# EECS2030 (B & E) Fall 2021
# Guide to Written Test 1
# WHEN: Thursday (September 30) & Friday (October 1)

### CHEN-WEI WANG

– This written test is **strictly** individual: identified collaborations will be reported to Lassonde for **a breach of academic honesty**.

– You are given **20 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 1 will be *opened* for submission at **14:00 EST** on **Thursday**, September 30.

– Written Test 1 will be *closed* for submission at **14:00 EST** on **Friday**, October 1.

– During the 24-hours submission period, there is a **single attempt of 20 minutes** for you to complete the test. That is, once you click on the test link and choose to start it, a timer of 20 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 <u>correct</u> answer you choose will receive a credit of $\frac{100\%}{2} = 50\%$, whereas for each <u>incorrect</u> answer you choose will receive a penalty of $\frac{-100\%}{3} = -33.3\%$.

    Say you chose one <u>correct</u> answer and one <u>incorrect</u> 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 <u>correct</u> answer and two <u>incorrect</u> 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 for the test.

– The concepts about Github and terminal commands are **not** covered in the test.

– All topics covered in the Review Tutorial on OOP in Java:

- TUTORIAL VIDEOS (PART 1 & PART 2)                                      LINK
- iPAD NOTES                                                         [ PDF ]
- CLASSES AND OBJECTS (up to and including **Slide 74**)              [ PDF ]
- Written Notes:
    * INFERRING CLASSES/METHODS FROM JUNIT TESTS                     [ PDF ]
    * DECLARING AND MANIPULATING REFERENCE-TYPED, MULTI-VALUED ATTRIBUTES [ PDF ]

– Lectures materials (slides, iPad notes, example code, recordings) from **Week 3**:

- LECTURE 2A: EXCEPTIONS                                             [ 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** compiler, 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 Test

– An example test has been made available on the B & E eClass site (under the `Written Tests` section). You can attempt this test for as many times as you wish.

This example test will be **closed** for submissions shortly before the actual test starts (i.e., 14:00 EST on Thursday, September).

– It is important note that these questions are meant for familiarizing yourself with the **format** and **workflow** of the test, and they cover **only** some of the topics required by the actual test: you are expected to study **all** materials as listed in Section 4.