OOP2 Midterm 2 March 22 2013 Melbourne Building 12.05 to ??.??ish

Answer all Questions

Q1.

Write the code for the simple game described below:

Players must try and guess a secret number within a specified range e.g. 1 – 100.

Output a message if the number is outside this range.

Players are allowed five attempts at guessing the number:



Type in the number and

then press the guess button

If the guess is lower than the secret number, the background colour of the text-field turns blue:



If the guess is higher than the secret number, the background colour of the text-field turns red:



The game finishes with either the player guessing the correct number or the player losing all their

lives:

  (50 marks)

The reset button resets

the game so that the user

can play again

Q2.

a) A class called employee is required the class is described as follows:

Employee

-firstName

-lastName

-phoneNumber

-dateOfBirth

Write code for this class. (2 marks)

Write the extra code required so that this class is can be ordered by last name and if there

is a clash on last name order by first name.

e.g.

Mark Langton .…

Denis Murphy ……

Paddy Murphy …..

(10 marks)

b) Write a driver program and any additional code necessary to create a list of four employee

objects, sort them and output them.

(10 marks)

c) What additional code would be required if instead of being ordered on name we wanted the

additional ability to order the employees on age. Write this code.

(10 marks)

d) Write a note on the interface used for cloning objects, and give code needed in a class to allow for cloning.

(18 marks)