CST8221 – Java Application Programming

Midterm Test Description

The Midterm Test consists of two separate parts and will be a two-day event. The second part is a practical exercise in which you have to show your GUI programming skills. The first part is a theoretical part in which you have to show your understanding of the basic concepts of the Java GUI components and building process. The Midterm Test will count for 30% of your final marks.

Part 2 - Practical Test

The Practical test will be conducted during your lab period:
Lab section 301: 14 March 2016, Monday, 11:00-13:00, T111
Lab section 302: 16 March 2016, Wednesday, 15:00-17:00, B110

The Part 2 test requirements and instructions will be posted on Blackboard (in your corresponding lab section) 15min before the beginning of the test. You must upload your solution on Blackboard 5min before the end of the lab period. The upload link will be closed at the end of the lab period. No late submission will be accepted.

What is on the test?

During the practical part of the Midterm Test you are to write a Swing GUI based Java application. The application will implement a rudimentary program (text) editor. It will have a menu system and a toolbar, and will be capable to open and save text files. The Part 2 will count for 15% of your final marks.

How to prepare

Read carefully Unit 5 – Part 1 (Menu) and Part 2 (Toolbars); Hybrid Activity 4 (Text Area); and Hybrid Activity 5 and 7 (Dialogs and File Dialogs). Explore very closely the accompanying code examples and try to understand how each single line of code works. The application you are to write will be based on these code examples.

Part 1 - Theoretical Test

The Theoretical test will be conducted during the lecture period on Thursday, March 17st, 2016, 10:00-11:00 in T119.

What is on the test?

The Theoretical Midterm Test consists of 40 compulsory questions. The questions will be a potpourri of true-false, yes-no, and multiple choice questions**.** Additionally, there will be some bonus questions. You may replace any of the compulsory questions with any of the bonus questions. The Part 1 will count for 15% of your final marks.

How to prepare?

Follow these simple steps:

Step 1.

Read very carefully all of the materials published on Blackboard (lecture units, hybrid activities, and labs). If you understand the basic concepts presented there and have a good grasp of how the corresponding Java code works, you are 95.009% ready for the test. Answer the questions at the end of the hybrid activities.

Step 2.

Read carefully the following textbook chapters: 14, 15, 23 and 25. Once you are done, you will be 100% ready for the test.

Test questions examples

Q1. Can an inner class method have access to the fields of the enclosing class?

a. Yes b. No

The correct answer is a. [HA1]

Q2. Can a JPanel contain another JPanel?

a. Yes b. No

The correct answer is a. [HA2]

Q3. Which one of the following is not a top-level container?

a. JApplet
b. JWindow
c. JDialog
d. JFrame
e. They are all top-level containers.

The correct answer is e. [U1,U2]

Q4. In JavaFX the top-level container is called Scene.

a. True b. False

The correct answer is b. [HA2]

IMPORTANT NOTE:

Part 1 will be a paper based closed-book test. All you need to bring is a pencil, an eraser, and your Java GUI brain.

Part 2 will be an open-book test. You are allowed to use any available to you resource (except your fellow students' work).

Prepare well and remember:

"You cannot learn everything but it is worth to try." One who tried and is still learning.

Are you prepared to take a test?

Use this simple equation to calculate you preparedness for taking a test.

$$\frac{8P_a\,(S + C)}{3P_n\,(D + N + I)} = P_{repared}$$

Where

P_a = Hours you actually spent preparing
S = Hours to sleep you had last night
C = Shot of strong coffee or other stimulants consumed
P_n = Hours of preparation needed to excel
D = Difficulty of the subject matter (1-10 with 10 being Compilers)
N = Level of nervousness (1-10 with 10 being **“**job interview with Google”)
I = Importance of event (1-10 with 10 being getting an A+)

IF $P_{repared}$ is greater than 1, you will be just fine.

This and many other formulas can be found in the book “[Geek Logik] - Easier living through MATHEMATICS” by G. Sundem