

Program #2
Create Distribution
Due Monday, October 13, 2003

Name: _____

Lab Time: _____

Grade: _____/30

<p>On my honor, as a University of Colorado at Boulder student, I have neither given nor received unauthorized assistance on this work. Signature: _____</p>
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In this program you will be given source code, and it is your job to create a “distribution” for this source code which automatically installs itself.

The Source Code

Create a directory named `program02` in your `src` directory. The source code for the program is in `~csci3308/src/program02.cc`. Copy this file to your `program02` directory. You may want to compile and run the program just to make sure it works. (The program is written in C++, so you should use the `g++` compiler to compile it.)

The Makefile

You must create a makefile for this program. The makefile must have at least two variables, `SRCDIR`, the directory for the source code, and `BINDIR`, the directory in which to install the executable. Assume that the user has the same directory structure as you and set the values of those two variables appropriately. The makefile should look in the directory `SRCDIR` to find any source files. (You should not assume that the makefile will be invoked in `SRCDIR`.)

The makefile must have at least three targets, `program02`, `install`, and `clean`. If we run `make program02` the makefile should compile `program02.cc` into a program named `program02`. Both the compiled program and any intermediate files should be placed in the current directory. The user will have changed to the build directory before running `make`. If we run `make install` the makefile should copy `program02` from the current directory to `BINDIR`. Also, if we run `make install` and the program hasn't been built the makefile should build the program before installing it. If we run `make clean` it should remove every file that was created by the makefile during the build phase. It should

not remove the source code and it should not remove an installed version of program02.

The Shell Script

You must create a shell script called `program02-install`. This script will be similar to `gnuchess-install` that automatically builds and installs the program. You will need to create the architecture specific directories so include your `archdir-setup` script in with the distribution. The makefile uses the view path to look for source files in the correct place, and uses `BINDIR` to install in the correct place, but it creates intermediate files in the current directory so the script should `cd` to the correct build directory before building.

Note: Your makefile and install script should be configured such that if you run the install script twice in a row, without calling `make clean` in between, that:

1. the install script does not crash the second time it is run
2. and the program will only be installed in the bin directory once.

In other words, do not copy program02 from the build directory into the bin directory unless its newer than the installed version.

The README File

You must create a README file with simple instructions on what each file in the distribution is, and how to proceed with installing the program. The README file should also have your name and your lab section listed at the top.

Putting it Into a Tar File

You will pack all of this into a tar file so that the user can get all the files at once. You should create a tar file named `program02.tar` that contains a directory named `program02`. In this directory there should be five files: `program02.cc`, `makefile`, `program02-install`, `archdir-setup`, and `README`.

To turn in your program, send the tar file as an attachment in an e-mail message to your TA. The TA must receive your tar file by 10 AM on October 13th. Bring the first page of the program 2 assignment to class on October 13th with your signed honor code statement. (You do not need to bring a printout of the contents of the tar file.)