

CIS 3270 Final Exam Fall 2006

Learning Outcomes

1. Foundation topics: although these basics are not intentionally tested, they can't be completely separated from the test. You need to have general understanding and experience to fully comprehend test questions. These topics include:
 - Java language basics (syntax, operator, etc.)
 - Object oriented programming
 - Common Java classes and their typical methods: String, Date, Math, System, etc.
 - Usage of common HTML tags: head, body, img, a, table, p, br, ol/ul, tc.
 - Basic relational database concepts: table, row/record, column/field, relationship
 - Simple SQL "select" statements
2. Web, HTTP and URL
 - Understand the client/server nature of web applications
 - Understand server side and client side technologies and examples
 - Understand simple HTTP request and response messages: get, post; message header; HTTP status codes (300, 400 and 500 series)
 - Understand all components of a URL: protocol, host, domain, port number, URI, parameters, ...
3. Common to JSP and Servlet
 - Be able to compare and contrast servlet and JSP technology: advantages, limitations and applications
 - Know how to process user data (parameters) sent within a URL ("get" method)
 - HTML form processing
 - i. Understand HTML form attributes of "Action" and "Method"
 - ii. Understand common HTML form elements and their attributes; know how and when to use these elements
 - iii. Know how to process data sent using HTML forms (either Post or Get)
4. Servlet specific
 - Servlet class structure, major methods
 - Servlet deployment: mapping to URL; web.xml
 - Servlet execution life cycle
 - Processing HTTP response message headers: "Redirection" and "Refreshing"
 - Know how to use servlet to generate dynamic HTML
5. JSP specific
 - Understand JSP lifecycle
 - Know the usage of JSP scripting elements: scriptlet, expression, declaration
 - Directive: page import
 - JSP action: jsp:include, jsp:forward
 - Know the differences among and the usage of URL redirection, refreshing and forwarding
 - Understand these implicit objects: out, request, response, session
6. Database programming
 - Understand the role of JDBC, ODBC and JDBC-ODBC-Bridge
 - Know the basic process of database query
 - Understand forward-only and read-only ResultSet objects and know how to process it
7. State management
 - Understand "state" (stateful / stateless), "session"
 - Understand common techniques to make HTTP stateful, and their advantages and limitations
 - Be able to use Java "session" API to read data from and save data to a "session".