COMP-232 Unix/C Tutorial LAB 3 – Putty / sftp / ssh

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First, check to see if you have putty installed on your system.

If not, the official download site for Putty for Window 10 is:

PuTTY: a free SSH and Telnet client (greenend.org.uk)

Mac users can download putty from:

Download Putty (0.76) for Windows, Linux and Mac - Install SSH in PuTTY (puttygen.com)

Start Putty. Enter 143.198.238.179 for Host Name/IP address and comp232.com for Saved Sessions.

PuTTY Configuration		? ×
Category:		
 Session Logging Terminal Keyboard Bell Features Window Appearance Behaviour Translation Selection Colours Connection Data Proxy Telnet Rlogin SSH Serial 	Basic options for your PuTTY set Specify the destination you want to connect Host Name (or IP address) 143.198.238.179 Connection type: Raw Telnet Raw Telnet Raw Telnet Raw Telnet Raw Connection type: Raw Telnet Structure Telnet Structure Telnet Telnet Telnet Telnet Telnet Telnet Telnet Telnet <td>ssion t to Port 22 () Serial Load Save Delete ean exit</td>	ssion t to Port 22 () Serial Load Save Delete ean exit
About Help	Open	Cancel

A common Putty change is to pick a font and/or font size rather than the default. To do this, click on **Appearance -> Change**. The Font window will appear. Select a font size larger than the default. Click OK.

RuTTY Configuration	? ×		
Category:		Font	×
Session	Configure the appearance of PuTTY's window		
	Adjust the use of the cursor	Font:	Font style: Size:
Keyboard	Cursor appearance:	Courier New	Regular 14
Bell	Block O Underline O Vertical line	Courier New 🔺	Regular \land 14 🔺
Window	Cursor blinks	Fixedsys	Italic 16
Appearance	Font settings	Lucida Console	Bold 18
Behaviour	Font used in the terminal window	Lucida Sans Typewrit	Bold Italic 20
Selection	Font: Courier New, 14-point Change	NSimSun	22
Colours	Allow selection of variable-pitch fonts	SimSun-ExtB	26
- Connection	Font quality:	Terminal v	× 28 ×
Proxy	O Antialiased O Non-Antialiased		Comple
Telnet	ClearType		Sample
- Rlogin	Adjust the use of the mouse pointer		
Serial Hide mouse pointer when typing in window			AaBbYyZz
	Adjust the window border		
Gap between text and window edge: 1			Script:
	Sunken-edge border (slightly thicker)		Western ~
About Help	Open Cancel		
y 1	Delete		
al			
		Show more fonts	
Close	window on exit:		
	ways Onever Only on clean exit		OK Cancel

But to save your changes, you need to select **Session** again, and then hit the **Save** button.

To log into comp232.com (after clicking on Save), click on the **Open** button.

A Putty window will appear.

Your user name is your first name in lower case, e.g., john. Your password is **comp232**. If there are two students with the same first name, e.g., daniel, your last name is your user name in lower case.

Once logged on, change your password. To do this, type:

% passwd

Enter your new password twice.

Make sure you remember your user id and password for future use!

Run the following commands:

% Is	← Nothing is there. This is a new account
% whoami	← Who am I logged in as.
% grep <username> /etc/passwd</username>	← Did I spell your name correctly?

Let's understand the /etc/passwd file. Here are the entries for Anton's entry. Each field is delimited by the colon.

kathleen:x:1167:1166:Kathleen Robbins,,,;:/home/kathleen:/bin/bash

kathleen – user name 1167 – user id 1166 – group id as found in the /etc/group file Kathleen Robbins – Full name /home/kathleen – Anton's home directory /bin/bash – Kathleen's default shell used when logging in

% grep <username> /etc/group ← I assigned you to your own group.

Again, let's look at Anton's entry in /etc/group:

kathleen:x:1166:

kathleen – group name (yes, I know. This isn't usual. Usually your group would be assigned to a common group like staff, representing the staff group).

* – group password. If empty, no password exists.

1166 – group id

user list – You can add users to be in your group.

Now start up an Ubuntu terminal window on your laptop.

Change to the directory where you have your 1.txt, 2.txt, 3.txt, and 4.txt; myfor.c, mywhile.c, myswitch.c, and myif.c; and, age.c source code files.

% sftp <username>@comp232</username>	com ← Or you can use: sftp samson@143.198.238.179
sftp> pwd	\leftarrow Print working directory on the remote system
sftp> mkdir LAB1	\leftarrow Use capital letters for directories as they are listed first.
sftp> cd LAB1	← Change to LAB1 directory
sftp> put lab1.txt	
sftp> mkdir TASK1 TASK2 TASK3 ← Create TASK subdirectories.	
sftp> pwd	 Print working directory on the remote system

sftp> lls	← List files on your system.
sftp> Is	← List files on comp232.com
sftp> cd TASK1	
sftp> put 1.txt	
sftp> put 2.txt	
sftp> put 3.txt	
sftp> put 4.txt	
sftp> Is	← Make sure 1.txt, 2.txt, 3.txt, and 4.txt are there.
sftp> cd/TASK2	← Now cd to TASK2 directory on comp232.com
sftp> put myfor.c	
sftp> put mywhile.c	
sftp> put myswitch.c	
sftp> put myif.c	
sftp> cd/TASK3	
sftp> put age.c	
sftp> cd	
sftp> ls -lr	← List all files and TASK directories
sftp> quit	← All done.

Now your files for LAB 1, TASKS 1-3, are on comp232.com.

Let's make sure they compile cleanly using the gcc compiler on the remote system (comp232.com system, that is).

You have two options to log into comp232.com: use ssh (secure shell) or use putty. To use ssh, type:

% ssh <username>@comp232.com ← Use ssh to log into comp232.com.</username>		
% cd	← Change to your home directory on comp232.com	
% cd LAB1	← Change to where your source code files and output files are.	
% ls -lr	← Let's see what's here.	
Make sure you can compile your programs with no errors or warnings using:		
% cd TASK2		

% gcc myfor.c -o myfor

Now run each program on comp232.com to make sure they work.

% Is -I myfor \leftarrow Note it's executable file.

% myfor

But wait, when I run it, you might see:

myfor: command not found

Why is that? And let's correct this now.

% echo \$PATH	← This will show you where executables are searched for in the order of the PATH. And you notice that your current directory isn't listed.
% ./myfor	\leftarrow This forces you to run the ratio command found in your current directory.
OR	
% PATH=\$PATH:.	← This will add your current directory you're in to the PATH, but only for this current session. Don't forget the dot after the semicolon.
OR	
% cd	\leftarrow Change to your home directory (as defined in /etc/passwd)
% ls -l .profile	← No .profile here.
% vi .profile	← New file, so simply add the following one line:
PATH=\$PATH:.	
%profile	← You can log out and log back in, or simply run your .profile to update PATH.
% echo \$PATH	\leftarrow The dot is at the end of the path. You're good every time you login now.

Now run each of your programs to make sure they work as expected.

Now that you updated your PATH, make sure you can compile and run your TASK2 and TASK3 programs on comp232. by running:

% mywhile

Do the same for myif.c and myswitch.c.

% cd ../TASK3

% gcc age.c -o age

% age