

# EECS2030 (B & E) Fall 2021

## Guide to Written Test 2

WHEN: Thursday (October 28) & Friday (October 29)

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- This written test is **strictly** individual: identified collaborations will be reported to Lassonde for a **breach of academic honesty**.
- **You are given 30 minutes** to complete the submission. The time limit is **strict**.
- This written test accounts for 6% of your course grade.
- Unlike the labs (and the later programming tests), there will be **no** starter project for you to download and import.
- All questions will be answered on the B & E eClass site.

## 1 Rules

- Written Test 2 will be **opened** for submission at **14:00 EST** on **Thursday**, October 28.
- Written Test 2 will be **closed** for submission at **14:00 EST** on **Friday**, October 29.
- During the 24-hours submission period, there is a **single attempt of 30 minutes** for you to complete the test. That is, once you click on the test link and choose to start it, a timer of 30 minutes will start.
- Though this is a written test, you may be asked to write fragments of Java code in answer boxes.

## 2 Format

- Most ( $\geq 70\%$ ) of the questions will be multiple-choice questions:
  - A true or false question
  - A question with a **single** correct answer
  - A question with **multiple** correct answers

e.g., Say you are given 5 answers for the question: 2 of them are correct (and 3 of them are incorrect). Accordingly, for each correct answer you choose will receive a credit of  $\frac{100\%}{2} = 50\%$ , whereas for each incorrect answer you choose will receive a penalty of  $\frac{-100\%}{3} = -33.3\%$ .

Say you chose one correct answer and one incorrect answer, then you would receive  $50\% + (-33.3\%) = 16.7\%$  of the full marks. Also, the minimum mark you can receive is 0 (e.g., when you chose one correct answer and two incorrect answers).

This mechanism is to ensure that one cannot just receive full marks by simply choosing *all* answers.
- There might be written questions requiring you to, e.g.,:
  - Write a fragment of Java code

In this case, minor syntax errors such as missing a semicolon will be excused.

- Explain how a given fragment of Java code works at runtime
- Explain why a given fragment of Java code works

### 3 Coverage for the Test

- You need **not** study Lab1, Lab2, or Lab3 for the test.
- The concepts about Github and terminal commands are **not** covered in the test.
- Materials (slides, iPad notes, example code, recordings) related to the following lectures will be covered:
  - TEST-DRIVEN DEVELOPMENT WITH JUNIT PDF
  - OBJECT EQUALITY PDF
  - AGGREGATION AND COMPOSITION PDF

### 4 Study Tips for the Test

- The test is meant to **test your understanding** of the taught concepts (which is different from a programming test in which you are expected to write Java programs with no syntax or type errors).
- Go through the slides and annotated iPad notes to review the concepts and examples. Re-watch parts of the lecture/tutorial videos if necessary.
- Skim through the topics discussed in the weekly Q&A sessions: watch ones you consider as helpful.
- Pay special attention to the logic explained on *tracing Java code* (e.g., use of a boolean variable to control the entrance into and exit from a loop, visualizing object creations and method calls).
- Given a piece of Java code, you are expected to judge:
  - If it does **not** compile, then what **syntax errors** or **type errors**?
  - If it compiles:
    - Will an **exception** occur (e.g., `IndexOutOfBoundsException`, `NullPointerException`)?
    - If no exception will occur at runtime, then what **console output** will it produce? Are there any **logical errors** (i.e., the output is not as expected)?

### 5 Example Questions

- Example questions will be made available on the B & E eClass site (under the **Written Tests** section) *by the end of Tuesday, October 26*.

You can attempt these questions for as many times as you wish, but the submission will be **closed shortly before** the actual test starts.
- It is important to note that these questions will only be meant for familiarizing yourself with the **format** and **workflow** of the test, and they will cover **only** some of the topics required by the actual test: you are expected to study **all** materials as listed in Section 4.