Documentation on SSH & SCP
ENGR30003: Numerical Programming for Engineers

This course requires you to compile and run C programs. You must also be able to copy over the program files to Dimefox and run them there. This guide will outline how to do that. If your terminal can't do any of the following, contact your tutor and he will assist you.

1. Let's assume you want to transfer a file called `helloworld.c` to Dimefox for running there. To transfer the file via the terminal you will open the terminal and type:

   `> scp <location>/helloworld.c username@dimefox.eng.unimelb.edu.au:~`

   Here, you are using the secure copy (SCP) protocol to transfer your program file to Dimefox. The first argument after scp is the location where the file is that you want to transfer. If, on the terminal, you are already in the folder where the file is located, the first arugment would simply be `helloworld.c`. The second argument is the server name followed by the location where you want to put the file. `~` represents the home folder on Dimefox. If you wanted to put this file into a folder called ENGR30003 on Dimefox, the second argument would be `username@dimefox.eng.unimelb.edu.au:~/ENGR30003`

2. After you have transferred the file, you can check if it is there on Dimefox. To do that, you will open the terminal and login to Dimefox using:

   `> ssh username@dimefox.eng.unimelb.edu.au`

   Here, you are logging onto the Dimefox server using the secure shell (SSH) protocol. After you enter your password, the terminal will now take you to your home folder on Dimefox. If you transferred your file to the home folder, you can check if it is there using:

   `> ls`

   Or if you put it in the ENGR30003 folder, you can check it using:

   `> ls ENGR30003`

   Or

   `> cd ENGR30003`
   `> ls`

3. The compilation and execution of your program on Dimefox is to be using:

   `> gcc -Wall -std=c99 helloworld.c -o hello -lm`

   And execution using

   `> ./hello`

4. To exit from the logged in session from Dimefox, simply type:

   `> logout`