

# CS472 Web Programming Final Exam Review

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## Lesson 1: Servlets

1. Steps of web dynamics
2. Features of HTTP
3. HTTP Request type: POST vs GET
4. Web server: what do web servers server? Limitations?
5. Servlet: what is servlet? Who manages ? how to create a servlet? How to configure servlet url(annotation, web.xml)?
6. What is web container? What kind of supports container provides?
7. Lifecycle of a servlet: load, init, service, destroy
8. Threading model: In what sense are servlets multi-threaded?
9. What are the implications of this for servlet instance variables?

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## Lesson 2: Managing State

1. Post vs get, bookmarking post requests
2. forward vs Redirect
3. how to get request parameter?
4. Scope: request, session, application/context
5. attribute vs parameter
6. session: how to get session, how to get rid of session
7. session lifetime
8. cookie: how to send a cookie, read cookie, characteristics of cookie
9. 6 ways to maintain state demo

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## Lesson 3: JSP

1. Main idea of JSP
2. Two types of data in JSP page
3. JSP elements: directive, declaration, scriptlet, expression, EL expression, action, comment(vs HTML comment)
4. Scope differences of JSP declarations versus scriptlets and expressions
5. JSP Lifecycle
6. What does the container do with your JSP?
7. Implicit objects(request, response, out, session, application, config, pageContext, page, exception)
8. EL (expression language): how is it evaluated, "null friendly"
9. How EL relates to JSP expressions and attributes
10. JSP Model 1 vs Model 2 (MVC)

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## Lesson 4: Custom tags

1. JavaBean: unique characteristics
2. JSP standard actions vs JSTL
3. <jsp:include /> vs <%@ include %>
4. JSTL core(**forEach**, if, set, out, choose)
5. How to use the var attribute of forEach
6. Custom tags
  - a. Steps to write your own custom tags: tag handler class, tld, include in jsp page
  - b. If has body content, if no body content
  - c. How to handle attribute