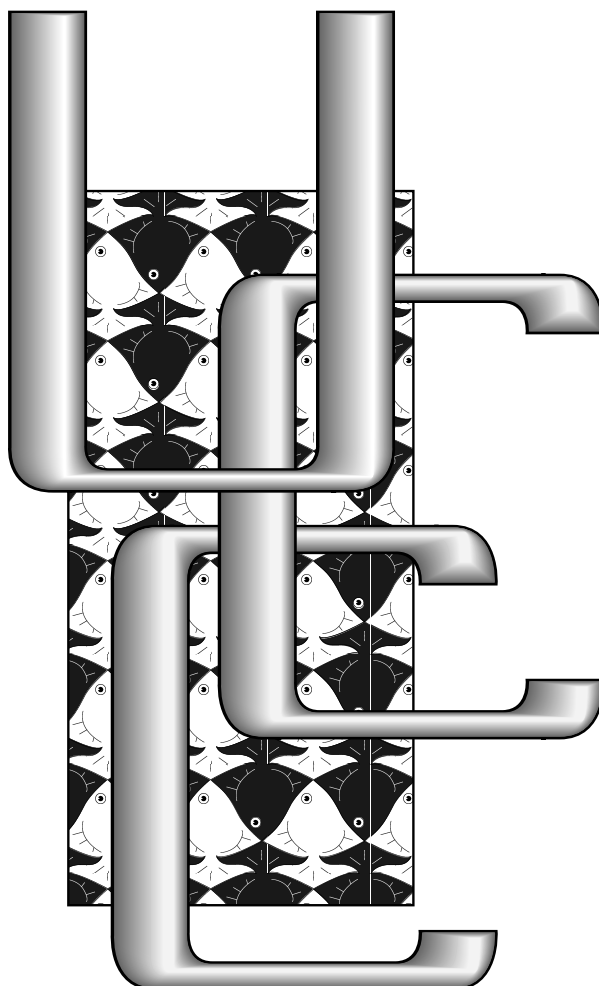


The UCC Fresher Guide



Official Best Club of 1999!

Come to the Fresher's Welcome at the UCC (details inside.)
There will be cheap pizza, computer games, and people to talk to!
We'll be having a lot of fun, and you can see the scary mirrorball.
Come along!

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1 Foreword

If you're a new member, try and read this. It'll help you get involved with a great club and make use of the tremendous computing resources the club puts at your disposal. This is a great chance to learn about the operating systems that drive much of the world's computing, and use hardware that you certainly won't find at home!

More to the point, UCC members are great people. Make sure you come up to the club room and hang out - every Friday night is pizza night. Subscribe to the lists and get details on jobs, parties and interesting 'stuff' that's going on in the world.

2 Introduction

The aim of this guide is to help new members get involved with the club. The UCC can be intimidating to new members - lots of strange looking computers (not all IBM PC derived!) and unusual operating systems (not just Windows!) But stick around and you'll get skills and knowledge that are both useful and fun.

Over the last couple of years a free operating system called Linux has gained quite a lot of attention. The UCC runs Linux, but that is by no means the only operating system you'll be able to work with as a member. There are boxes running quite a few of the non-free Unix operating systems (Solaris, Digital Unix) as well as Mac OS and the next generation Mac OS, Rhapsody.

If you haven't used Unix or similar systems before, then this document should give you a hand. If all you want from the club is to be able to check your email, hopefully that will be made clear. And if you already have experience with Unix (and other operating systems that aren't Windows) you may want to read this for the information about the UCC itself.

2.1 What is the UCC?

The University Computer Club was founded in 1974 (it turned 25 in 1999!) to promote awareness of computer science and to provide students with computer facilities that would normally be inaccessible. We have pizza Friday nights and a drinks machine - you dispense drinks electronically. There are also regular social events - see below!

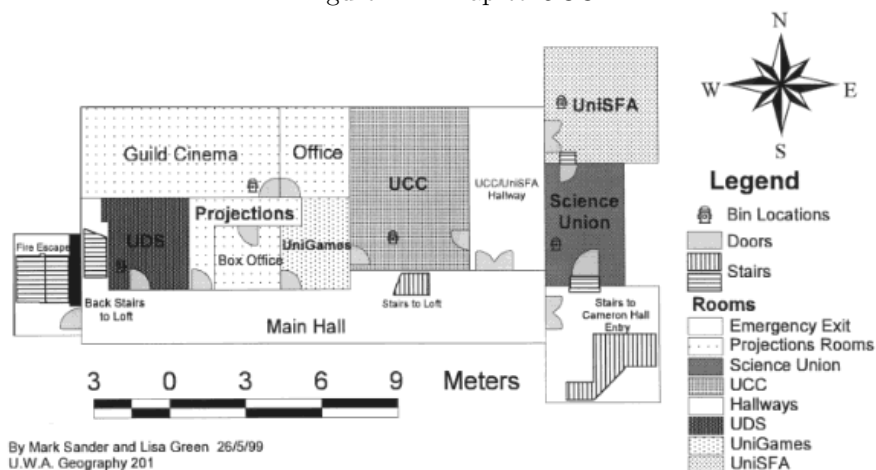
2.2 Where is the clubroom?

Have a look at the map. Basically you just wander behind the Tavern, go through the door on the right and follow the stairs. UCC is on the right from the top of the stairs.

2.3 What is the committee and what does it do?

The UCC committee comprises a President, a Vice-President, a Treasurer, a Secretary, three Ordinary Committee Members ("OCMs") and a First Year Representative ("Fresher Rep"). The committee is responsible for the general running of the club.

Figure 1: A map to UCC



The *President* is the figurehead of the club - the contact point between UCC and the Student Guild. He or she is also supposed to ensure everyone else is doing what they are supposed to.

The *Vice-President* fills in for the President whenever necessary and assists the President in their duties.

The *Secretary* takes the minutes at meetings, emails minutes out to the UCC list, and handles correspondence.

The *Treasurer* looks after the club's bank accounts and payment of bills.

The *OCMs* are there to assist the executive (the four positions above) in whatever way and to provide conflicting and reinforcing positions to committee meetings so that committee makes better decisions.

The *Fresher Rep* represents members which have joined for the first time, including first year UWA students. It's important that are new members are able to get their say in too!

It is *very* important that people turn up to the Annual General Meeting (AGM) to elect the committee. Freshers can run for any position!

2.4 What are UCC 'groups'?

Groups are the UCC's way of getting things done¹. We have several groups for different purposes. The main ones are outlined in Table 1.

2.5 Who can I ask for help?

If you have a problem with your account then just ask a friendly wheel member to fix it. Try and learn from your mistakes so that you don't repeat them, but remember that you can always ask people in the clubroom for help. If its just a general question (programming, campus life, etc) just ask around - someone can probably answer it.

¹Or not, as the case may be!

Table 1: Summary of UCC Groups

Coke Group	Coke group is responsible for administrating the electronic vending machine. These are the people to talk to if you want to add credit to your Coke account. To add credit simply get one of the plastic bags in a box on top of the filing cabinet, put your money in the bag and tell a coke group member the amount and the bag number.
Door Group	A door group member should be in the room at all times. They are charged with making sure that all members behave responsibly with UCC equipment. Door members can open the electronic door. If the room is ever open without a door member, email committee@ucc.gu.uwa.edu.au immediately.
Wheel Group	Wheel group are in charge of maintaining the club's Unix machines. As such they have root access and are the people to see if you break your account.

3 How to get involved with the club

3.1 Subscribe to the mailing lists

If you want to keep up with club events, activities and discussions you want to be on the mailing lists. The volume of email you'll receive varies strongly with time - in my experience it jumps sharply during study breaks. When a frank exchange of views takes place (a.k.a, a flame war) your mail box may be flooded with twenty messages in twenty minutes - but don't worry about it. Most of the email will be fun to read!

Table 2 contains a brief description of the first mailing lists you may wish to join.

3.2 UCC Events

3.2.1 Freshers' welcome

There will be cheap pizza (only \$2 for Freshers), computer games, and people to talk to! More details will be provided closer to the event (probably by email and posters in the clubroom.)

3.2.2 Friday night is pizza night!

Come into UCC on a Friday night to share Pizza with your fellow UCCans. Pizza gets ordered when someone bothers (usually 7-7:30pm) and then it's followed up with plenty of things happening. This is the best time to learn anything about UCC or to do with computers in general - lots of people to ask and plenty to interest all.

Table 2: Main UCC Mailing Lists

ucc@ucc.gu.uwa.edu.au	This is the main UCC mailing list. You'll receive email about practically any topic if you subscribe, as well as general UCC announcements. All subscribers may post to this list.
ucc-announce@ucc.gu.uwa.edu.au	Special UCC announcements are posted here. All members are subscribed to the list. Only list administrators may post to it.
committee@ucc.gu.uwa.edu.au	A list for the public discussion of committee activities and decisions. All members may subscribe to this - there is a separate committee-only mailing list.
tech@ucc.gu.uwa.edu.au	A list for the public discussion of technical issues at the club. Any non security sensitive discussions should be carried out here.

3.3 And Sunday night is cards..

Every Sunday night in the Cameron Hall loft, a few people can be found playing cards. Almost all popular card games are played, including Bridge, Poker and sometimes other games like Chess. Come along and have a fun time, all UCCans are welcome.

3.4 Work on UCC projects

There are people around working on various insane projects. Just look at the mirrorball sometime! There are people wandering around with knowledge about practically everything, including electronics and the various types of programming. If you want to find out about ongoing projects just subscribe to the mailing lists and hang around the clubroom.

If you have projects of your own, you'll very likely find someone willing to help.

3.5 Offer to help out

There is always something that needs to be done. Perhaps you could run for committee at the AGM (on the FIXMEFIXME), or help in the (infrequent, yet mammoth) clean-ups. If you have a cool coding idea that would be useful and you'd like to implement at UCC, talk to people about it. If you get positive feedback, write it and then a wheel member might install it so all members can use it.

4 Using the computers!

4.1 What machines does UCC have?

The UCC has a variety of computers running a multitude of different operating systems. 1999 saw the appearance of a number of SGI (formerly Silicon Graphics) machines² running IRIX - the SGI Unix variant.

The staple OS for the UCC is currently Debian GNU/Linux. It is being used to run our two user machines (Mermaid and Morwong) and several servers. Also present are FreeBSD, Sun Solaris, and Digital Unix. Non-Unix operating systems include various versions of MacOS, BeOS and maybe even Windows(!).

4.2 How do I log in?

Most UCC machines run multi-user operating systems. This means several people can use them at once. Users are given a *username* - you should choose one when your account is created.

Logging into a computer is simple. At the prompts enter your username and then your password. If the system complains about an 'invalid login' (or similar) and you are sure that you typed your password correctly, you may not have an account on that machine. Ask a wheel member (nicely :) to create an account. Some machines are only for use by system administrators - for example, mooneye and mako.

The Apple Macintoshes and the BeBox do not (at the time of writing) require logins. However, if someone seems to be using one of these computers and isn't around, please wait a while before closing all their windows :)

4.3 Dispensing soft drinks from the machine

To dispense your choice of soft-drink from our electronic machine, just type "dispense" at a prompt. To find out how to get a prompt, read on! There's also a web interface to the coke machine, see the webpage.

To pay for your drinks you'll need a Coke Group member - again, keep reading and you'll find out more.

4.4 What is Unix?

Many UCC computers run variants of Unix. Most Unix-based operating systems are quite similar from a user's point of view. The following quote is from the Jargon File, as maintained by Eric S. Raymond, and should explain a little about where Unix came from:

:Unix:: /yoo'niks/ /n./ [In the authors' words, "A weak pun on Multics"; very early on it was 'UNICS' (also 'UNIX') An interactive time-sharing system invented in 1969 by Ken Thompson after Bell Labs left the Multics project, originally so he could play games on his scavenged PDP-7. Dennis Ritchie, the inventor of C, is considered a co-author of the system. The turning point in Unix's history came when it was reimplemented almost entirely in C during 1972-1974,

²Kindly donated by Hammersley Iron

making it the first source-portable OS. Unix subsequently underwent mutations and expansions at the hands of many different people, resulting in a uniquely flexible and developer-friendly environment. By 1991, Unix had become the most widely used multiuser general-purpose operating system in the world. Many people consider this the most important victory yet of hackerdom over industry opposition (but see Unix weenie and Unix conspiracy for an opposing point of view). See Version 7, BSD, USG Unix, Linux.

You can read more of the Jargon file by typing “jargon *keyword*” at a shell prompt on most UCC machines.

4.5 Common Unix Commands

This section documents common Unix commands. They are fundamental and should be implemented almost identically on any Unix platform. See Table 3.

4.6 Editing files under Unix

Various editors exist for the Unix operating system. A common editor for beginners is *Pico*. It is easy to use and simple, although less powerful than other editors. *Emacs* and *VI* are the two editors typically used by experienced Unix users.

Both Emacs and VI are extremely powerful and available on almost all Unix systems. For more information on Unix editors browse the web - there are many very good FAQs available.

4.7 Shells and login scripts

When you log into a Unix machine, whether remotely or on the console, an interactive shell is run. Many shells exist with different features (bash, tcsh, zsh, etc). When your account was created your default shell was set (probably bash or zsh - there is currently a debate about which).

At the time of login the shell runs your *startup scripts*. These specify aliases, run useful programs and display information to your terminal. For zsh the startup script is `.zshrc`. Be very careful editing this script - change it incorrectly and you may be unable to log on to some or all machines.

To avoid this happening, test the script *before* logging out. The command `'source ./zshrc'` should do the trick. This will run the script and (hopefully) report any errors.

4.7.1 Your path

An important point needs to be made here. Your *path* is the list of directories scanned by your shell when you attempt to run a program. You may often wish to run programs in the current directory.

By default the UCC login scripts do not include the current directory (also referred to as the `'.'` directory) in your path. You need to explicitly state the location of the program you wish to run if it is in the current directory, and

Table 3: Summary of Common Unix Commands

<i>Command</i>	<i>Basic syntax/Example</i>	<i>More info...</i>
cd	cd <i>directory</i>	'cd' changes your current directory. You can specify the directory to change to in two ways - using <i>relative</i> or <i>absolute</i> paths. <i>Relative</i> paths use two special directories - '.' refers to the directory above the current one and '.' refers to the current directory. <i>Absolute</i> paths are taken with reference to the <i>root</i> directory - '/'. cd with no parameters returns you to your home directory.
cp	cp <i>source destination</i>	'cp' is used to duplicate a file. If you want to copy <i>every</i> file in a directory and its sub-directories then use 'cp -r <i>directory new-directory</i> '
exit	exit	'exit' exits the shell you are currently running.
logout	logout	'logout' logs you out of the <i>login</i> shell you are currently using.
ls	ls	'ls' displays a listing of the current directory. By default files beginning with the '.' character are <i>hidden</i> . To have these files included in the listing use the '-a' option. The '-l' option displays more information on each file. An extremely common use of the command is therefore 'ls -al'.
man	man <i>name</i>	man is used to get help on a command or topic. Type <i>man man</i> for more information on man:-)
mv	mv <i>source destination</i>	'mv' is used to move a file. The mv command is used with exactly the same syntax to move a directory as to move a file.
rm	rm <i>filename</i>	'rm' is used to remove a file. If you want to remove <i>every</i> file in a directory and <i>all</i> directories above it then use 'rm -r <i>directory-name</i> '

that directory is not in your path. If you have a program 'hello' in the current directory, you would type './hello' to run it.

If you wish you may add the current directory to your path. It is not there default for an important reason - *the current directory may contain hostile executable files*. For example, if a hostile program named 'ls' was in the current directory you might type 'ls' and suddenly have all of your files deleted.

4.8 Customising your account

The account management system at UCC is under active development. It's recommended that you ask someone how to change your account details :)

5 Common questions

5.1 BeOS

5.1.1 What the heck is a BeBox?

The BeBox is based loosely around the Apple Macintosh design. It features two 133Mhz PowerPC processors. The two sets of yellow lights on the front of the BeBox represent the CPU usage of each processor!

The Be is currently running BeOS. BeOS appears to be a reasonable operating system, but application development for the BeBox hardware seems to have stalled. The BeOS release for the Intel architecture appears to have a much larger software base. As it stands the Be lacks much in the way of useful software.

5.2 IRIX and the SGIs

5.2.1 Where did you such cool machines appear from?

Hammersley Iron kindly donated a SGI O2 and Indigo 2. These machines are very useful for 3D tasks - especially OpenGL programming. They also seem to be used for Quake a lot.

5.2.2 Common commands give 'file not found'.

IRIX has a slightly different directory structure to Linux. You're probably missing '/usr/bsd' and '/usr/freeware/bin' from your path.

5.3 Apple Macintosh

5.3.1 What operating systems are available for the Macs?

Currently the UCC's Apple Macintosh computers are running various versions of MacOS. including MacOS 9 and MacOS X Server (also known as Rhapsody and Darwin). MacOS X is a result of Apple's purchase of NeXT and is effectively a successor to NeXTstep.

5.3.2 I can't log in to Rhapsody. How do I boot to MacOS?

This section only applies to the G3, which dual boots Rhapsody and MacOS. Rhapsody does not at the time of writing have all user accounts. If you want to use MacOS rather than Rhapsody click the 'Restart' button and hold down 'Option' until you see the MacOS logo.

The default operating system is Rhapsody. If want to use Rhapsody simply reboot the machine - Rhapsody will boot automatically.

5.4 Printing

UCC owns several working³ laser printers. A system to make the printers from all user machines is currently being devised. The simplest answer is: ask someone.

5.5 X Windows doesn't load

Some of the UCC's terminals run X Windows (and are called *X-Terminals*) - for example the small white Labtams. There can be a few problems when logging into these, and hopefully this section will help. A *dumb terminal* can only operate in text mode - we have a few of these outside the clubroom.

If, after logging in, the screen goes blank for a second or two and then the login prompt reappears you probably have a problem with your '.xsession' file. This file specifies the commands to be run immediately upon logging in to an X Session Manager. A neat trick that works on most X session managers is to enter your username and password, but instead of pressing <enter> after entering your password, press F1. You will be given a secure startup, usually giving you a command prompt so you can run a window manager.

This file may attempt to run a command (such as a window manager) which doesn't exist. The easy way to fix this is to log in to a plain text console (for example the dumb terms) and execute the command 'mv .xsession .xsession.broken'. You should now be able to log into X. It is probably a good idea to have a look at the '.xsession.broken' file and see what was wrong with it. Also see the file '.xsession.errors' which will explain the reason for past failures.

6 More information

Much of the software you will use on a day-to-day basis is a product of the open-source movement. This movement is largely internet based - so if you want to find out more about a project, have a look on the web.

UCC has an extensive collection of reference manuals. In particular the Sun manuals along the wall next to the door are *really* good. If the relevant man page doesn't have enough information these might be able to help.

Table 4 details some of the most useful websites for people interested in Unix operating systems and computing in general.

³At least some of the time

Table 4: Useful web sites

http://www.ucc.gu.uwa.edu.au/	The UCC homepage! Information is posted here from time to time, including committee minutes, policies and cool cgi-scripts.
http://www.gnu.org/	The homepage of the Free Software Foundation. These are the people that created gcc and many other utilities commonly used under Linux and other Unixes.
http://www.linux.com/	This is the official Linux homepage. A very useful resource that links many more specific sites.
http://www.debian.org/	The official homepage of Debian GNU/Linux. This is the flavour of Linux currently predominating within UCC. A useful site for news and updates.
http://www slashdot.org/	Slashdot describes itself as "News for Nerds. Stuff that matters." It provides interesting reading if you're interested on the latest computing news.
http://www.freshmeat.net/	Freshmeat is <i>the</i> repository for free software. This is the place to visit to look for free software, or to find out about updates.

If you have any questions after reading this Guide, don't hesitate to ask someone. Come up to the clubroom. Nobody bites and we're all more than willing to help.

Have a great time at Uni, and the UCC looks forward to seeing you!