

Homework 01: Number Guessing “Game”

CS 412

For this assignment, your task is to implement a number guessing game in Java. Your code must generate a random number between 0 and 100, then repeatedly prompt the user to input a number until they get it correct. Your program must output whether the user’s input is above or below the magic (random number). Your solution must use at least two classes, one that holds the number and logic to check the number, the other class must hold the “main” method that drives the program.

REQUIREMENTS:

- Must use at least two classes:
 - One class that encapsulates the magic number, e.g.,
 - generation
 - checking
 - A separate test class with the main method.
- Must separate user input from number checking, e.g.,
 - user input goes in class with main method.
- Must generate a random number between 0 and 100.
- Must prompt user for input.
- Must read integer input from user.
- Must output whether user input is *too high* or *too low*.
- Must loop repeatedly until user inputs correct number.
- Must display message and terminate after user inputs correct number.

EXAMPLE:

```
enter a number b/t 0 and 100: 50
too high
enter a number b/t 0 and 100: 25
too low
enter a number b/t 0 and 100: 33
too low
enter a number b/t 0 and 100: 42
too low
enter a number b/t 0 and 100: 47
nailed it!
```