Worksheet One

"You know", said Arthur,"Its at times like this, when I'm trapped in a Vogon airlock and about to die of asphyxiation in deep space that I really wish I'd listened to what my mother told me when I was young". "Why, what did she tell you?" replied Ford. "I don't know I didn't listen!"
Douglas Adams, The Hitch Hikers Guide to the Galaxy 1979

Objectives of this session:
- to learn how to login/logout from Unix.
- to learn how to change your password on Unix.
- to familarise yourself with the process of using Firefox to access both the standard SDK documentation and the documentation available from the unit web page.
- to create, compile and run your first Java program.

Prior to coming to this practical you must have:
- Enrolled in ST151 or ST501
- Successfully registered for the practical session that you are attending.

Your must bring to this practical:
- Your lecture notes.
- Your text books (including a print out of the pdf file book).
- This worksheet.

Exercise One (logging onto Unix)
- Use your Oasis username and password to login the the lab computers.
- Use your lecture notes to find out how to login to Unix and create a terminal window.

Exercise Two (using the web to access JDK documentation and ST151/501 documentation).
The Firefox web browser icon is on the toolbar. Left click on it once and wait for Firefox to load.

The first thing that will happen is the university's internet monitoring system will ask you to enter your username and password again. Do that and it will then load whatever the default home page is. Enter the url below:

```
http://www.computing.edu.au
```

When it loads, set this as your normal home page. Next click on the current student tab and the units area and finally select Software Technology 151. Record this as a bookmark (if you are used to internet explorer the I mean favourites but the correct and more generic term is bookmark).

In addition to Blackboard, all of the ST151 web materials are available via this area. You will often find it much faster to access this that to login to Blackboard so make good use of this area.

The next thing is to bookmark the Java online documentation. It won't mean anything to you know but you will need it later so bookmark it now. The URL is:

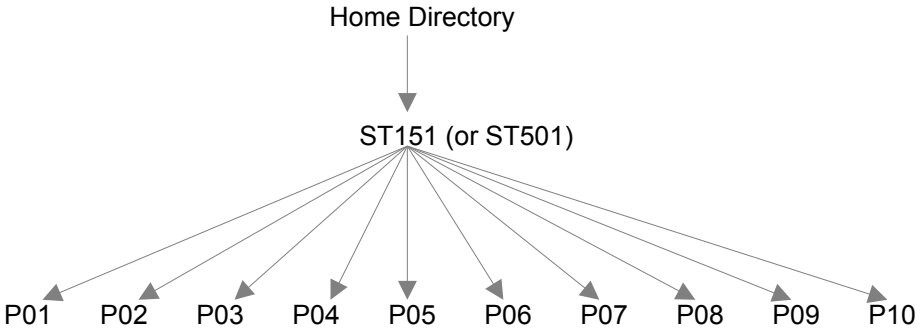
```
/usr/java/latest/docs/api/index.html
```

When you have loaded the page, save it as a bookmark.

You should also need to set the proxy settings to be able to access web sites outside of Curtin. You should tick the option that says automatically detect proxy settings.

Finally you need to set the disk cache size to zero MB. If you have trouble with the proxy or Cache settings ask your tutor to assist you.

Exercise Three (getting organised).
Using your lecture notes to guide you, create a directory called ST151 (or ST501 as appropriate) in your home directory. Under that directory create a series of sub-directories, one for each practical. Each week you should place the work for that week in the appropriate directory. You should attempt to do this via a Unix shell window not using the graphical user interface.



Again using your lecture notes, learn how to:
- find out your current directory location.
- change from your home directory (where you started when you logged in.) in the ST151 (or ST501) directory.
- move into the various practical directories and back to your home directory.

Exercise Four (setting up for Java)
In order to be able to compile and run Java programs you will have to modify a special file in your home directory. The file is called .bash_profile. Because its name starts with a period, you will not see it using the command for listing files (i.e. ls) unless you use the –a option (i.e. ls –a).

There are two text editors you can use. One is called vi (see the help files on how to use it) and the other is called gedit (available via the Accessories menu). gedit works like Notepad on windows. Using either editor create a text file and put anything in it just to get sued to using the editor.

When you feel comfortable with the editor use the it to add the following lines to a file called .bash_profile:

```
export CLASSPATH="/usr/java/latest/lib:/usr/units/st151/classes:."
```

Get your tutor to check that you have modified your .bash_profile file correctly. Once this is done test it with the command:

```
source .bash_profile
```

This will make this modification take effect.

Finally log completely out of the system and log back in. This will ensure that the changes you made to the .bash_profile file will now take effect.

Note Exercise Five is on the next page.

Exercise Five (your first Java program)
Translate the algorithm below into a Java main() method. Use the example at the end of lecture one as a guide. Note you will need to check the Java example in the lecture notes very carefully. Write your java program on a piece of paper and then use the vi editor to create a file called MyFirstJavaApplication.java in your P01 directory.

```
INPUT integerOne and integerTwo
sum = integerOne + integerTwo
diff = | integerOne – integerTwo |
OUTPUT sum and diff
```

Your tutor will explain how to do absolute vale in Java, other than that the lecture one example has all the information you need. Once you have created the java program, try to compile it using the command:

```
javac MyFirstApplication.java
```

If it does not compile successfully then ask your tutor for help in correcting the errors. Once you have corrected the error then try compiling it again.

Once it has been successfully compiled then you can try running it using the command:

```
java MyFirstApplication
```

Once you have got this far you have successfully completed worksheet One. Congratulations!!