

COMP90041 Programming and Software Development

Lecturer: Prof. Rui Zhang

Semester 1, 2019, Week 2

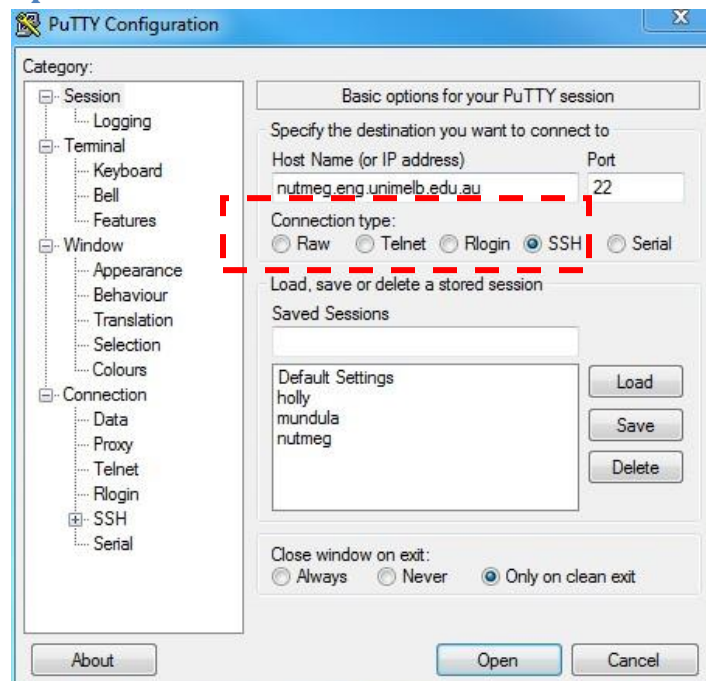
COMP90041 Lab Week 2 Step by Step

Goal: Compile and run your first Java program

Software: PuTTY (<http://www.chiark.greenend.org.uk/~sgtatham/putty/download.html>),
FileZilla (<http://filezilla-project.org/download.php?type=client>).

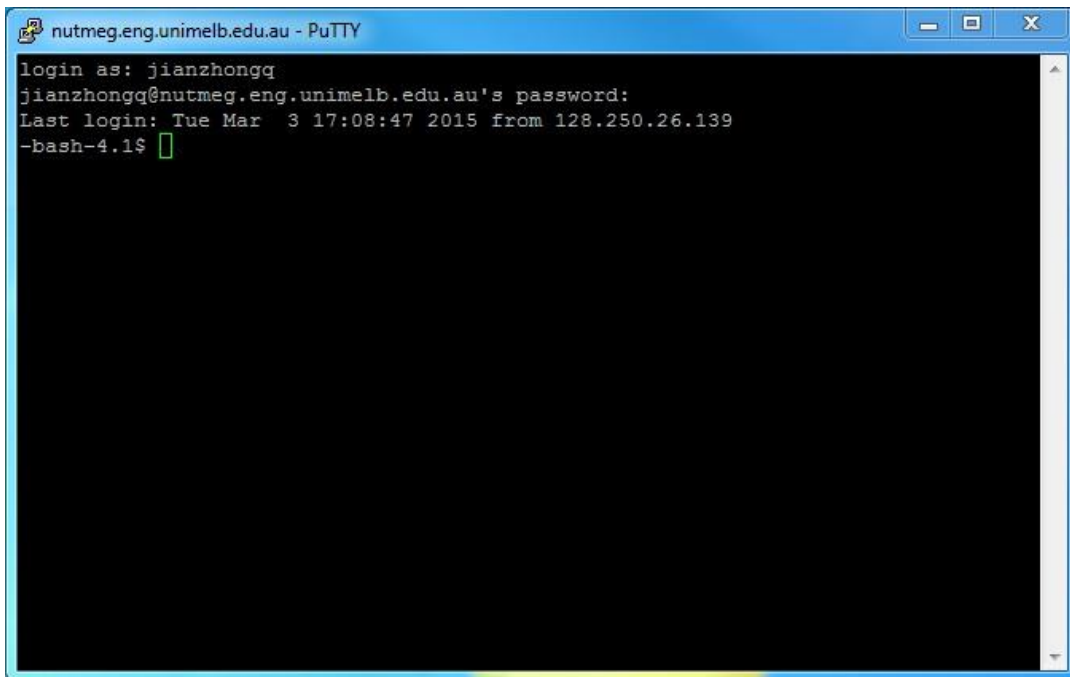
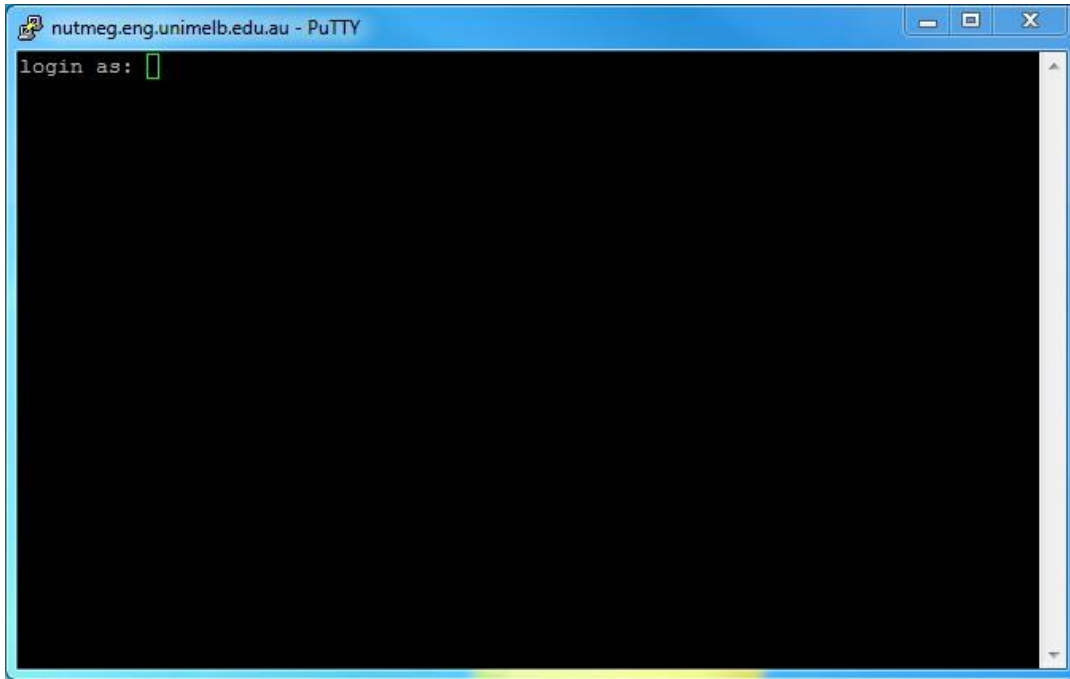
1. Use PuTTY to access a server

1.1 Launch PuTTY, enter “nutmeg.eng.unimelb.edu.au” as the “Host Name”, and click “Open”



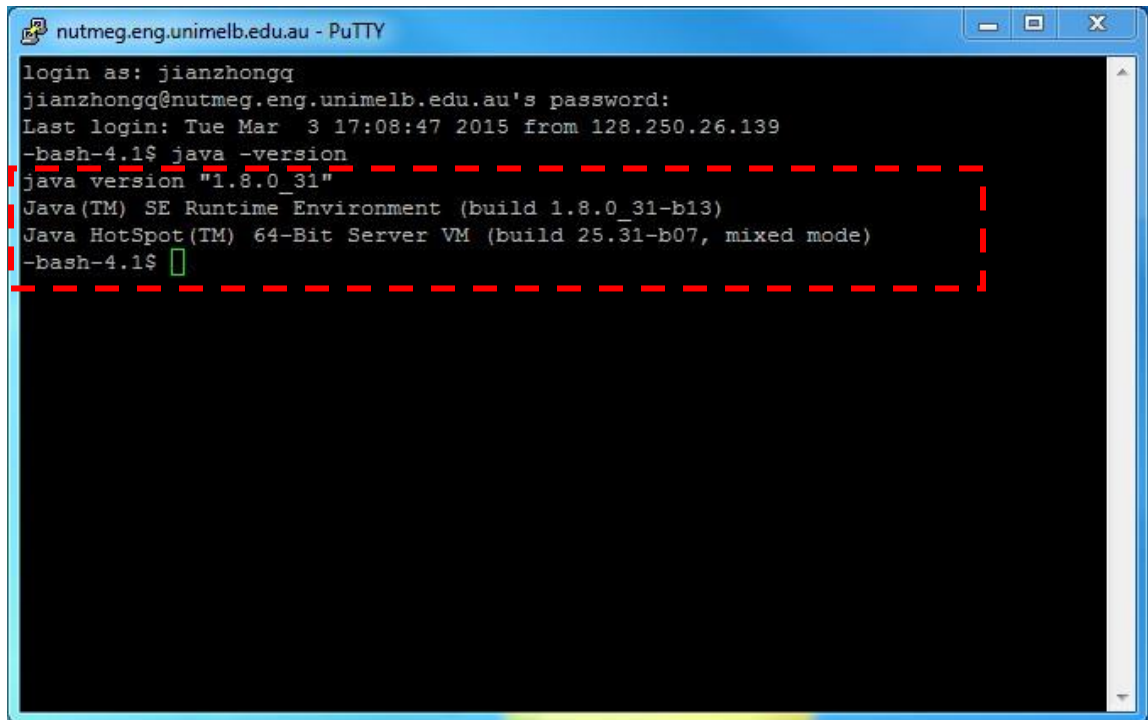
1.2 Click “Yes” on the pop-up window

1.3 Log in with your university account



1.4 Examine the Java Runtime Environment version with “java -version”

If the following screen shows up then the correct Java compiler has been installed.



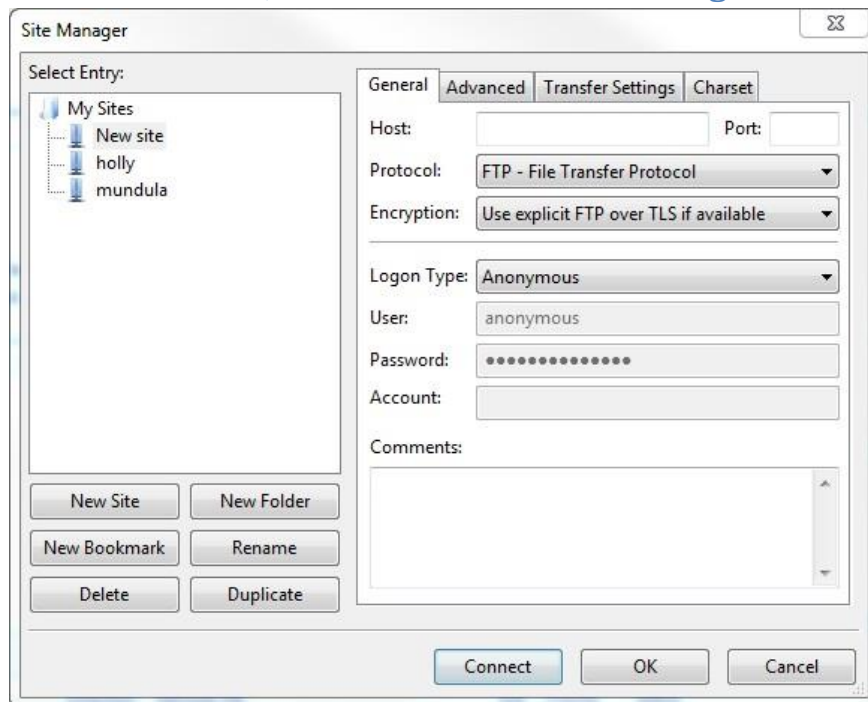
The screenshot shows a PuTTY terminal window titled "nutmeg.eng.unimelb.edu.au - PuTTY". The terminal displays the following text:

```
login as: jianzhongq
jianzhongq@nutmeg.eng.unimelb.edu.au's password:
Last login: Tue Mar  3 17:08:47 2015 from 128.250.26.139
-bash-4.1$ java -version
java version "1.8.0_31"
Java(TM) SE Runtime Environment (build 1.8.0_31-b13)
Java HotSpot(TM) 64-Bit Server VM (build 25.31-b07, mixed mode)
-bash-4.1$
```

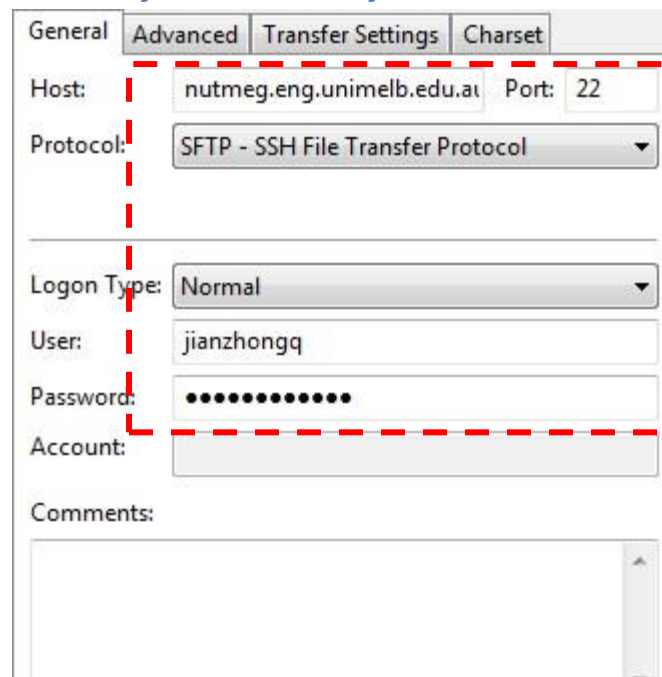
The output of the `java -version` command is highlighted with a red dashed rectangle, indicating a successful installation of the Java Runtime Environment.

2 Use FileZilla to transfer files to the server (optional)

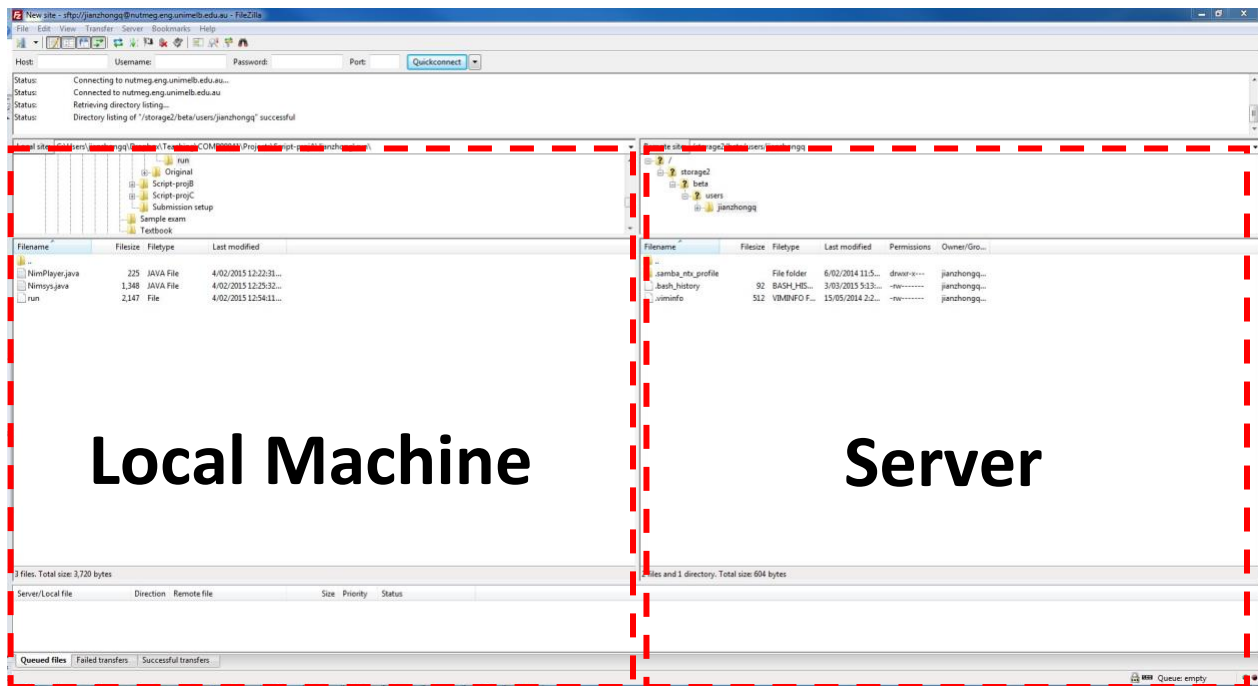
2.1 Launch FileZilla, click menu File->Site Manager->New Site



2.2 Create a new site with host name “nutmeg.eng.unimelb.edu.au”, server type “SFTP – SSH File Transfer Protocol”, logon type “Normal” and your university account name and password



2.3 Connect

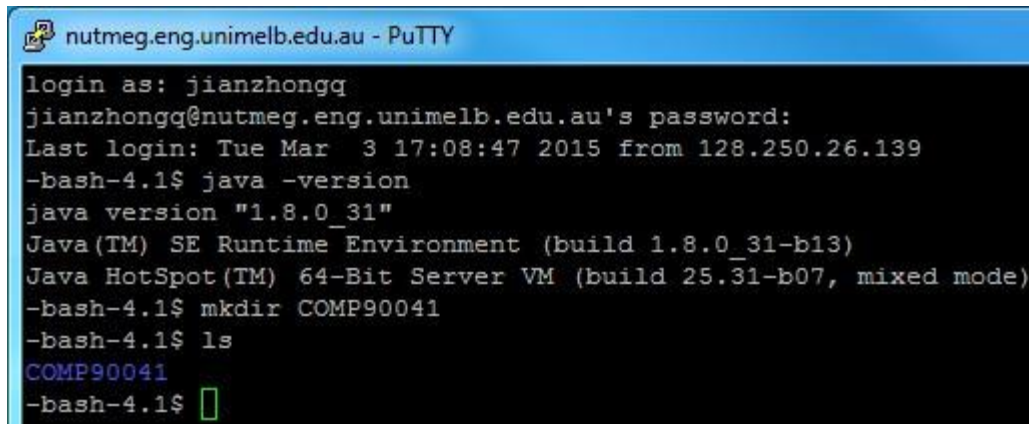


3 Compile and run a Java program

3.1 In Putty, create a folder “COMP90041” with “mkdir COMP90041”

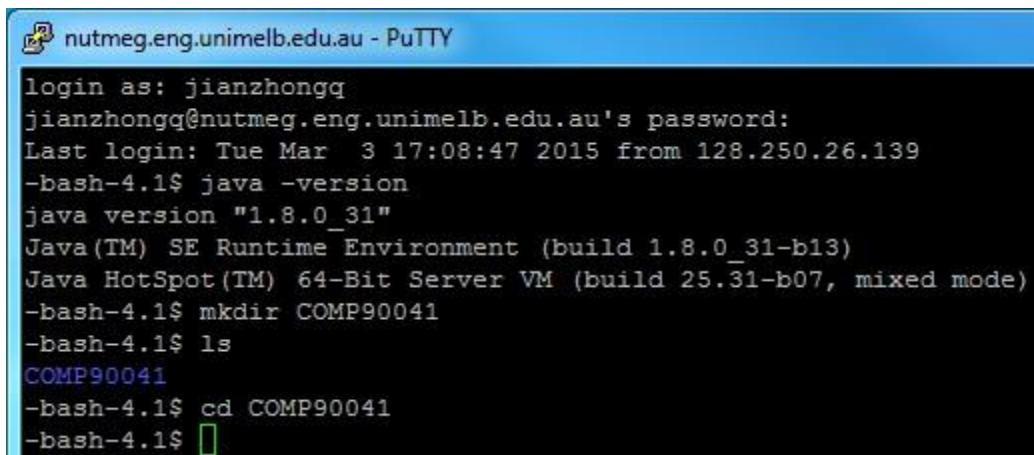
```
nutmeg.eng.unimelb.edu.au - PuTTY
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jianzhongq@nutmeg.eng.unimelb.edu.au's password:
Last login: Tue Mar  3 17:08:47 2015 from 128.250.26.139
-bash-4.1$ java -version
java version "1.8.0_31"
Java(TM) SE Runtime Environment (build 1.8.0_31-b13)
Java HotSpot(TM) 64-Bit Server VM (build 25.31-b07, mixed mode)
-bash-4.1$ mkdir COMP90041
-bash-4.1$
```

3.2 View the files and folders under the current directory with “ls”



```
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java version "1.8.0_31"
Java(TM) SE Runtime Environment (build 1.8.0_31-b13)
Java HotSpot(TM) 64-Bit Server VM (build 25.31-b07, mixed mode)
-bash-4.1$ mkdir COMP90041
-bash-4.1$ ls
COMP90041
-bash-4.1$
```

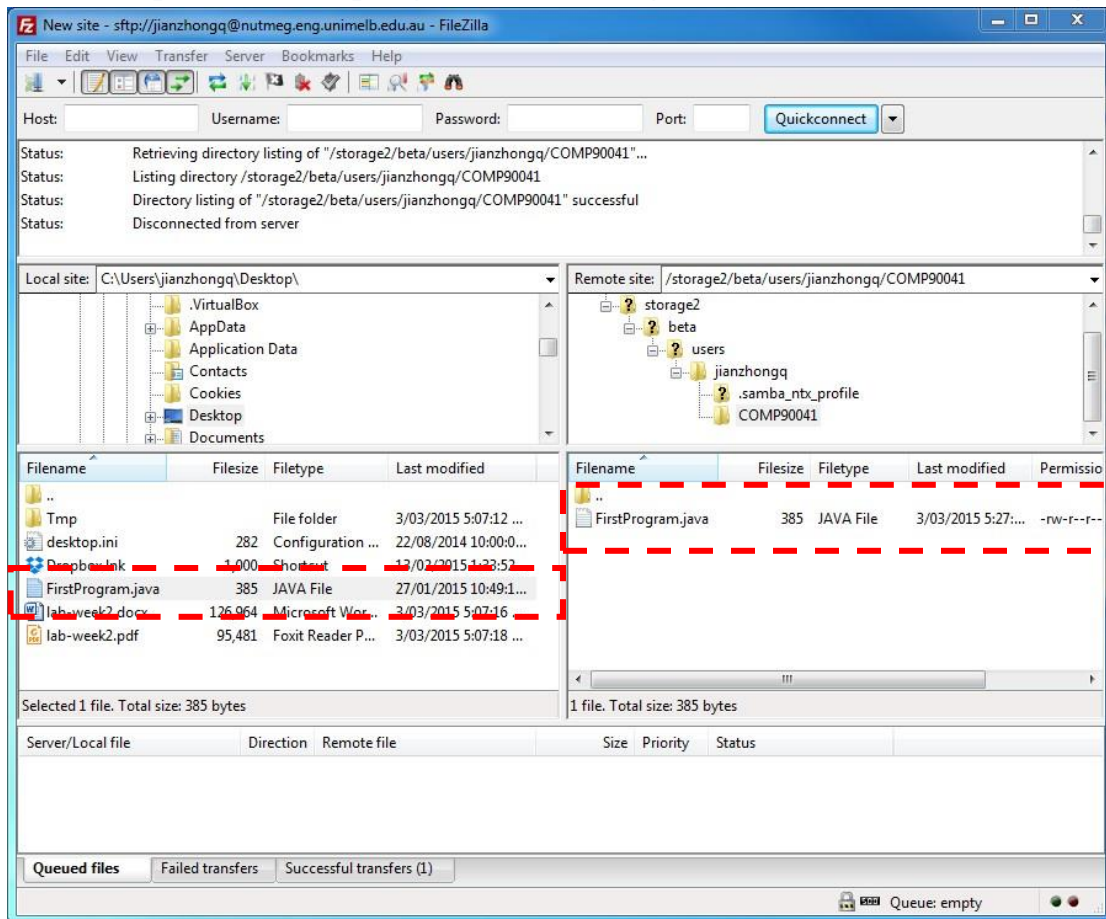
3.3 Enter the folder “COMP90041” with “cd COMP90041”



```
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Last login: Tue Mar  3 17:08:47 2015 from 128.250.26.139
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Java(TM) SE Runtime Environment (build 1.8.0_31-b13)
Java HotSpot(TM) 64-Bit Server VM (build 25.31-b07, mixed mode)
-bash-4.1$ mkdir COMP90041
-bash-4.1$ ls
COMP90041
-bash-4.1$ cd COMP90041
-bash-4.1$
```

Note: can go back to the parent folder with “cd ..”

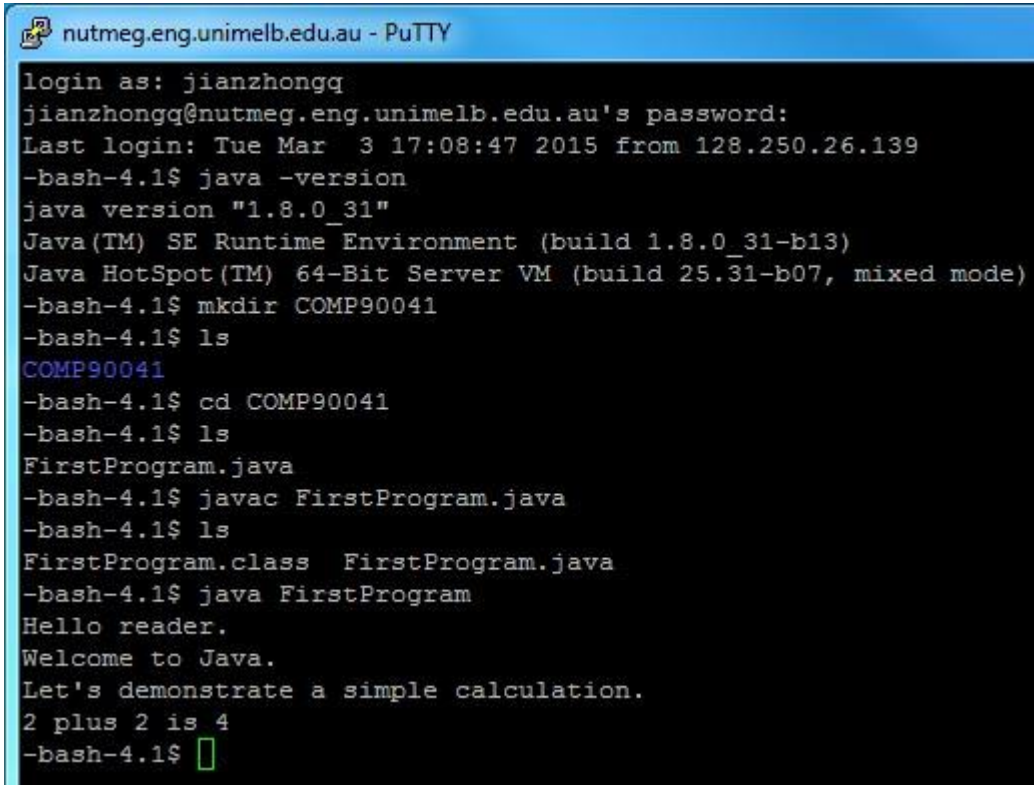
3.4 Upload a Java program “FirstProgram.java” to “COMP90041/”



3.5 Compile the program with “javac FirstProgram.java”

```
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jianzhongq@nutmeg.eng.unimelb.edu.au's password:
Last login: Tue Mar  3 17:08:47 2015 from 128.250.26.139
-bash-4.1$ java -version
java version "1.8.0_31"
Java(TM) SE Runtime Environment (build 1.8.0_31-b13)
Java HotSpot(TM) 64-Bit Server VM (build 25.31-b07, mixed mode)
-bash-4.1$ mkdir COMP90041
-bash-4.1$ ls
COMP90041
-bash-4.1$ cd COMP90041
-bash-4.1$ ls
FirstProgram.java
-bash-4.1$ javac FirstProgram.java
-bash-4.1$ ls
FirstProgram.class  FirstProgram.java
-bash-4.1$
```


3.6 Run the program with “java FirstProgram”

A screenshot of a PuTTY terminal window titled "nutmeg.eng.unimelb.edu.au - PuTTY". The terminal shows a login session for user "jianzhongq". The user enters their password and logs in. The terminal prompt is "-bash-4.1\$". The user runs "java -version", which outputs "java version "1.8.0_31"" and "Java(TM) SE Runtime Environment (build 1.8.0_31-b13)". The user then runs "mkdir COMP90041", "ls", and "cd COMP90041". The terminal shows the directory contents: "FirstProgram.java". The user runs "javac FirstProgram.java", which outputs "FirstProgram.class". The user then runs "java FirstProgram", which outputs "Hello reader.", "Welcome to Java.", and "Let's demonstrate a simple calculation. 2 plus 2 is 4". The terminal prompt is "-bash-4.1\$".

```
login as: jianzhongq
jianzhongq@nutmeg.eng.unimelb.edu.au's password:
Last login: Tue Mar  3 17:08:47 2015 from 128.250.26.139
-bash-4.1$ java -version
java version "1.8.0_31"
Java(TM) SE Runtime Environment (build 1.8.0_31-b13)
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-bash-4.1$ mkdir COMP90041
-bash-4.1$ ls
COMP90041
-bash-4.1$ cd COMP90041
-bash-4.1$ ls
FirstProgram.java
-bash-4.1$ javac FirstProgram.java
-bash-4.1$ ls
FirstProgram.class  FirstProgram.java
-bash-4.1$ java FirstProgram
Hello reader.
Welcome to Java.
Let's demonstrate a simple calculation.
2 plus 2 is 4
-bash-4.1$
```