

How to install mkevals on WINDOWS or UNIX

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This document describes how to get **mkevals** working on either a WINDOWS machine or a UNIX (or Linux) machine.

The **mkevals** program produces a draft of narrative evaluations by analyzing numerical scores on a number of "items", such as examinations, quizzes or homework. It is therefore useful when student performance is primarily based on such numerical scores. The program was originally developed for use in large introductory physics courses. Some faculty in other disciplines have also found it useful.

mkevals is basically a UNIX program, and has until now been used as such. We have now created a version that runs well on WINDOWS XP, and may also work on other WINDOWS versions, so we have written this piece as a general guide, so you can get it working correctly, whether you use WINDOWS or UNIX.

In what follows, we describe first, how to install **mkevals** on WINDOWS, and after that, how to install the program on UNIX.

A complete description of the **mkevals** program may be found [here](#).

1 Preparatory steps for Windows

First, a few UNIX-style packages are needed to run **mkevals**. They may be obtained from <http://gnuwin32.sourceforge.net/packages/>, where you may download (for free) the following:

- **groff**
- **sed**
- **which**
- **coreutils**

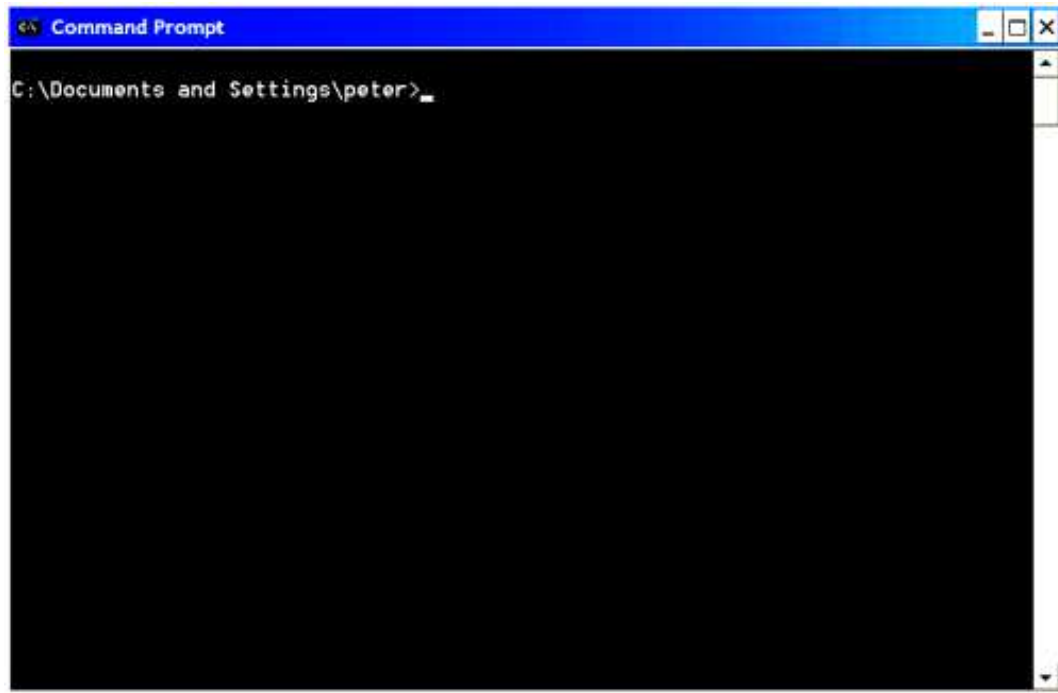
coreutils, while not absolutely necessary to run **mkevals**, is extremely useful, since it enables the use of common UNIX commands such as **ls** (list), **rm** (remove), **cp** (copy), **mv** (move), etc. Moreover, **coreutils** will be necessary in case you might want to compile or recompile the program from the source code, so it's a good idea to install it on your machine.

For each of the above, click on the "setup" link (chose "Complete package, except sources"). This will enable you to download the appropriate installer to your desktop. The installation process is self-evident, just use the default settings of various paths for the installation.

When you've installed these packages, it's a good idea to make sure they work. For this, open a **Command Prompt** window on your desktop. The **mkevals** program will be run from such a window, so if you're not familiar with it, now is a good time to try it out. On most Windows versions (for example, XP) the **Command Prompt** is called **cmd.exe**. (On some older versions there is also (or instead) **command.com**, which provides a similar (but inferior) command prompt window.)

On Windows XP, you can open a **Command Prompt** window with 'start' → 'All Programs' → 'Accessories' → 'Command Prompt'.

It should look something like this:



Now maximize the Command Prompt window and then try giving the command

```
cd C:\
```

which should take you to the "root" directory **C:**. (`cd \` should do the same thing.) Then try the commands

```
ls and ls -l and ls -F.
```

The second of these should provide a long listing of the contents of the directory. (Compare with the equivalent `cmd.exe` command `dir`.) The third should mark directories with an appended "/" and executables with an appended "*". Various flags may be combined. Try `ls -lF` or `ls -tlf`. Try `which groff` or `which which`. All should produce sensible results.

This completes the preparatory steps.

2 How to install mkevals.exe

After you have completed the above preparatory steps, the next step is to see whether the compiled binary executable file **mkevals.exe** will work for you on your Windows machine.

To do this, just download the file **mkevals_setup.exe** to your desktop, by clicking [here](#). Open this setup file (which is similar to the setup files used by the GnuWin32 folks) and follow the steps. It's a good idea to check the boxes that will create desktop icons for both the **mkevals** executable and its documentation. At the end, if you leave the box that launches the program checked, a **Command Prompt** window should pop up, with the command **mkevals -h** being given in that window.

mkevals_setup.exe will, by default, install the **mkevals** executable software in the 'C:\Program Files\mkevals' folder. Included will be the executable **mkevals.exe**, a pair of sample files 'sample.new' and 'sample.old', and an uninstall executable **unins000.exe**. In a sub-directory 'doc' will be the documentation for **mkevals** in two different formats, 'mkevals.html' and 'mkevals.pdf'.

mkevals_setup.exe will also install all the source code (including the documentation and a 'Makefile') for the program in the 'C:\src\mkevals' folder, in case you might want (or need) to compile or recompile the **mkevals** program on your Windows machine. It will also install a "Bourne Again" shell (bash) in 'C:\bin'; this is needed in case you want or need to recompile the program.

NOTES: (a) Running **unins000** will delete everything installed by **mkevals_setup.exe**, including this source code. If you just want to uninstall the **mkevals** executable and its documentation, while saving the contents of the 'C:\src\mkevals' folder, give the command **make uninstall** from the source code directory. (b) If you want to compile **mkevals** on your machine, you will need an appropriate C++ compiler. See the section below entitled [Chapter 4 \[How to compile mkevals on Windows\]](#), page 9.

If the executable **mkevals.exe** works in the final step of the installation (where the program is launched), what you see will probably look something like this, which is the display of a brief "help" file that summarizes the usage of the **mkevals** program, including all possible options:

```

Usage: +[1;32mmkevals+[0m [-hpruod] inputfilename

+[1;32mmkevals+[0m will form written narrative evaluations using
as an input file the class roster provided by the registrar's
office that contains the list of students enrolled in the
course. This file must be suitably edited to provide the
numerical data to be used by +[1;32mmkevals+[0m. For additional details,
see the documentation (e.g., point your browser at +[1;32mmkevals.html+[0m),
or other documentation formats for the +[1;32mmkevals+[0m program.

Options:

-h      display this help message
-v      print version number
-p      (for "plus") allow "+" and "-" grades
-r      (for "rank") provide a class ranking by category
-u      (for "upgrade") discount low early exam scores
-o      (for "old") accommodate old style class rosters
-d      (for "debug") show detailed program operation

C:\PROGRA~1\mkevals>

```

Note the weird character strings, which are **ansi.sys** character sequences that are intended to display a few words in green color. For obscure reasons, the usual Windows distributions do not ship with the **ansi.sys** driver enabled, but if you'd like to see the green words, it is easy to enable the **ansi.sys** driver. Here's how to do it (although this step is not essential for the program to work):

If you have Windows NT, or 2000 or XP: (a) Use a convenient editor (notepad, e.g.) to edit the file 'CONFIG.NT' by adding this single line at the end of the file:

```
DEVICE=%systemroot%\SYSTEM32\ANSI.SYS
```

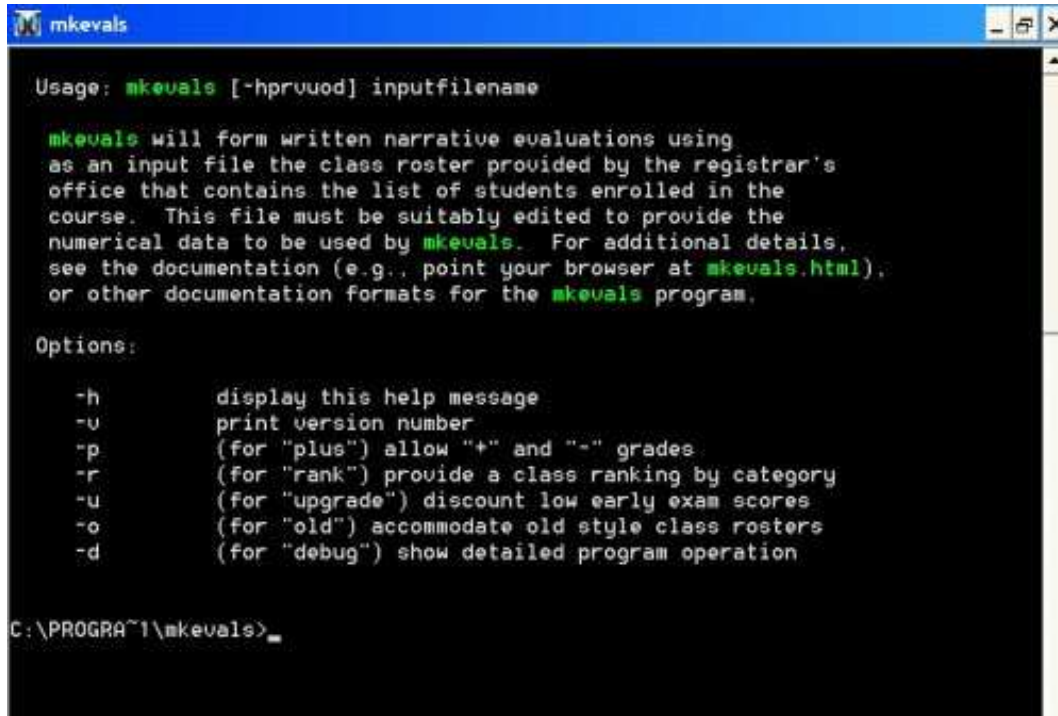
(b) Save 'CONFIG.NT', and (c) log out and log in again to cause the added line to take effect.

If you have Windows 95, or 98 or DOS: (a) Find out where the file 'ANSI.SYS' exists on your system; (b) edit the file 'CONFIG.SYS' (usually found in the 'WINDOWS' folder) to add the line

```
DEVICE=<path to ANSI.SYS>\ANSI.SYS
```

where "<path to ANSI.SYS>" is what you found from step (a); (c) Save 'CONFIG.SYS', and (d) log out and log in again to cause the added line to take effect.

If you've enabled your **ansi.sys** driver, here's what a launch of the program should display:



```
mkevals

Usage: mkevals [-hpruod] inputfilename

mkevals will form written narrative evaluations using
as an input file the class roster provided by the registrar's
office that contains the list of students enrolled in the
course. This file must be suitably edited to provide the
numerical data to be used by mkevals. For additional details,
see the documentation (e.g., point your browser at mkevals.html),
or other documentation formats for the mkevals program.

Options:

-h          display this help message
-u          print version number
-p          (for "plus") allow "+" and "-" grades
-r          (for "rank") provide a class ranking by category
-u          (for "upgrade") discount low early exam scores
-o          (for "old") accommodate old style class rosters
-d          (for "debug") show detailed program operation

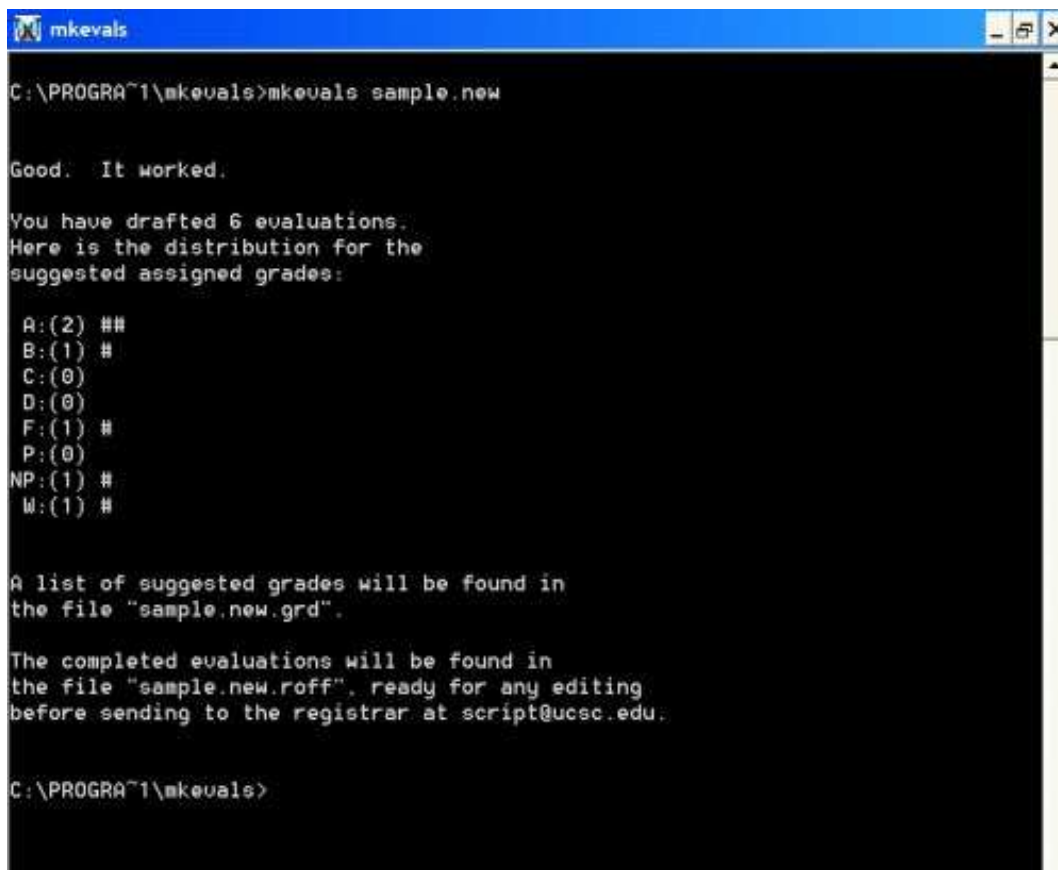
C:\PROGRA~1\mkevals>
```

3 How to test mkevals.exe

If everything works so far (with or without the green words), try giving the command

```
mkevals 'sample.new'
```

This should draft evaluations for the six students in the sample file provided with the distribution, and something like the following is what you should see appearing on the screen:



```
C:\PROGRAM~1\mkevals>mkevals sample.new

Good.  It worked.

You have drafted 6 evaluations.
Here is the distribution for the
suggested assigned grades:

A:(2) ##
B:(1) #
C:(0)
D:(0)
F:(1) #
P:(0)
NP:(1) #
W:(1) #

A list of suggested grades will be found in
the file "sample.new.grd".

The completed evaluations will be found in
the file "sample.new.roff", ready for any editing
before sending to the registrar at script@ucsc.edu.

C:\PROGRAM~1\mkevals>
```

If this works, you might try exercising various options, for example, by giving the command

```
mkevals -purd 'sample.new'
```

You should also find that the command

```
mkevals 'sample.old'
```

will exit with an error message, but that the command


```
mkevals -o 'sample.old'
```

will work correctly.

The program will exit with an error message if either the **which** or the **sed** command is not found on your system; if this is the case, you may not have completed the [Chapter 1 \[Preparatory steps for Windows\]](#), page 2, described above.

In case none of the above works, or if it does work, but you would like to change the wording of phrases used in the evaluations (as described in [the description of the program](#)), you might try compiling the source code on your machine, as described in the following section.

4 How to compile mkevals on Windows

First, to compile the **mkevals** program, you will need an appropriate C++ compiler installed on your machine. **DJGPP** is well-maintained, is free, and works well. (We used **DJGPP** on a Windows XP machine to create the executable file **mkevals.exe**.)

To download **DJGPP**, go to <http://www.delorie.com/djgpp/zip-picker.html>, specify your operating system, check the C and C++ boxes and the RHide box. You will want to select (the default) "Build and run programs with DJGPP". You probably won't need the GNU debugger, nor any of the Extra Stuff. Then click on the "Tell me which files I need" button, which will take you to a page that lists the files to be downloaded, and provides good guidance for installing **DJGPP** on your machine. It is easy to install **DJGPP** on Windows. The documentation is clear. It is not a large package—around 20 MB. It comes with a built in "Gnu Make" program so you won't need to worry about whether or not **make** exists on your system.

Second, assuming you have already downloaded the file 'mkevals_setup.exe' and have run it to install all the components of the **mkevals** program, change to the directory containing the source code for **mkevals**:

```
cd 'C:\src\mkevals'
```

Then try giving the command **make**. If the **DJGPP** compiler is in your "Path" (which it should be if you have followed the instructions from the **DJGPP** site carefully), you should see the various source code pieces being compiled, ending up with the creation of the executable **mkevals.exe** in this directory.

Third, test your newly created executable by giving the commands **mkevals -h**, and then **mkevals 'sample.new'**, as described Chapter 3 [How to test mkevals.exe], page 7. (The sample files 'sample.old' and 'sample.new' are included with the source code, and should be present in this directory.)

Finally, if your test is successful, try giving the command **make install**. If this works, you should find that the executable **mkevals.exe** is present in the 'C:\Program Files\mkevals\' folder, and that the documentation (the files 'mkevals.html' and 'mkevals.pdf') is present in the 'C:\Program Files\mkevals\doc\' folder.

Should you want to **uninstall** both the executable **mkevals** and the accompanying documentation, the command **make uninstall** should accomplish this.

The command **make clean** will remove the executable and all the object files (the files that were produced by **make**), and the command **make distclean** will restore the source code directory to its original condition. You may see some error messages resulting from these commands, but they seem to work anyway.

5 How to install mkevals on UNIX

If you're on a UNIX machine, the process is straightforward, with no preliminary steps required. Since various UNIX systems have various architectures, we have not created any ready-to-use executables for UNIX or Linux. However it is very easy to compile the source code on a UNIX type machine. (This has been tested on a few UNIX machines.)

Just download to some convenient directory (for example, a directory labeled 'src/mkevals') the tarred and compressed file of source code by clicking on this link: <http://maxwell.ucsc.edu/~drip/programs/mkevals/mkevals-2.3.tar.gz>. Then uncompress it with **gunzip mkevals-2.3.tar.gz** and extract the contents with **tar xvf mkevals-2.3.tar**. (On Linux systems this may be done in a single step: **tar xzvf mkevals-2.3.tar.gz**.) This will create the sub directory 'mkevals-2.3', so **cd** to this directory and follow the instructions in the 'README' file contained therein. Typically you will give the commands **make** and, after all compiling is completed, **mkevals -h** (or **mkevals sample.new**), and if those commands work, try the command **make install**.

6 About text editors

Once you have the **mkevals** program running, the next step is to use it to create some narrative evaluations. For this, you will need a good text editor. While text editors that are commonly used on Windows machines will work, you might consider trying out **Gvim**. It is my editor of choice. I use it for anything that requires writing—whether it’s a letter to a friend or an email message or computer code or an html file. To try it out, go to <http://www.vim.org/>, download to your desktop the self-installing executable **gvim63.exe**, open it and install **gvim** on your Windows machine.

7 Caveat

Essentially everything I know about Windows machines has been learned during the past few weeks, while I've been trying out (on a Dell Notebook running Windows XP) the various procedures described in this document. Much of the above is therefore arrived at by trial and error (lots of error). I have also received many generous words of wisdom from a few friends (Al Kelley, Michael Beeson, Roger Anderson) who are more knowledgeable than I am about how to make things work on Windows. Kees Zeelenberg was helpful in pointing me to Jordan Russell's Inno Setup software.

There are surely things that won't work the way I've described them. If you have suggestions for improvement I would very much welcome them. Just email me at drip@ucsc.edu.

Peter Scott