

## CSC 502 WEEK 3 QUIZ STUDY GUIDE

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There will be two parts to the quiz. One part will be closed book, and will deal with concepts.

The second part will be open book and open notes, and you will be able to use online resources. In this second part you will be asked to write a program or programs similar to the examples seen in lecture, and similar to the homework assignment.

Concepts covered in the closed book part will involve GUI programming using both Swing and JavaFX:

General approach to GUI programming: top-level container to hold user-interface components; events on components, event handlers / event listeners.

### 1. GENERAL CONCEPTS

Understand the concepts of classes, subclasses, abstract methods, abstract classes, interfaces, and know the difference between static class methods and instance methods.

Understand the concept of an enumeration type.

### 2. SWING GUI PROGRAMMING

The significance of JFrame, Component, and Container classes. ActionEvent on buttons and text fields. The getSource() and getActionCommand() methods on ActionEvent.

Event Listener interfaces. Be able to list the methods of the MouseListener and ActionListener interfaces and explain their purpose (when they are called).

Understand the concept of Layout Managers and be able to explain BorderLayout, FlowLayout, and GridLayout.

### 3. JAVA FX GUI PROGRAMMING

The theatre metaphor for a GUI program, the Application class, the purpose of the launch method of the Application class, the Stage and Scene classes.

The concept of a node and of a scene graph node; leaf nodes, branch nodes, and root nodes.

The JavaFX hierarchy: the significance of the Node, Parent, Pane, Control, Labeled classes.

The VBox and HBox classes and how they can be used.