The University of Newcastle
SENG6110 Object Oriented Programming

Computer Lab – Week 6

Attention: use only Bluej to edit, compile, run and debug your programs. It will be very useful in the future in SENG6110 and subsequent courses to know how to use an IDE. The most important aspect is to know how to debug a program using an IDE. You have seen a video about it in the last computer lab. Today you will have some tasks involving debugging.

1. Download the codes Person.java, Couple.java and AgencyInterface.java from Canvas. Now follow the instructions below. Note that the instructions from a. to f. are the same from the previous tutorial. The instruction g. will show you how to debug a program. The video Lab-Week6-AgencyExample explains how to use the debug using the Agency example.

    a. Execute Bluej. Just write bluej in the command line.

    b. Open a new project:

        i. select open from project menu

        ii. write agencyExample (it will be created a folder agencyExample and all programs related to this project will be inside the folder agencyExample)

    c. Add each class from a file

        i. Select add class from file from edit menu

        ii. Select the file Person.java (repeat the process for Couple.java and AgencyInterface.java)

    d. To edit your codes, just click twice in a class and the source code will open

    e. To compile, just choose the compile menu.

    f. To run the program

        i. go to Bluej window (in AgencyInterface.java window – the class that has the method main).

        ii. use the right button of the mouse and choose main(). Don't worry about the other options now. g. To debug the program

        i. Select show debug from view menu

        ii. Go to AgencyInterface.java and click in the left of the line System.out.print("name: ");. A symbol stop should appear. If does not appear is because you should go more to the left.

        iii. Now run again as indicated in step f iv. The program will run and stop in the line with the stop.

        v. Now you can run each line clicking the Step or Step Into buttons and see the variables values in debug window. The difference between these two buttons is Step Into will enter inside a method and Step will not. Use Step Into and you will go inside each object.

        vi. You can add more stops if necessary and you can delete a stop just clicking in the stop symbol.

        vii. Note that during this process you can see the values inside the variables.

    h. Add the following feature in the Agency example. The age needs to be greater or equal to 18. If age is less than 18, the program will ask again, until the input is a number greater or equal to 18. You should implement a method called inputAge and call the method from run. The method will be as below (it is already added in the Java file available in the computer lab)

```
public int inputAge()
{
// add the code here to receive an integer number as input and
// check if the number is greater or equal to 18
// if the number is less than 18, the program should ask the number again
// until the input number is greater or equal to 18
}
```

i. Debug the code from h (if you haven't done yet) line by line and check the value of each variable using BlueJ.

j. Add a method in Couple class called printCouple(). The method should return a String with the name and age of each person. Call the method in AgencyInterface.