Version Control

Introduction to Git & Github – Chapter 2

KAJAANIN
AMMATTIKORKEAKOULU
UNIVERSITY OF APPLIED SCIENCES

Deepak K.C. ; deepak.kc@kamk.fi ;

git --distributed-is-the-new-centralized

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

Git is easy to learn and has a tiny footprint with lightning fast performance. It outclasses SCM tools like Subversion, CVS, Perforce, and ClearCase with features like cheap local branching, convenient staging areas, and multiple workflows.

https://git-scm.com/

What is Git?

- The most popular version control today
- Developed (2005) by the Linux development community
- Everything is stored in local repositories on your computer
- Operated using the command line

Download Git

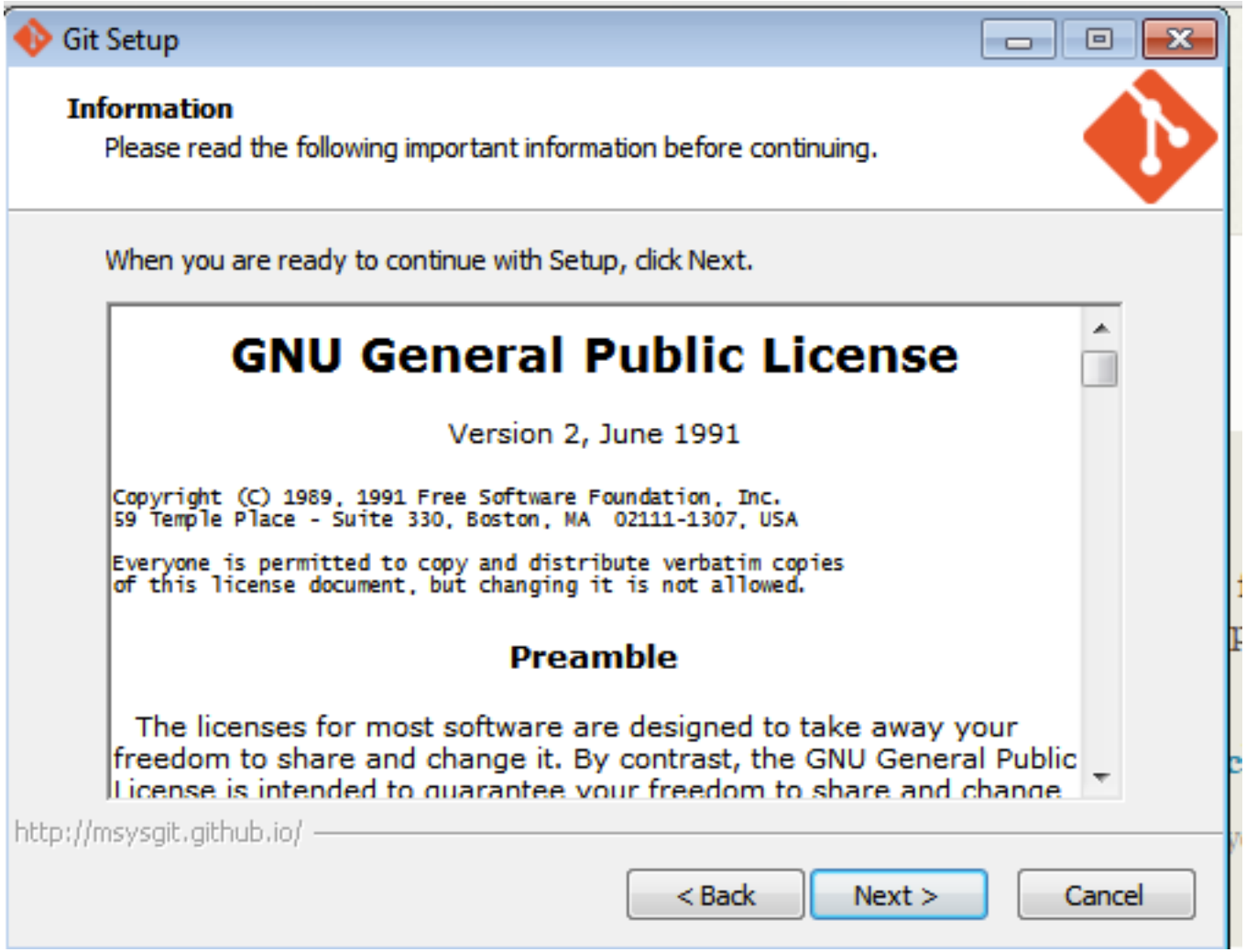
- https://git-scm.com/downloads

Installing Git

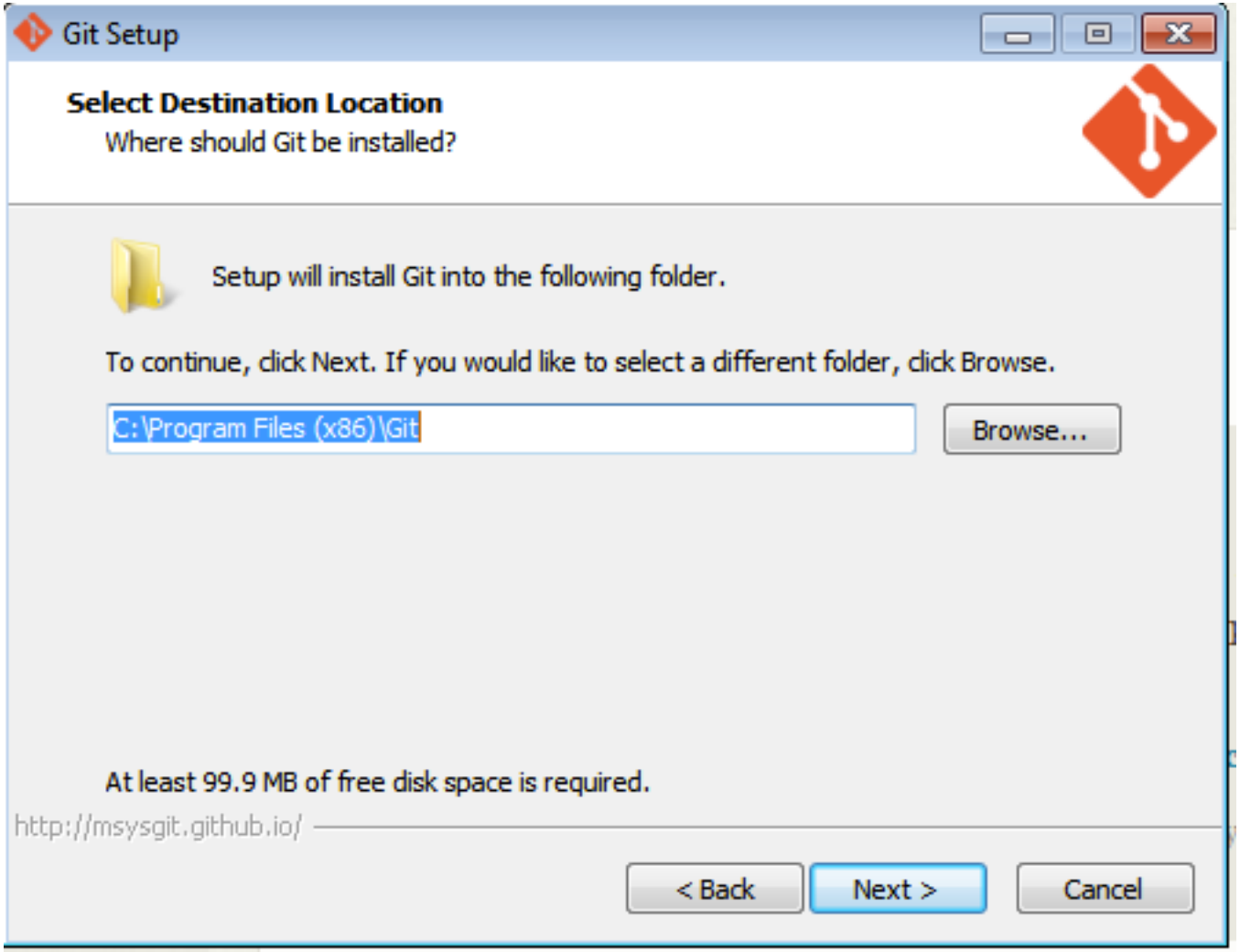
- Installing on Windows
  - Download latest git version for the Windows platform
  - http://git-scm.com/download/win
- Easy way to get git installed is to install GitHub for Windows
  - Download GitHub from http://windows.github.com/
  - The installer includes a command line version of Git as well as the GUI

Git – Windows 7 installation process – Step I

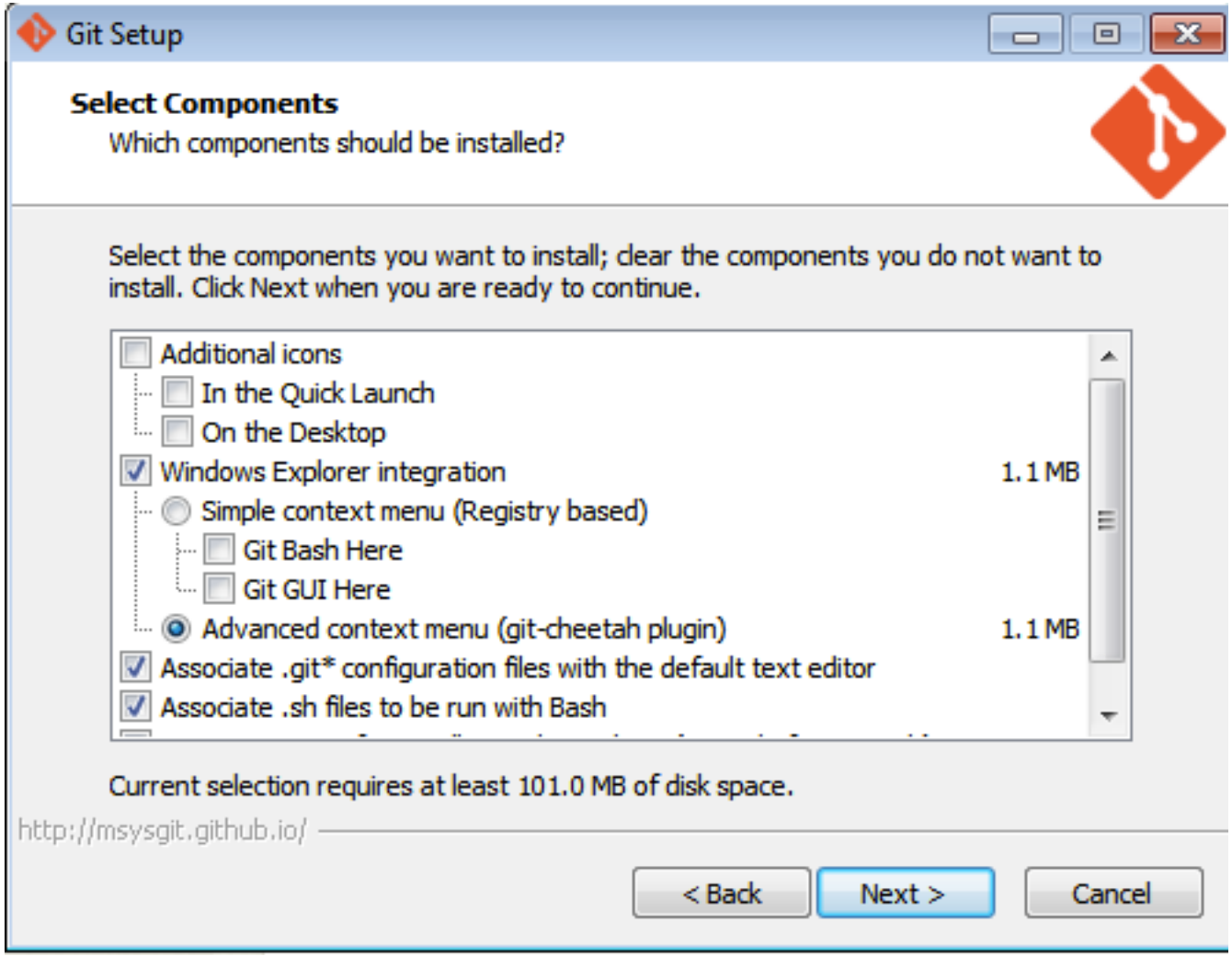
Git – Windows 7 installation process – Step II



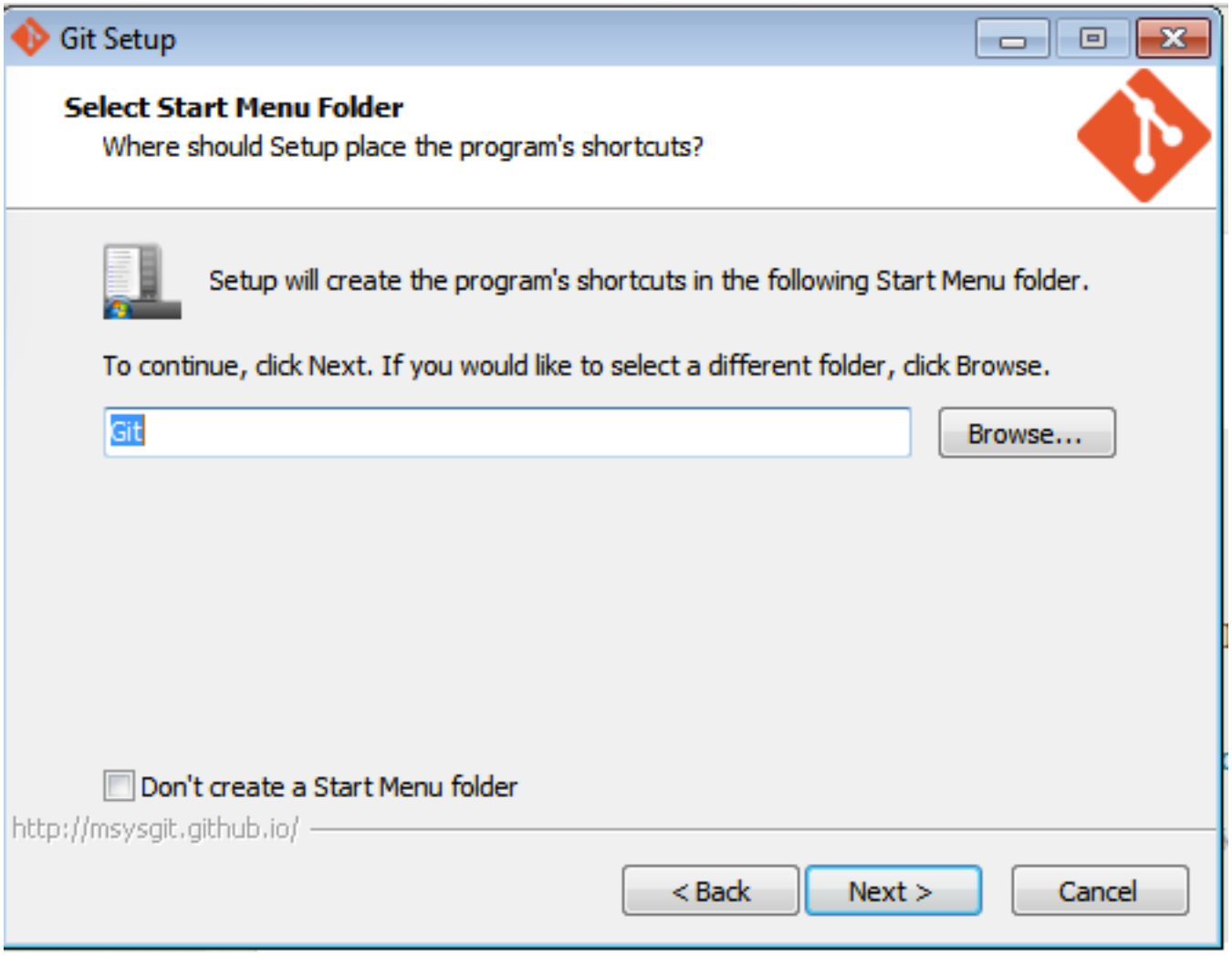
Git – Windows 7 installation process – Step III



Git – Windows 7 installation process – Step IV

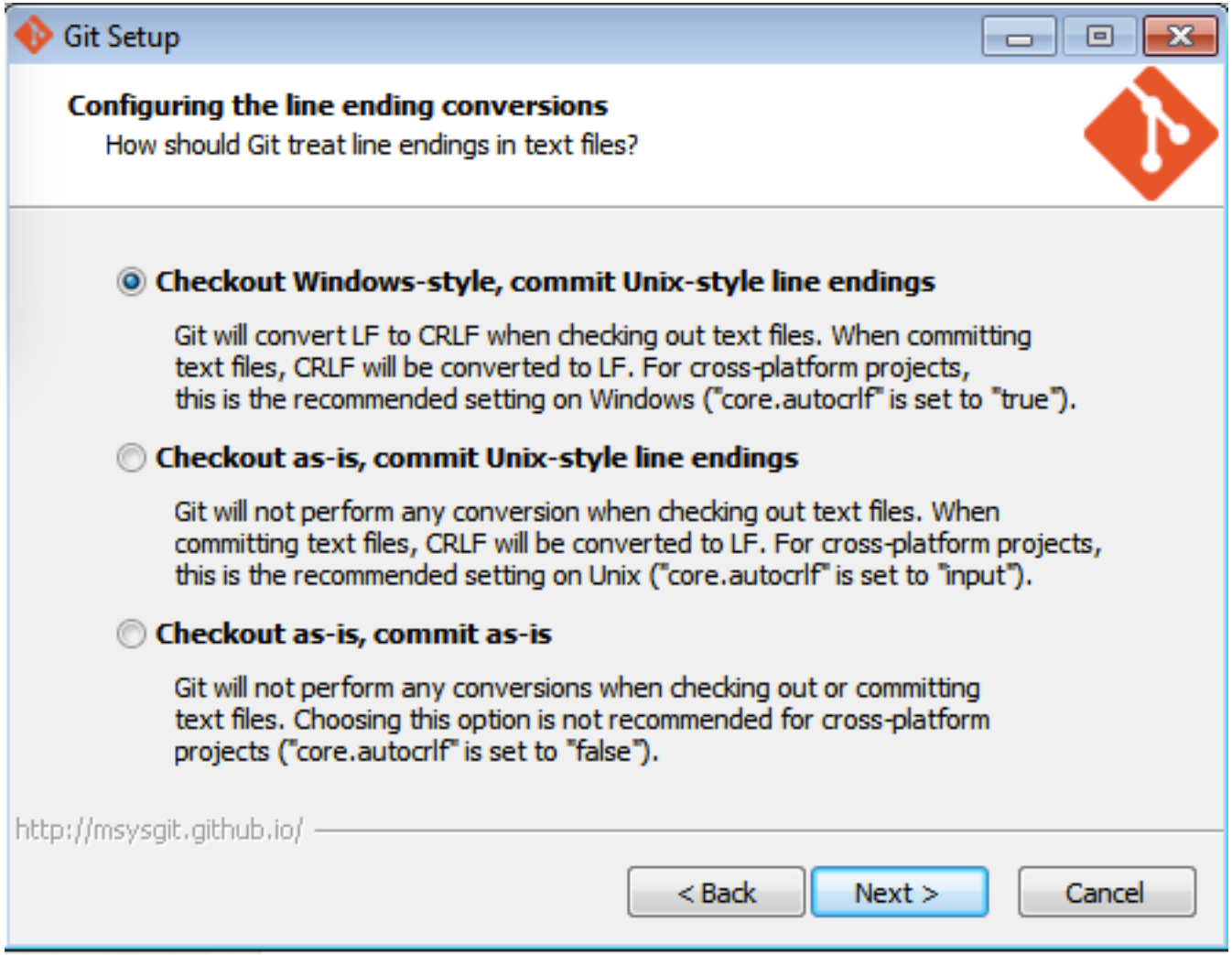


Git – Windows 7 installation process – Step V



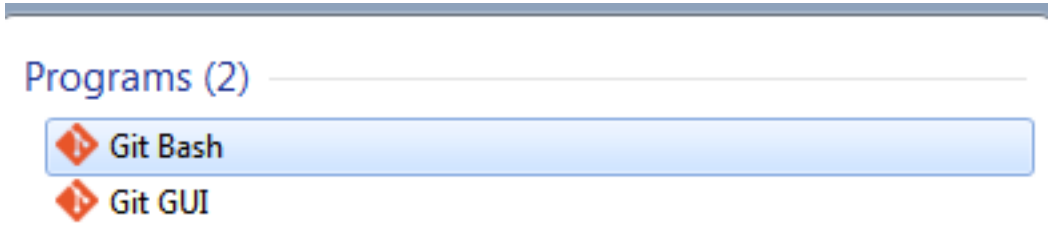
Git – Windows 7 installation process – Step VI

Git – Windows 7 installation process – Step VII

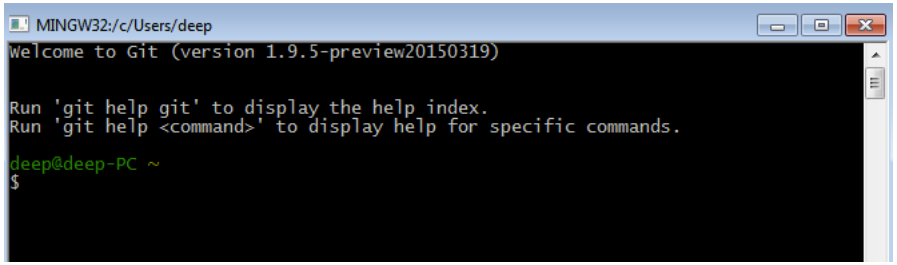


Git – Windows 7 installation process – Step VIII

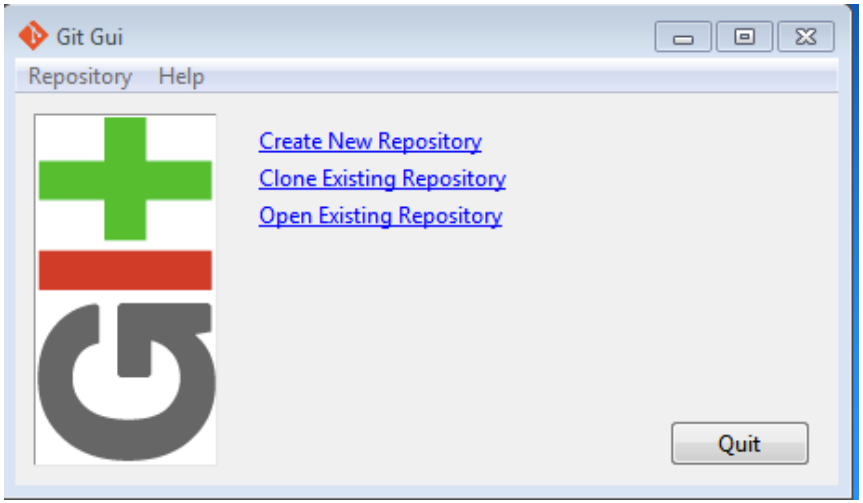
After installation



Git Bash



Git GUI



First time Git setup

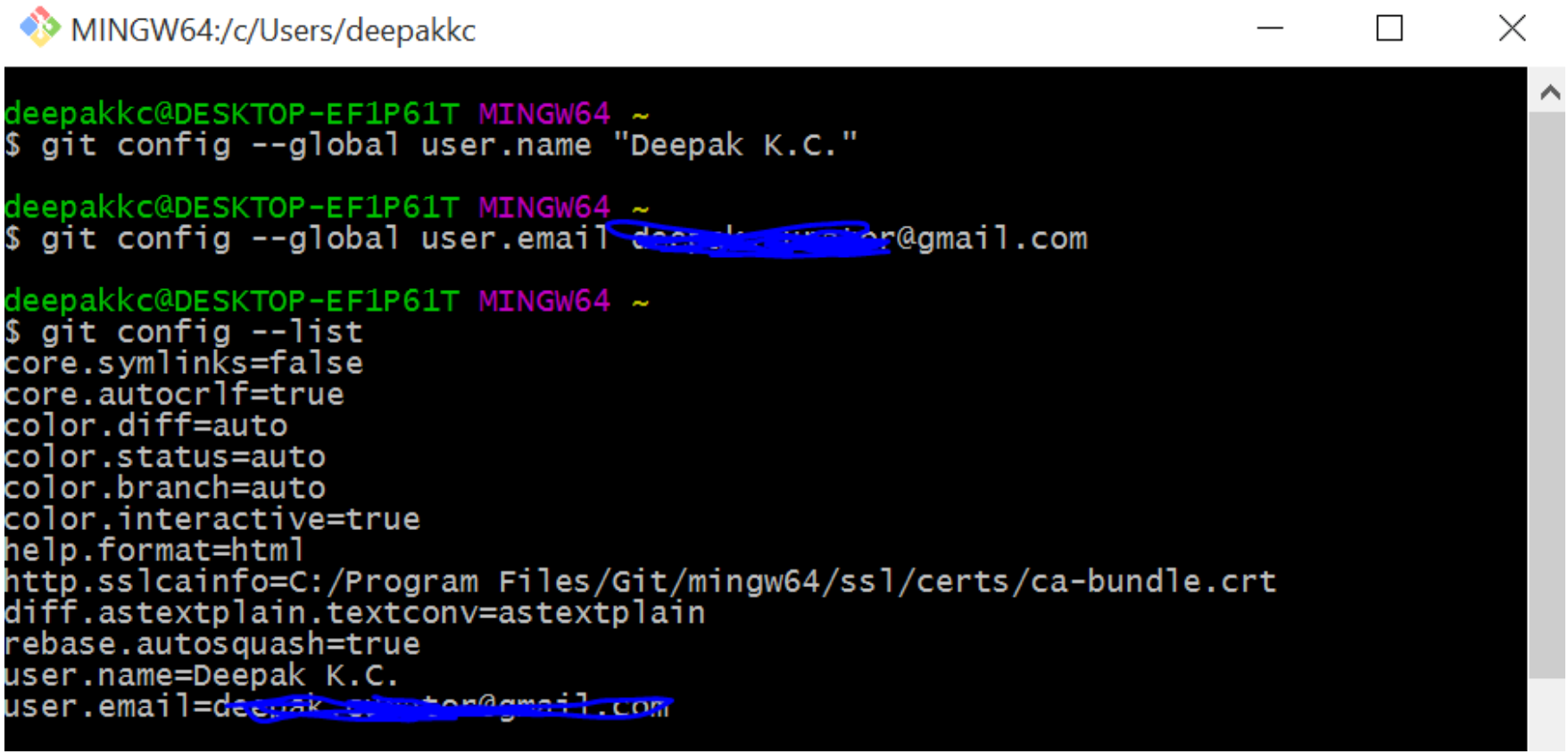
- Customize your Git environment
- Do following tasks once in your computer. They remain also when upgrades are done.
- Git config is a tool that can be used to set configuration variables
- Git config
  - /etc/gitconfig file: Contains values for every user on the system and all their repositories. If you pass the option --system to git config, it reads and writes from this file specifically.
  - ~/.gitconfig or ~/.config/git/config file: Specific to your user. You can make Git read and write to this file specifically by passing the --global option.
  - config file in the Git directory (that is, .git/config) of whatever repository you're currently using: Specific to that single repository.

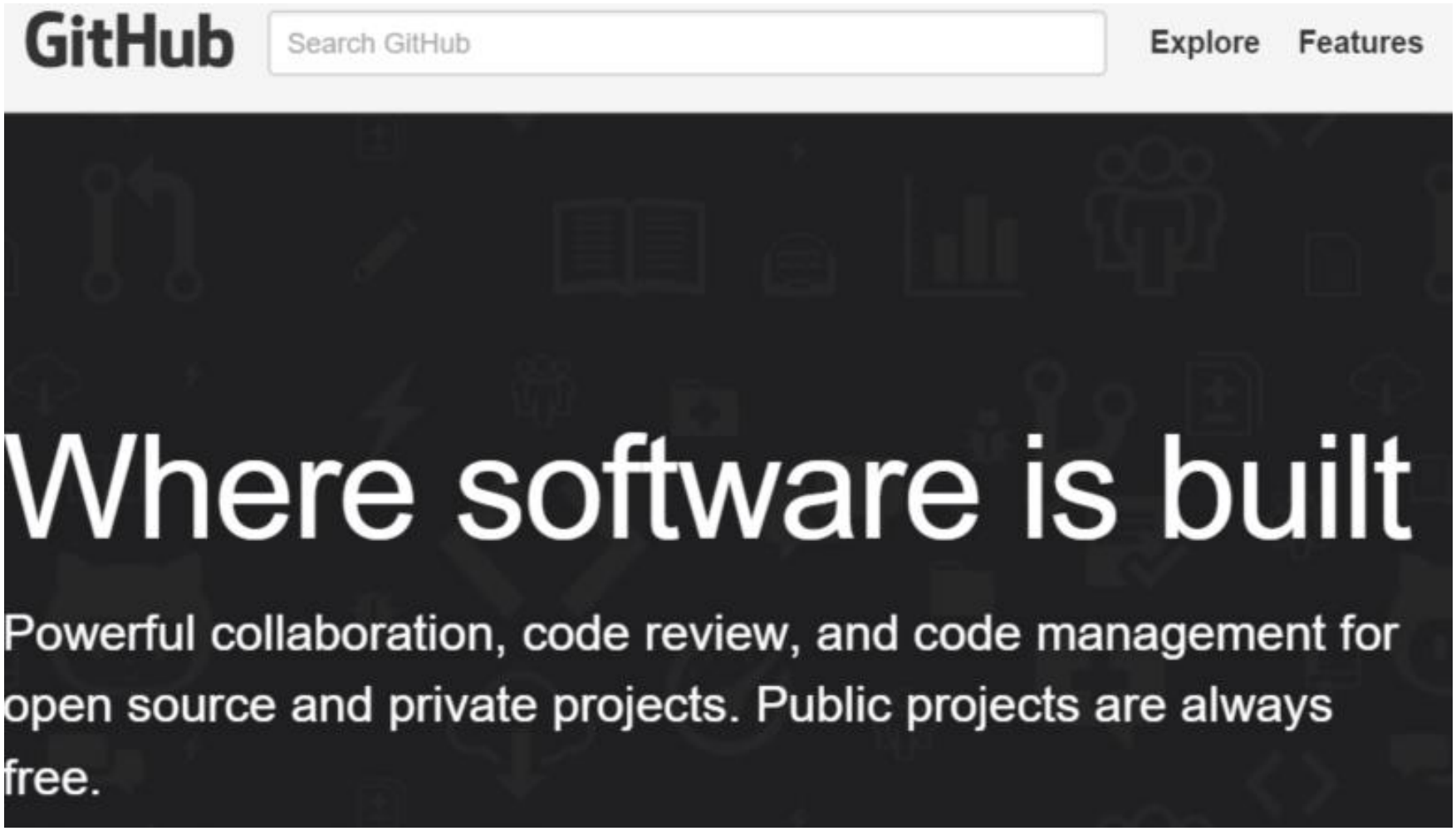
Setting up username & e-mail address

- After installation & configuration, the first thing to do is set your identity (username & email address)
- Git commits using your identity
  - $ git config --global user.name “Deepak KC“
  - $ git config --global user.email deepak.kc@kamk.fi
- To check your settings:
  - git config –list
- To check a specific key’s value
  - git config user.name

Read more on setting your email in Git : https://help.github.com/articles/setting-your-email-in-git/

Setting up username & e-mail address





https://github.com/

What is GitHub?

- **“GitHub** is a Web-based Git repository hosting service. It offers all of the distributed revision control and source code management (SCM) functionality of Git as well as adding its own features ”. (1)
- “GitHub is how people build software. With a community of more than 12 million people, developers can discover, use, and contribute to over 31 million projects using a powerful collaborative development workflow ”. (2)

1. https://en.wikipedia.org/wiki/GitHub
2. https://github.com/about

What is GitHub?

- Allows to share projects with the world, follow one another, get feedback and contribute to millions of repositories
- Allows users to push & pull their local repositories to and from repositories on the web
- A home page for the project to display public repositories

Setting up a GitHub Account

- Go to the GitHub home page - https://github.com/
- Enter your username, email and password
  - Sign up for GitHub:
  - Use the same email address that you used when setting up Git
- Select the free plan and click “Finish Sign Up”

GitHub Profile

- All your activities on GitHub is displayed in your profile
- Other people can know who you are and what you are working one
- On working more and more projects, your profile becomes a portfolio of your work

References

- http://git-scm.com/doc
- http://guides.beanstalkapp.com/version-control/intro-to-version-control.html
- https://www.atlassian.com/git/tutorials/using-branches/