

Build and Package

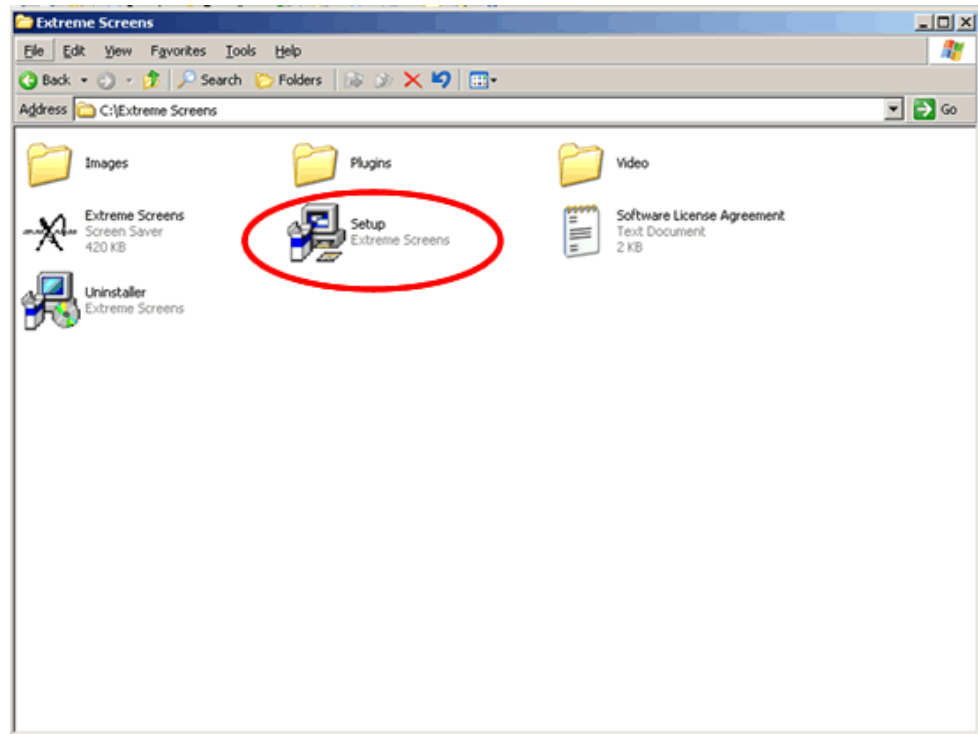
CSE 403 section, 2011 Feb 3, Hao Lu

How can others run your code?

- Build from code?
- Installation?
- Resources or dependencies?
- Options?
- Documentation

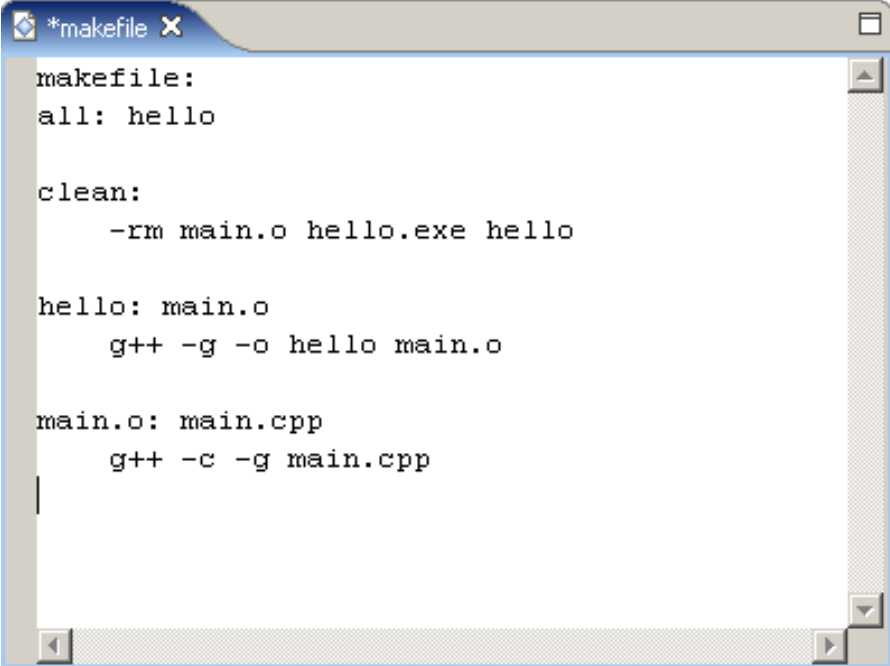
Example 1

- Precompiled distribution
- Run setup.exe



Example 2

- Download source code tarball
- \$./configure
- \$ make
- \$ make install



```
*makefile x
makefile:
all: hello

clean:
    -rm main.o hello.exe hello

hello: main.o
    g++ -g -o hello main.o

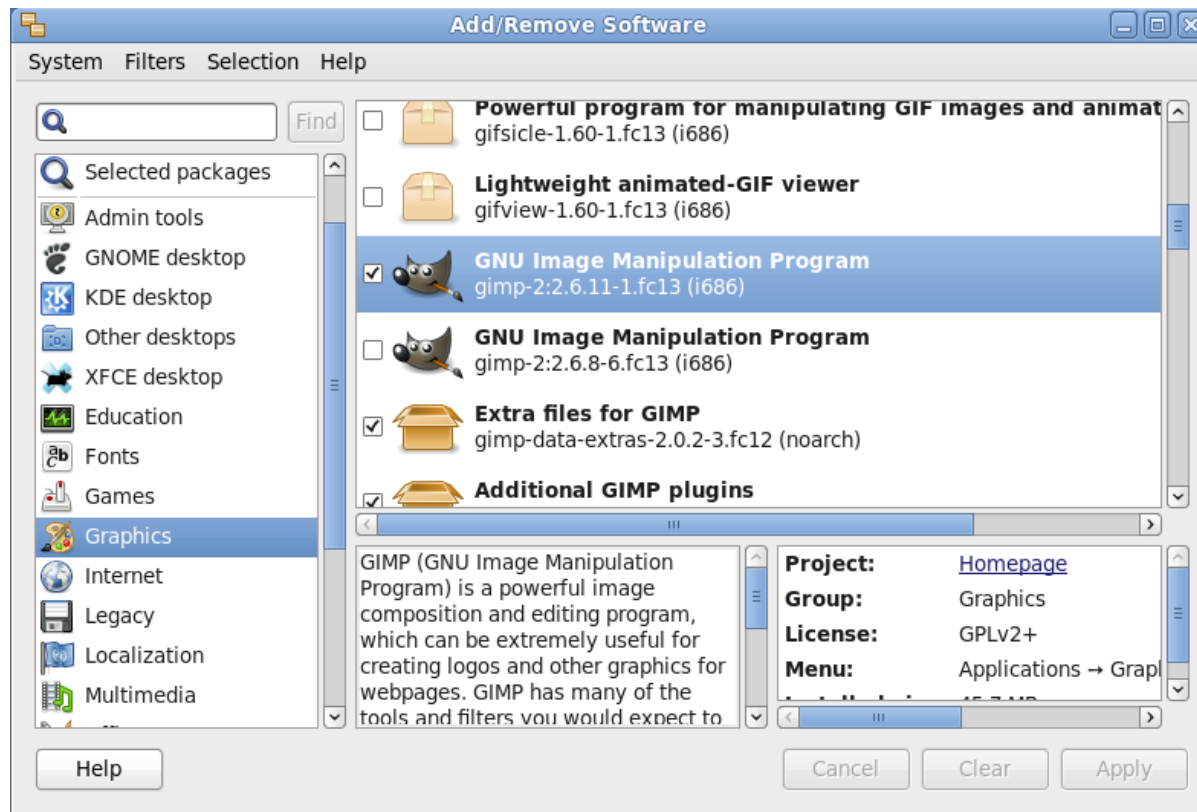
main.o: main.cpp
    g++ -c -g main.cpp
```

Example 3

- Download package.deb
- `$ dpkg -i package.deb`

Example 4

- From package list



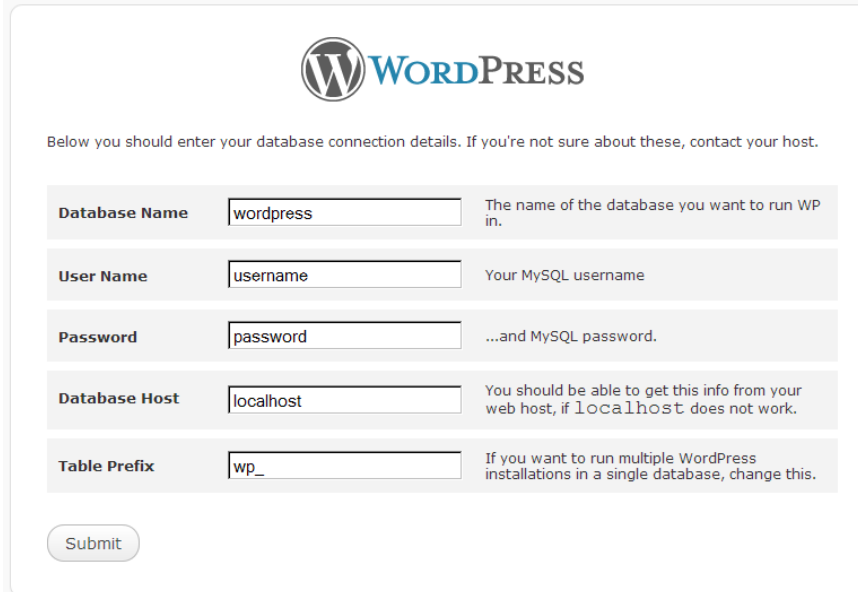
Example 5

- App store



Example 6 (WordPress)

- Download and unzip the WordPress package
- Create a database for on your web server
- Copy the WordPress files to your web server
- Open wp-admin/install.php in a web browser



The screenshot shows the WordPress installation database configuration screen. At the top is the WordPress logo. Below it is a note: "Below you should enter your database connection details. If you're not sure about these, contact your host." The form contains five rows of input fields with labels and descriptions:

Database Name	<input type="text" value="wordpress"/>	The name of the database you want to run WP in.
User Name	<input type="text" value="username"/>	Your MySQL username
Password	<input type="text" value="password"/>	...and MySQL password.
Database Host	<input type="text" value="localhost"/>	You should be able to get this info from your web host, if localhost does not work.
Table Prefix	<input type="text" value="wp_"/>	If you want to run multiple WordPress installations in a single database, change this.

At the bottom left of the form is a "Submit" button.

Build

- Automation
 - Autoconf, GNU make, Cmake, Ant, Maven, Rake, ...
 - Xcode, Visual Studio, ...
- Dependencies!
- Documentation!

Package Format

- source tarball
- .app
- .jar
- .apk
- .rpm
- .xpm
- setup.exe
- .dll; .so; ...
- ...

Install

- Windows Installer
- Package manager



Guidelines

- Instructions
- Requirements
- Automate
- Clear, flexible configuration

Release(s) we'd like

- Stuff for both users and developers
 - Often easier in one package
 - Sometimes the same
- Complete instructions

Setup we'd like

- README in your code repository
- Tell us where everything is
- One step build script to generate all releases

