

NEW YORK CITY COLLEGE OF TECHNOLOGY/CUNY
Computer Systems Technology Department

CST4713 – Dynamic Web Development: Servlets and JSP

(3 credits, 2 class hours, 2 lab hours)

INSTRUCTOR:

OFFICE:

E-MAIL:

PHONE:

OFFICE HOURS:

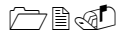
Course Description:

This course introduces students to the role of Servlets and Java Server Pages (JSP). It provides instruction in building web pages dynamically, organizing projects into web applications, and deploying these applications using a web server, such as Apache Tomcat. The course presents role of Servlets as middleware in an N-tiered design structure (acting as a middle layer between requests coming from Web browsers or other HTTP clients and databases or applications on the HTTP server). The conceptual frameworks of the Servlet life cycle, handling client requests, generating server responses, handling cookies, session tracking, and the integration of Servlets and JSPs using the MVC (model-view-controller) architecture are all discussed.

Course Objectives:

Upon successful completion of the course, the student should be able to:

-  Demonstrate understanding of Servlets and JSP in web application development.
-  Describe the Servlet life cycle.
-  Demonstrate understanding of dealing with form data from client requests.
-  Demonstrate understanding of various HTTP request headers, and how to access them from a client request.
-  Demonstrate understanding of the meaning, format, and means of setting HTTP response codes/headers.
-  Demonstrate understanding of how to send and receive cookies, their benefits and drawbacks, and differences between session and persistent cookies.
-  Demonstrate understanding of the various elements of session tracking and the Java session tracking API.
-  Demonstrate understanding of the syntax and utility of Java Server Pages (JSP).
-  Demonstrate understanding of invoking Java code with JSP scripting elements.
-  Demonstrate understanding of controlling Servlets generated from JSP.
-  Demonstrate understanding of including files and applets in web pages using JSP.



Use JavaBeans components in JSP documents.



Integrate Servlets and JSP using the Model View Controller (MVC) Architecture.

Prerequisite:

CST3613 - Application Development with Databases.

Required Materials:

Text: *Core Servlets and Java Server Pages*, Vol 2 Marty Hall and Larry Brown, Second Edition, Sun Microsystems Press, 2004, ISBN: 0-13-009229-0

FREE ONLINE PDF VERSION -- <http://pdf.coreservlets.com/>

Academic Integrity Policy:

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Grading Procedure:

Final	35%
Midterm	35%
Project	20%
Participation, tests	10%
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TOTAL	100%

Letter	A	A-	B+	B	B-	C+	C	D	F
Numerical	93-100	90-92.9	87-89.9	83-86.9	80-82.9	77-79.9	70-76.9	60-69.9	<=59.9

Course Outline:

Week	Topic	Chapter
1	Overview of Servlet and JSP Technology	1 and 3
2, 3	Handling the Client Request: Form Data	4
3, 4	Handling the Client Request: HTTP Request Headers Generating the Server Response: HTTP Status Codes	5 and 6

5	Generating the Server Response: HTTP Response Headers	7
6	Handling Cookies	8
7	Session Tracking	9
8	Review and Midterm Exam	
9	Overview of JSP Technology	10
10	Invoking Java Code with JSP Scripting Elements	11
11	Controlling the Structure of Generated Servlets: the JSP page Directive, Including Files and Applets in JSP Pages	12 and 13
12,13	Using JavaBeans Components in JSP Documents	14
14	Integrating Servlets and JSP: The Model View Controller (MVC) Architecture	15
15	Review and Final Exam	

Assessment criteria:

For the successful completion of this course a student should be able to:	Evaluation methods and criteria
1. Demonstrate understanding of the role of Servlets and JSP in web application development.	1. Students will demonstrate on homework and exams their proper understanding of the role of Servlets and JSP in web application development.
2. Describe the Servlet life cycle.	3. Students will demonstrate on exams and homework projects their understanding of the Servlet life cycle.
3. Demonstrate understanding of dealing with form data from client requests.	4. Students will demonstrate on homework projects, lab exercises and exams their ability to write Servlet programs which deal with form data from client requests.

4. Demonstrate understanding of various HTTP request headers, and how to access them from a client request.	5. Students will demonstrate on homework projects, lab exercises and exams their ability to write Servlet programs which make use of various HTTP request headers.
5. Demonstrate understanding of the meaning, format, and means of setting HTTP response codes.	6. Students will demonstrate on homework projects, lab exercises and exams their ability to write Servlet programs which set HTTP response codes in an appropriate fashion.
6. Demonstrate understanding of the meaning, format, and means of setting HTTP response headers.	7. Students will demonstrate on homework projects, lab exercises and exams their ability to write Servlet programs which set HTTP response headers in an appropriate fashion.
7. Demonstrate understanding of how to send and receive cookies, their benefits and drawbacks, and differences between session and persistent cookies.	8. Students will demonstrate on homework projects, lab exercises and exams their ability to write Servlet programs which make use of cookies in various ways.
8. Demonstrate understanding of the various elements of session tracking and the Java session tracking API.	9. Students will demonstrate on homework projects, lab exercises and exams their ability to write Servlet programs which make use of session tracking.
9. Demonstrate understanding of invoking Java code with JSP scripting elements.	10. Students will demonstrate on homework projects and exams their ability to invoke Java code with JSP scripting elements.
10. Demonstrate understanding of controlling the structure of Servlets generated from JSP.	11. Students will demonstrate on homework projects, lab exercises and exams their ability to controlling the structure of Servlets generated from JSP.
11. Demonstrate understanding of including files and applets in web pages using JSP.	12. Students will demonstrate on homework projects, lab exercises and exams their ability to include files and applets in web pages using JSP.
12. Use JavaBeans components in JSP documents.	13. Students will demonstrate on homework projects, lab exercises and exams their ability to use JavaBeans components in JSP documents.

13. Integrate Servlets and JSP using the Model View Controller (MVC) Architecture.	14. Students will demonstrate on homework projects, lab exercises and exams their ability to integrate Servlets and JSP.
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