chaves SSH



Criando a Chave

- Entre no diretório .ssh

```
$ cd ~/.ssh
```

- Crie a chave

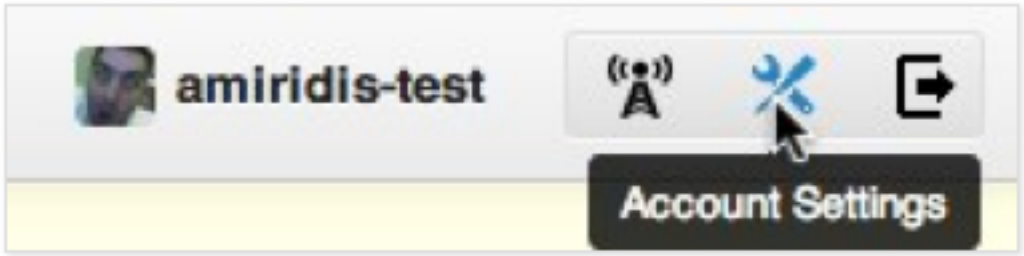
```
$ ssh-keygen -t rsa -C "your_email@youremail.com"
Generating public/private rsa key pair.
Enter file in which to save the key
(/Users/your_user_directory/.ssh/id_rsa):<press enter>
```

Definindo uma senha

```
Enter passphrase (empty for no passphrase):<enter a passphrase>
Enter same passphrase again:<enter passphrase again>
```

```
Your identification has been saved in
/Users/your_user_directory/.ssh/id_rsa.
Your public key has been saved in
/Users/your_user_directory/.ssh/id_rsa.pub.
The key fingerprint is:
01:0f:f4:3b:ca:85:d6:17:a1:7d:f0:68:9d:f0:a2:db user_name@username.com
The key's randomart image is:
+--[ RSA 2048]----+
|      .+   +      |
|        = o O .   |
|         = * *    |
|        o = +     |
|       o S .      |
|      o o =       |
|       o . E      |
|                  |
|                  |
+-----------------+
```

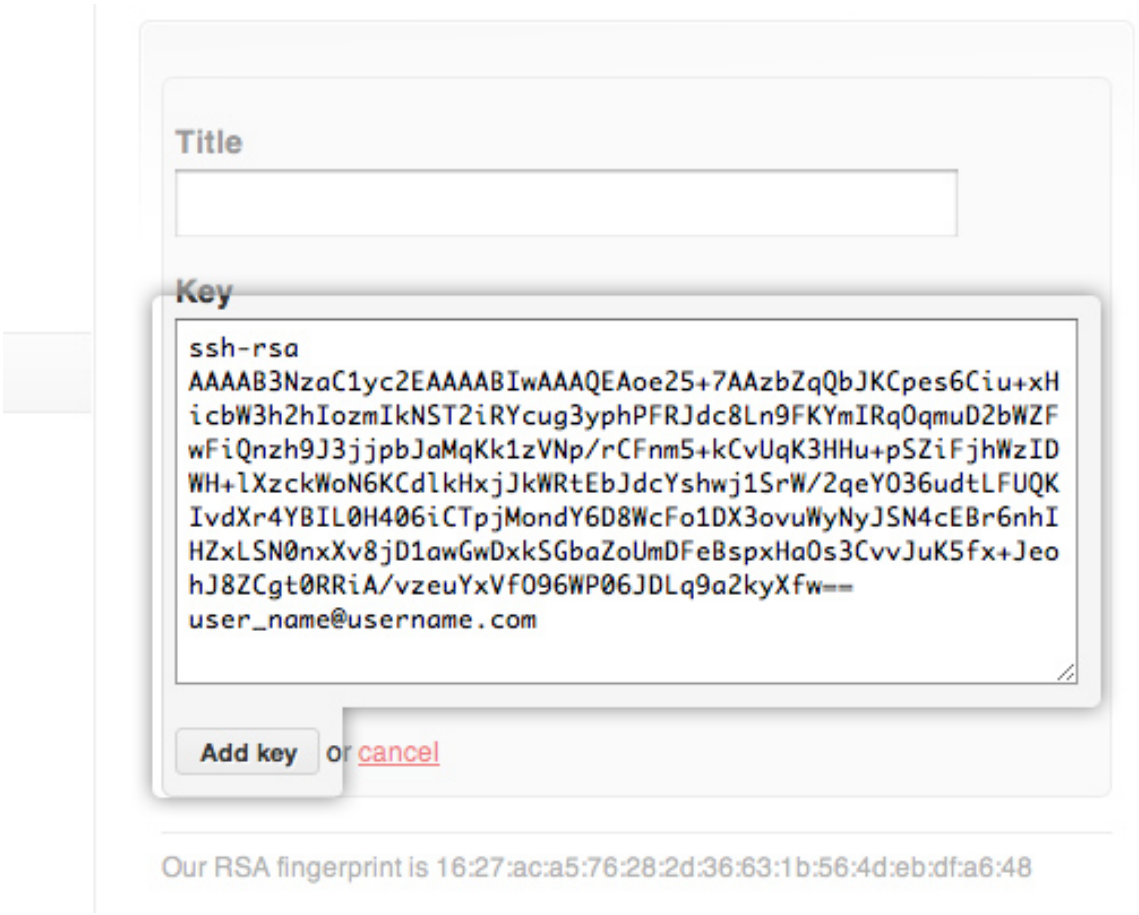
Adicionando sua chave ao github



- Crie uma conta gratuita no github
- Faça o login
- Clique em “Account Settings”
- Depois em clique em “SSH Public Keys”
- Clique em “Add another public keys”

Copiando a chave

- Abra o arquivo id_rsa.pub em um editor de texto e copie o conteúdo para o git



Testando...

- Digite o seguinte comando:

```
$ ssh -T git@github.com
```

- Funcionou se você obtiver a seguinte resposta:

```
The authenticity of host 'github.com (207.97.227.239)' can't be
established.
RSA key fingerprint is 16:27:ac:a5:76:28:2d:36:63:1b:56:4d:eb:df:a6:48.
Are you sure you want to continue connecting (yes/no)?
```

Testando...

- Digite yes

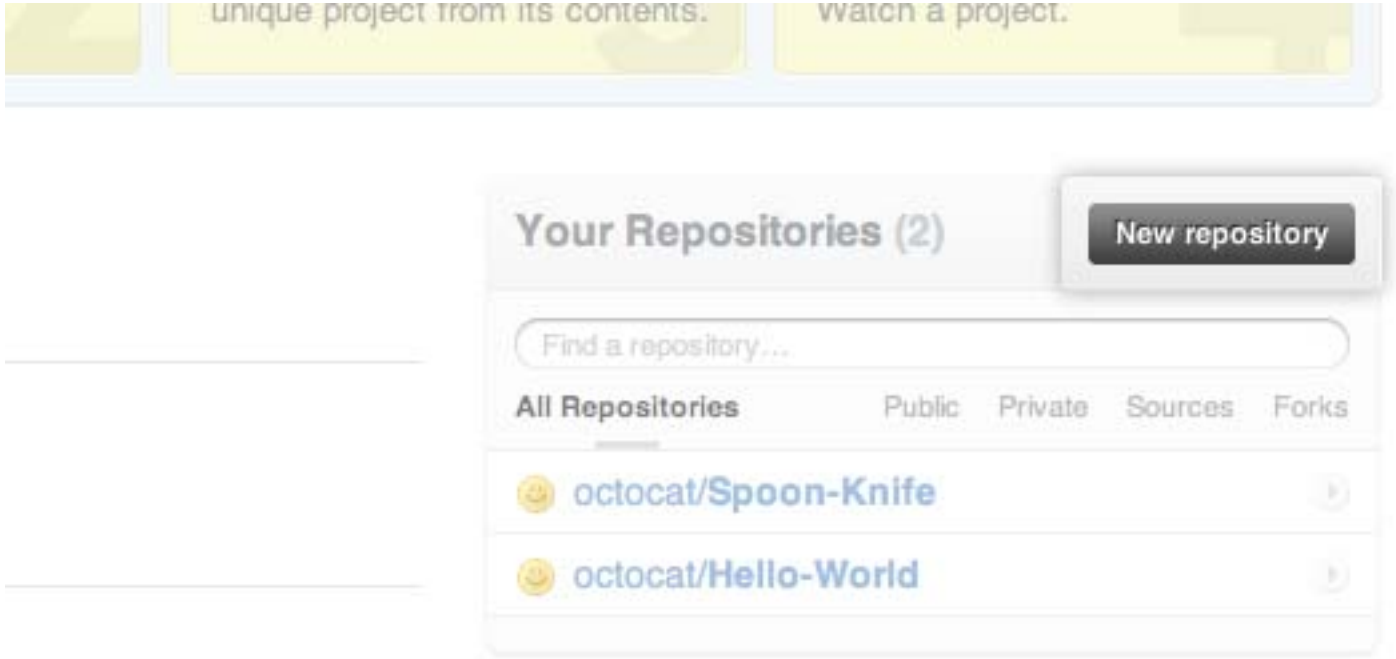
```
Hi username! You've successfully authenticated, but GitHub does not
provide shell access.
```

Configurando seus dados

```
$ git config --global user.name "Firstname Lastname"
$ git config --global user.email "your_email@youremail.com"
```

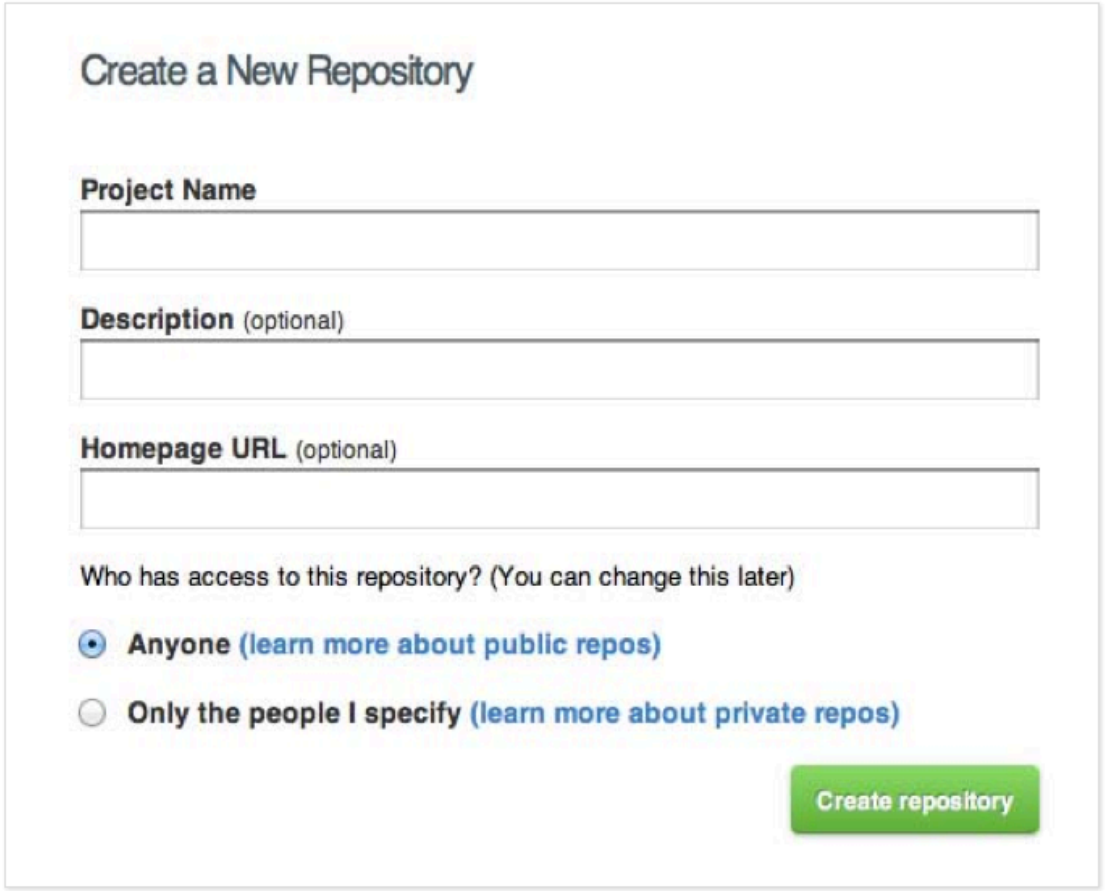
Criando um repositório

- Clique em “new repository”



Criando um repositório

- Preencha os seguintes campos

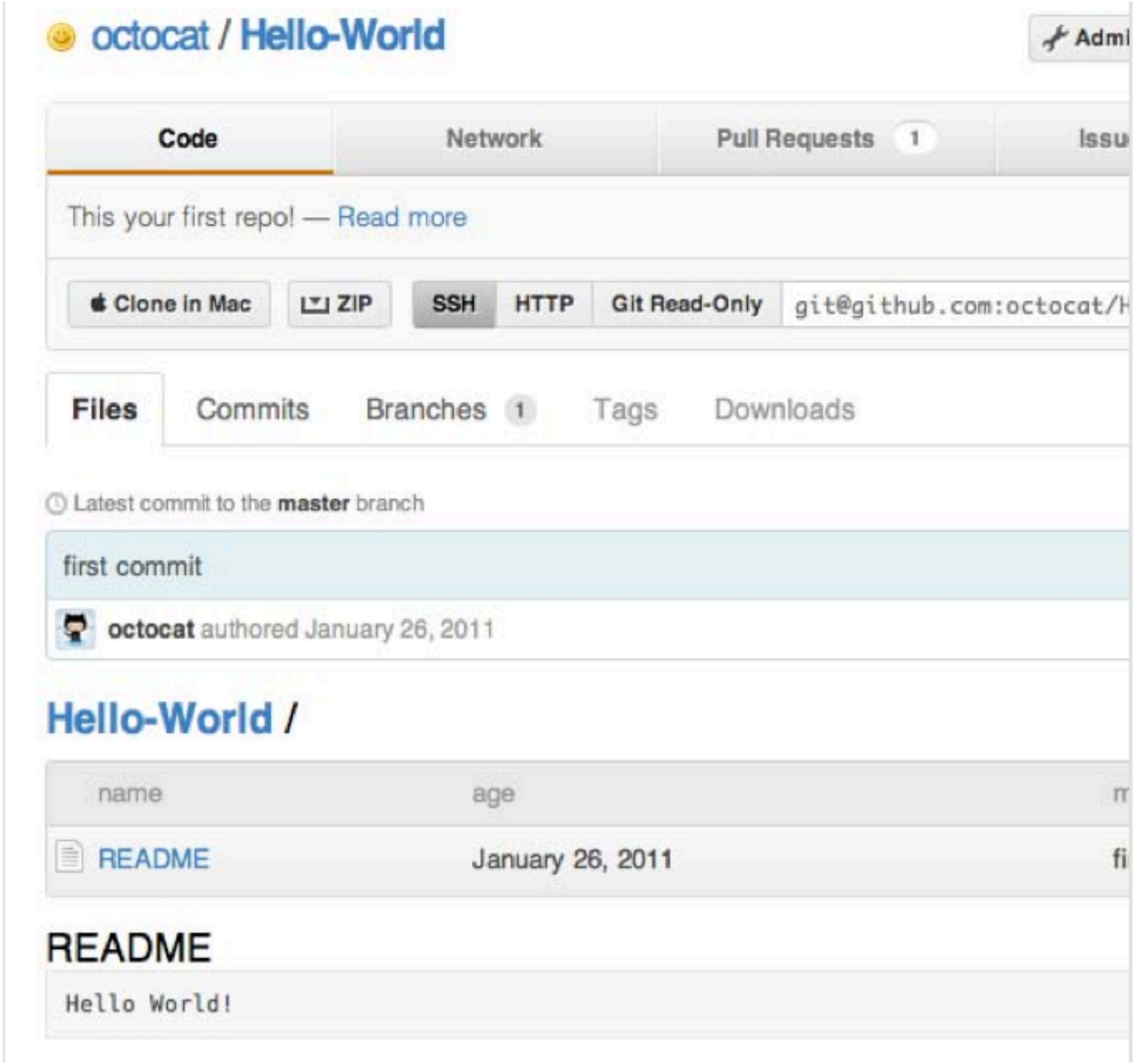


Criando um repositório

```
$ mkdir ~/Hello-World
$ cd ~/Hello-World
$ git init
Initialized empty Git repository in /Users/your_user_directory/Hello-
World/.git/
$ touch README
```

```
$ git remote add origin git@github.com:username/Hello-World.git
$ git push origin master
```

```
$ git add README
$ git commit -m 'first commit'
```


octocat / Hello-World
Admi
Code
Network
Pull Requests 1
Issu
This your first repo! — Read more
Clone in Mac
ZIP
SSH
HTTP
Git Read-Only
git@github.com:octocat/H
Files
Commits
Branches 1
Tags
Downloads
Latest commit to the master branch
first commit
octocat authored January 26, 2011
Hello-World /
name
age
README
January 26, 2011
README
Hello World!

Comandos indispensáveis

- status
  - Mostra o status do index
- Add
  - Adicona arquivos ao index
- Commit
  - Envia as modificações rastreadas do index para o repositório
- Pull
  - Obtem a versão mais recente do github
- Push
  - Envia o repositório local para o github
- Rm
  - Remove um arquivo do repositório

Caminho Feliz do git

- O usuário modifica os arquivos que quiser do em seu diretório de trabalho
- O usuário executa o comando **git status .** Para ver as modificações no index
- O usuário executa o comando **git add .** para adicionar as modificações do diretório de trabalho para o index

Caminho Feliz do git

- O usuário executa o comando **git pull origin master** para obter a última versão dos arquivos que estão no github
- O usuário executa o comando **git push origin master** para enviar as últimas modificações em seu repositório local para o githut

O Que pode dar Errado?

- MERGE!!!
  - Se o git não for capaz de resolver o merge automaticamente, então o programador deve resolve-lo manualmente
  - http://book.git-scm.com/3_basic_branching_and_merging.html

O Que pode dar Errado?

- MERGE!!!
  - Ocorre quando o repositório local está desatualizado em relação ao repositório do github
  - O comando **pull** sincroniza os dois repositórios
  - Quando um mesmo arquivo foi alterado por mais de uma pessoa então ocorre o MERGE
  - Se as alterações forem em lugares diferentes do mesmo arquivo então o git faz o merge automático e não exige intervenção do usuário