

CSCI-230: Exam II Guideline

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YOU ARE ALLOWED ONE CHEAT SHEET (FRONT & BACK)

- *Debugging*
 - Failures, Errors and Faults
 - Syntax vs. logic mistakes
 - Spatial and temporal relationships between failures and faults
 - The debugging process: from failures to errors
 - Breakpoints & debugging commands in Netbeans: **finish, continue, step over, step over expression, step into, step out**
 - Given some code:
 - Be able to show runtime stack and stack frames
 - Be able to tell where the debugger goes to next upon issuing a debugging command
- *JavaDoc*
 - Ability to comment a piece of code using JavaDoc based on the requirements outlined in this class (for classes, fields & methods)
 - Checked vs. unchecked exceptions in Java
- *Testing & JUnit*
 - What is testing?
 - The different types of testing activities and when to use each (Unit, Integration, Functional, etc ...)
 - Unit testing: black box and white box testing
 - Generate test cases (input/output combinations) for a given method using black box testing
 - Generate equivalence classes for every input (name & range)
 - Select sample test values per input
 - Include Boundary/special cases
 - Combine test values optimistically or pessimistically
 - Generate test cases (path/input/output combinations) for a given method using white box testing
 - Draw complete and correct flowcharts
 - Create a table showing paths, inputs & outputs
 - Understand code involving **TestCase** and **TestSuite**
 - Major assert methods used in JUnit: (e.g. **assertEquals**, **assertTrue**, etc ...)
 - Know how to write JUnit test code including testing for Exceptions
 - Failure vs. Error in JUnit
- *Web Programming*
 - Static vs. dynamic Webpages and how a Web server processes each
 - Basic HTML: given HTML code show corresponding Web page (and vice versa)
 - Form processing: method attribute, action attribute, hidden fields
 - Java Servlets: given Servlet code show corresponding Web page (and vice versa)
 - JSP: tags, **request** object (**request.getParameter** method), **response** object(**response.sendRedirect** method), **session** object (**session.setAttribute** & **session.getAttribute** method)
 - JSP: given .jsp code show corresponding Web page (and vice versa)
 - Create a JSP page or Servlet to do something specific