



EECS 1720

Programming for Digital Media

Course Review
W2023

Topics for Endterm

multiple choice (30 questions)

- Classes & Exceptions
 - fields, field & method access (private/public/protected)
 - Constructors, and Methods (Accessors & Mutators)
 - types of access, types of constructors, what makes an API?
 - Exceptions & Exception Handling
 - encapsulation, data hiding/data integrity, utility vs. dynamic classes, this vs. this()
 - HAS-A => aggregation (aliases) vs composition (copies); exceptions used in constructors
- Inheritance & Polymorphism
 - IS_A => how to extend a class, what is inherited into the child class?
 - super vs. super() – when to use in a ctor, or method?
 - protected access (meaning), overriding (vs. overloading)
 - polymorphic form => what can a parent reference refer to?);
 - polymorphic behaviour => late/early binding, dynamic dispatch, casting up/down an inheritance hierarchy
 - what can a particular reference access?
 - implications for exception hierarchy (i.e. ordering of catch matters)
 - Interfaces vs. Abstract Classes

- Java AWT/Swing
 - Layouts, Basic GUI components (covered in labs)
 - Absolute vs layout managers (types – box, border, grid, flow, etc.)
 - Basic UI components/controls (JFrame, JPanel, JButton, JLabel, JTextField, JRadioButton, JCheckBox, etc)
 - setBounds, setSize/setPreferredSize, contentPane vs glassPane (adding components to a pane/panel), using JPanels to organize, basics of setting up a JFrame (sizing, making visible, etc), , extending Canvas/JPanel & overriding paint()
 - Events and Event Handling
 - ActionEvents and ActionListener
 - MouseEvents and MouseListener/MouseMotionListener
 - KeyEvents and KeyListener... what is focus, why requestFocus() needed for key events
 - Adaptors vs Listeners?
- Basic Threads, Timer Class
 - What is a thread
 - What is the Timer, what is it used for?
 - What does a Timer thread emit & how is this used for animation/regular updates/changes?
- Model - View– Controller (MVC) – what is it? what is the goal when following this pattern?