

Forman Christian College, Lahore

(A Chartered University)

Assignment 3

Due: Sunday 24/3/2013 at 11:59 pm

Program Description

In this assignment you are going to make a code breaking game. You are going to write a program that generates a 3 digit code at random consisting of any number and let the human player guess this code. Each time the player inputs his guess, the program responds with a score reflecting how close the player's guess was from the secret code.

Scoring:

The objective of the game is for the player to guess the 3 numbers correctly, with the least number of attempts.

The player has to guess the 3 numbers and the positions of each number. The program outputs two numbers for the score: the number of numbers in the correct location and the numbers which are correct but in the wrong locations. Study the examples below.

Secret Code: 134

Computer Outputs Score:

Guess: 549. This has 0 numbers in the correct location and 1 correct number in the wrong location (second 4).

Guess: 153. This has 1 numbers in the correct location (first 1) and 1 correct number in the wrong location (third 3).

Guess: 134. This has 3 numbers in the correct location and 0 correct number in the wrong location.

Obviously, the required score to win is 3 for number of correct locations. Only then does the program ends.

Sample run (User input in bold and italics)

Welcome to Code Cracker by <Your name>

Can you crack the code?

The computer has thought of 3 numbers consisting of 0-9

Take a guess! **145**

You guessed: 145

There are 0 numbers in the right place,

And 0 other numbers which are right, but in the wrong place.

Take a guess! 426

You guessed: 426

There are 1 numbers in the right place,

And 1 other numbers which are right, but in the wrong place.

Take a guess! **346**

You guessed: 346

There are 0 numbers in the right place,

And 2 other numbers which are right, but in the wrong place.

Take a guess! **634**

You guessed: 634

There are 1 numbers in the right place,

And 1 other numbers which are right, but in the wrong place.

Take a guess! **623**

You guessed: 623

There are 3 numbers in the right place,

And 0 other numbers which are right, but in the wrong place.

Well done! You cracked the code in 5 attempts!

Bye bye!

Submission instructions

You need to email the file, CodeCracker.java to TA.comp102@gmail.com with the subject as “COMP 102: Assignment 3: Roll number.”

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 CodeCracker.java would result in a zero for the assignment.