

Sun/Unix Information (9/97)

This brief document is intended to provide basic information about using the Mathematics Department network of Sun workstations in 219 Swords. To begin, an inviolable rule:

Workstations are not PC's, do not turn off the power on either the monitor or the computer when you are done.

If you should have problems with software or hardware please report them via e-mail to:

`help@math.holycross.edu` or simply `help`

or speak to Prof. Damiano, 341 Swords Hall, e-mail: `dbd@math.holycross.edu` or Prof. Little, 335 Swords Hall, e-mail: `little@math.holycross.edu`

Be as specific as possible when you report a problem. Give the name of the workstation on which the problem occurred, the software you were running at the time, and the action which appeared to cause the problem.

Exiting

To exit a session:

- (i) Move the mouse to the *Exit* button on the desktop toolbar, click on the lefthand mouse button.
- (ii) Confirm your exit from the session in the box that appears in the middle of the screen.

Passwords

Each user has a username and a password. Your username is usually your first initial followed by the first seven letters of your last name. Your password has been assigned initially. This should be changed during your first Sun session. This can be done by entering the command

```
nispasswd <enter>
```

in a console or terminal window.

Files and Directories

The Unix operating system uses the following conventions for naming files and directories (sometimes called folders):

Names. Names are case sensitive (Unix knows that “z” is not “Z”), can be of any length, and should contain no blank spaces.

File types. Filenames usually contain a suffix that identifies the type of the file. For example, Unix knows that *myfile.ps* is a Postscript file, which is a printer ready format. When you create a file from within a piece of software, it will indicate the appropriate file type.

Full file names. The full name of a file or directory contains a list of the directories that contain it. The full name of all student files begin with */home/stu/*. For example, */home/stu/msmith/math41/worksheet1.mws* refers to the file *worksheet1* in student user *msmith's* directory *math41*. Since it has type *mws*, it should be a Maple worksheet.

Basic Unix Commands

The following basic unix system commands should all be executed from the command line of a terminal or console window. (These windows can be created by clicking on *Terminal* or *Console*, which appears on the *Programs* sub-menu of the workspace menu.)

- *pwd* Displays the present working directory. (Until you create new directories this will return */home/stu/username.*)
- *ls* Displays a list of all the files in the current directory.
- *rm filename.xyz* Removes or deletes the file *filename.xyz* from the current directory.
- *cp oldfilename.xyz newfilename.xyz* Makes a copy of the file named *oldfilename.xyz* and calls the copy *newfilename.xyz*.
- *mv oldfilename.xyz newfilename.xyz* Renames or moves the file *oldfilename.xyz* to *newfilename.xyz*.
- *mkdir directoryname* Creates a new directory with name *directoryname*.
- *cd directoryname* Changes directories from the current directory to the directory *directoryname*.

Printing from a command line.

- *lp filename.xyz* Prints the file *filename.xyz* on the HP 4mv printer in Swords 219. Your workstation will respond with a message like

```
request id is hso_219_hp4mv-114 (1 file(s))
```

telling you the print job has been sent and the job number, in this case, 114.

- *lpstat* Tells you the status of the printer and gives a list of the jobs yet to be printed and lists the printers and job numbers.
- *cancel hso_219_hp4mv-114* Cancels the print job number 214 on the HP 4mv printer.

Processes and Remote login

It is sometimes the case that a piece of software, a *process* in Unix terminology, will freeze. You can kill a process using *kill* from a console or terminal on your current machine, but you may need to run *ps* first to find the process number. If the machine itself is frozen it is possible to run *kill* from another workstation via *rlogin*.

- *ps -f* Generates a list of processes or software that you are running. For example,

```
sylvester% ps -f
      UID          PID  PPID  C   STIME TTY          TIME CMD
msmith  2112    2099   0 17:43:59 pts/2    0:01 xdvi unix
msmith  2099    1861   0 17:00:50 pts/2    0:00 /bin/csh -i
```

This shows, for example, that user *msmith* was running *xdvi* and that the process number was 2112.

- *kill -9 abcd* Kills the process numbered *abcd*.
- *rlogin newmachine* Logs you in to the machine named *newmachine* from a session on your current machine. This is useful if you have frozen an entire machine. Logon to a second machine and *rlogin* to the first machine and begin killing processes as above. To exit an *rlogin* session type *exit*