

Forman Christian College, Lahore

(A Chartered University)

Assignment 2

Due: Monday 11/3/2013 at 12.01 am

Program Description

Write a program, GuessingGame.java - a guessing game for two players where both players guess a number in between 1 and 100. Your program should generate the "secret number" randomly. The winner is determined as follows:

- If both players guess the same number, the first player wins.
- If one player's guess is closer than the other player, then that player wins.
- If both players' guesses are off by the same value, then the player that guessed the lower number wins.

For example, if the secret number is 71 and the two players guesses are 64 and 77, then the player that guesses 77 wins, since $77 - 71 = 6$ and $71 - 64 = 7$. Alternatively, if the secret number is 45 and the two players guesses are 36 and 54, then the player that guesses 36 wins, since $45 - 36 = 9$, $54 - 45 = 9$, and 36 is less than 54.

The program should

- First ask for the two players names.
- Then generate the secret number, and ask the players to guess it.
- Finally it should print out who the final winner was.

Sample run

```
Enter player 1 name: Nazim
Enter player 2 name: Aamir
HMMMMMM let me think of a number between 1 and 100
Alright I have thought of a number.
Nazim enter your guess: 64
Aamir enter your guess: 77
The secret number was 71
Nazim had 77 with a difference of  $77 - 71 = 6$ 
Aamir had 71 with a difference of  $71 - 64 = 7$ 
Nazim wins!!!
```

Another sample run:

```
Enter player 1 name: Khosa
Enter player 2 name: Zain
HMMMMM let me think of a number between 1 and 100
Alright I have thought of a number.
Khosa enter your guess: 36
Zain enter your guess: 54
The secret number was 45
Khosa had 36 with a difference of  $45 - 36 = 9$ 
Zain had 54 with a difference of  $54 - 45 = 9$ 
Since both scores are equal, the winner is the one who guessed the lower
number wins and that happens to be Khosa.
Khosa wins!!!
```

Submission instructions

You need to submit the following files:

- GuessingGame.java
- A screenshot of the console compiling and running the program with a sample run. To take a picture of the console window, you need to press PrtSc while pressing Alt. Paste this image file in Paint, and save the image file as screenshot.png. The screenshot should look something like this:

You need to email the two files (GuessingGame.java and screenshot.png) to TA.comp102@gmail.com with the subject as “COMP 102 - Assignment 2 - Roll number” and attach the required files.

Notes on Grading

- All variables should have informative names.
- Your input/output should match the examples.
- Every program must have comments. There should be header comments in your program including your name and a brief introduction of the program. You should have at least one comment besides that.
- Any plagiarism/cheating would be strictly dealt with.
- Use correct indentation.
- 1 day late assignment would be penalized by a 10% grade deduction. 2 days late would be penalized by 25% grade deduction. Assignments submitted 2 days after the submission date would not be accepted.
- Failure to send GuessingGame.java would result in a zero for the assignment. Failure to send screenshot.png would result in 20% grade deduction.