**Lab 15**

**Exercise 1**

In your project make sure you have a folder created called files

Create a new package called exercise 1.

Write a program called WriteTabDelimited file which create a two dimensional String array (4 rows and 3 columns) with the following values:

Donnel John 34

Collins Tony 18

Greally Jim 16

Brady Noel 69

Use the PrintWriter, BufferedWriter and FileWriter classes to write the contents of the array to a file called employeesTab.txt (in the files folder) ensuring that the lastname, firstname, and age are separated by a tab and each line is separated by a newline character

Run your program to ensure the data is written correctly to the file as you will be using this file in the next exercise.

**Exercise 2**

Create a new package called exercise2.

Download the file Employee.java from Moodle and place this inside the package. Write a program called TestTabScanner that uses the Scanner class to open the file employeesTab.txt and uses the Scanner class again to split each line into tokens.

See sample program on slide 8 of the notes for the use of Scanner in splitting a line into tokens.

The delimiter that you need to use in this case is “\t”.

Once you have the data processed, create Employee objects and add them to the arraylist – see sample program

Print out the contents of the objects to the screen – see sample program

Replace the \t character with a space and run the program again. See what happens.

**Exercise 3**

Create a new package called exercise 3

In this exercise we revisit exercise 2 from lab sheet 14 last week. In this exercise you read in data from three separate files for the paint, wallpaper and flooring.

Now we have combined all the data into one file as follows:

p,Dulux Soft Sheen,11.52,2,12

p,Crown White,10,3,10

p,Dulux Matt Emulsion,15.70,3,11

p,ColorTrend Always Neutral,23.99,2,9

w,Shand Kydd,50,10.06,0.52

w,Graham & Brown,19.99,9.5,.52

w,Super Fresco,24.99,12.5,.52

f,Quick-Step Planked Oak,65,1.65

f,French Oak Renoir,90,1.8

f,Express Clic,40,1.4

f,Reflections,50,1.3

In the files folder, create a new text file called materials.txt and copy the above data into the file and save it.

The data for each item is now all on the same line with a comma used as the delimiter.

Download the lab15ex3.zip from Moodle, extract and copy the files into your package

Write one static method in the test class called readMaterialsFile which takes the arraylist of type Material as a parameter. In this method you need to open the file, read in the data (use Scanner to process the delimiter) and create Paint, Wallpaper, and Flooring objects and add them to the arraylist.

Note that there is a flag added at the start of each line indicating p for paint, w for wallpaper and f for flooring. This value can be used to distinguish between the different types of material when reading from the file (use a switch statement for this).