



SWARNANDHRA

College of Engineering & Technology

(Autonomous)

Narsapur - 534 280.

DEPARTMENT OF COMPUTER & SCIENCE ENGINEERING

TEACHING PLAN

Course Code	Course Title	Course / Semester	Branches/Section	Contact Hrs/Week	Academic Year
16CS5T02	Advanced Java and Web Technologies	III B.Tech / V	CSE – A, B & Shift	4	2020-21

COURSE OUTCOMES:

At the end of the course students are able to

- CO1:** Distinguish various static web pages' web pages using html. (K2)
CO2: Relate to a well formed / valid dynamic web pages. (K3)
CO3: Interpret on xml data storage using various components. (K2)
CO4: Use web servers to servlets applications and session tracking. (K3)
CO5: Associate server side java application to catch form data sent from client to server. (K2)
CO6: Construct web applications access data base by using database connectivity. (K3)

Week No.	Out Comes	UNIT I Topics/Activity	Text Book Reference	Contact Hours	Delivery Method
1	CO1: Distinguish various static web pages' web pages using html.	1.1.Introduction to html, structure of a html page.	T1,R1	1	Chalk & Board, PPT, Assignment, Test
		1.1.1. HTML History and Versions	T1,R1		
		1.1.2. HTMLT page structure and Editors	T1,T3,R1		
		1.2.HTML basic tags	T1,T3	1	
		1.2.1. HTML documents	T1,R1		
		1.2.2. HTML Paragraphs	T1,R1		
		1.3. Formatting tags	T1,T3	1	
		1.3.1. Formatting tags with an attributes	T1,T3		
		1.4.Lists	T1,T3	1	
		1.4.1. Ordered list	T1		
1.4.2. Unordered list	T1				
1.4.3. Definition list	T1				
2		1.4.4. Nested list	T1,R1	1	
		1.5.Tables	T1,T3	1	
		1.5.1. table tag attributes	T1,R1		
		1.5.2. Nested tables	T1,R1		
3		1.6.Images	T1,T3	1	
		1.6.1. Images tag with an attributes	T1,R1		
		1.6.2. image mapping using links.	T1,R1		
		1.7.Forms.	T1,T3	1	
		1.8. Frames.	T1,T3	1	
		1.8.1. Nested Frames	T1		
		1.8.2. iframes with an attributes	T1		
1.9. Cascading style sheets	T1	1			
1.9.1. Inline style sheets	T1				
1.9.2. Internal style sheets	T1				
		1.9.3. External style sheets	T1,T3	1	

Assignment Questions:

1. Explain the syntaxes of anchor tags? (K2)
2. Apply form tags in HTML? Give examples? (K2)
3. Define a frame? Use nested frames in webpage? (K2)

Model Paper Questions:

1. Define different types of 'Lists' tags in HTML. (K1)
2. Demonstrates the following input components in HTML forms with proper syntax of the corresponding HTML tags. Text Input, Selectable list with multiple selection option, Radio Buttons. (K3)
3. Define a CSS? Explain several mechanisms used to apply CSS to HTML pages? (K2)

Week No.	Out Comes	UNIT II Topics/Activity	Text Book Reference	Contact Hours	Delivery Method
4	CO2: Relate to a well formed / valid dynamic web pages.	2.1.Client side scripting with JavaScript	T1,T3, R1	1	Chalk & Board, PPT, Assignment, Test
		2.1.1. Advantage of client side script	T1,R1		
		2.1.2. Working procedure	T1, R1		
		2.2.Variables	T1	1	
		2.2.1. Variables declaration using data type	T1		
		2.2.2. Functions	T1,T3	1	
		2.2.2.1. Argument functions	T1,T3		
		2.2.2.2. No argument functions	T1,T3		
		2.2.2.3. Recursive functions	T1,T3		
		2.2.3. Conditions	T1,T3, R1	1	
		2.2.3.1. Simple if	T1,T3, R1		
		2.2.3.2. if-else	T1,T3, R1		
		2.2.3.3. if-else ladder	T1,T3, R1		
2.2.3.4. nested if	T1,T3, R1				
2.2.3.5. Switch	T1,T3, R1				
5		2.3.loops and repetition	T1, R1	1	
		2.3.1. while loop	T1, R1		
		2.3.2. do-while loop	T1, R1		
		2.3.3. for loop	T1, R1		
		2.4.Pop up boxes	T1, R1	1	
		2.4.1. Alert message box	T1,T3		
		2.4.2. Input Prompt and confirm message box	T1,T3		
		2.5. JavaScript and objects	T1,T3	1	
2.6. JavaScript own objects	T1,T3				
6		2.7. DOM and web browser environments Manipulation using DOM	T1,R1	1	
		2.8. forms and validations	T1, R1	1	
		2.9. Combining HTML, CSS and JavaScript, Events and buttons	T1,T3	1	

Assignment Questions:

1. Illustrate a JavaScript? Write the features of JavaScript? (K3)
2. Explain all type of objects in JavaScript. (K2)
3. Judge a form validation? Explain with example? (K3)

Model Paper Questions:

1. Explain DHTML and HTML from each other? (K2)
2. Explain how events are handled in JavaScript. (K2)
3. Write a script that inputs several lines of text and a search character to determine the number of occurrences of the character in the text. (K3)

Week No.	Out Comes	UNIT III Topics/Activity	Text Book Reference	Contact Hours	Delivery Method
6	CO3: Interpret on xml data storage using various components.	3.1.Introduction to XML	T1,T3, R1	1	Chalk & Board, PPT, Assignment, Test
		3.1.1. uses of XML	T1,T3		
3.2. simple XML,		T1,R1	1		
3.2.1. XML key components		T1, R1			
7		3.3.DTD and Schemas	T1,T3, R1	1	
		3.3.1. DTD using XML with application	T1, R1	1	
		3.3.2. Schemas using XML with application	T1, R1	1	
8		3.4. XML schemas.	T1, R1	1	
		3.4.Transforming XML using XSL	T1, R1	1	
		3.5. Transforming XML using XSLT.	T1,T3,	1	
	3.6.DOM	T1, R1	1		
	3.7. SAX	T1, R1	1		

Assignment Questions:

1. Describe a DTD? Explain the building blocks of DTD? **(K2)**
2. Describe an XML Schema? Explain the advantages of Schema over DTD? **(K2)**
3. Explain DOM parser? What are the difference between SAX and DOM? **(K3)**

Model Paper Questions:

1. Explain the advantages of XML over HTML? **(K2)**
2. Explain with an example, how can you check an XML document is both valid and well-formed document? **(K3)**
3. Examine limitations of Document Type Definitions (DTDs)? Apply these limitations are overcome using XML schema? **(K3)**

9	MID-I Examinations				
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Week No.	Out Comes	UNIT IV Topics/Activity	Text Book Reference	Contact Hours	Delivery Method
10	CO4: Use web servers to servlets applications and session tracking.	4.1.Installation	T1, R2	1	Chalk & Board, PPT, Assignment, Test
		4.1.1. Pre-requirements	T1,R2		
		4.1.2. Path settings	T1,T2,R2		
		4.2. Configuration of Tomcat web server	T1	1	
		4.2.1. Port Number	T1		
		4.2.2. Users	T1		
11		4.3.Lifecycle of a Servlet, ,	T1,T2,R2	1	
		4.4. JSDK	T1,T2	1	
		4.5. Servlet API	T1,T2	1	
		4.6. javax.servlet Package,	T1,T2	1	
		4.7. Reading Servlet parameters and	T1,T2	1	
4.7.1. Reading Initialization parameters.		T1,T2			
12	4.8. javax.servlet HTTP package.	T1,T2,R2	1		
	4.9. Handling Http Request & Responses.	T1,T2,R2	1		
	4.10. Session Tracking	T1,T2,R2	1		
	4.11. Using Cookies-Session Tracking,	T1,T2,R2	1		
	4.12. Security Issues.	T1,T2,R2	1		

Assignment Questions:

1. Represent the advantages of servlets over CGI? **(K2)**
2. Summarize session tracking? Explain different mechanisms of session tracking? **(K2)**
3. Solve the security issues in servlets? **(K3)**

Model Paper Questions:

1. Compare doGet() and doPost() methods? **(K2)**
2. Demonstrate a Servlet with the life cycle. **(K2)**
3. Explain in detail about servlet API **(K2)**

Week No.	Out Comes	UNIT IV Topics/Activity	Text Book Reference	Contact Hours	Delivery Method
13	CO5: Associate server side java application to catch form data sent from client to server.	5.1. Understanding JSP	T1	1	Chalk & Board, PPT, Assignment, Test
		5.1.1. Scripting elements	T1,T2	1	
		5.1.2. Directive elements	T1,T2	1	
		5.1.3. Action elements	T1,R2	1	
14		5.2. Describing the JSP life cycle	T1,T2	1	
		5.3.JSP Application Design with MVC	T1,R2	1	
		5.4.Generating Dynamic Content	T1,R2	1	
		5.5.Implicit JSP Objects,	T1,T2	1	
15		5.6. Conditional Processing	T1	1	
		5.7.Displaying Values Using an Expression to Set an Attribute	T1,T2	1	
	5.8.Declaring Variables and Methods	T1,T2	1		
	5.9. Error Handling.	T1,T2	1		

Assignment Questions:

1. Explain Anatomy of JSP Page. (K2)
2. Demonstrate data sharing between various JSP pages? (K3)
3. Develop a session tracking in JSP pages? (K3)

Model Paper Questions:

1. Explain the problems with servlets and list out the advantages of JSP. (K2)
2. Explain in detail about MVC architecture. (K2)
3. Explain different JSP elements with an example. (K3)

Week No.	Out Comes	UNIT IV Topics/Activity	Text Book Reference	Contact Hours	Delivery Method
16	CO6: Construct web applications access data base by using database connectivity.	6.1.Database Programming using JDBC.	T1,T2,R2	1	Chalk & Board, PPT, Assignment, Test
		6.1.1. Driver class and installation	T1,T2		
		6.1.2. Connection establish and close	T1,T2	1	
		6.1.3. Statements	T1,T2		
		6.2.Studying Javax.sql.* package,	T1,T2	1	
		6.2.1. Interfaces	T1,R2		
6.2.2. Classes and methods		T1,R2	1		
17		6.3.Accessing a Database from a JSP Page	T1,R2	1	
		6.3.1. Data retrieval from database	T1,R2		
		6.3.2. Data insert into database	T1,R2	1	
	6.3.3. Data modifications in database	T1,R2			
	6.4.Application	T1,T2,R2	1		
6.4.1. Specific Database Actions	T1,T2,R2	1			

Assignment Questions:

1. Describe a JDBC? Explain the JDBC architecture. (K2)
2. Write a JDBC program how to insert and updates records into database. (K3)
3. Associate between JDBC servlets and JDBC JSP with example. (K2)

Model Paper Questions:

1. Discover various JDBC drivers. (K3)
2. Explain in detail about javax.sql.* with an example. (K2)
3. Develop a JSP page to access data base. Explain with an example. (K3)

Total Hours: 64

18	MID-II Examinations				
19 20	Preparation and End Examinations				
21 22	End Theory Examinations				

Advanced Topics:

1. Introduction to the Struts Web Framework. (3 Hours)
2. Introduction to the Spring MVC Web Framework. (3 Hours)
3. Introduction to cache mechanism using database connectivity. (4 Hours)

TEXT BOOKS:

T1: Web Technologies-Black Book, Comprehensive Problem Solver, Dreamtech press.-2017.

T2: JAVA The Complete Reference, 9th Edition by Herbert Schildt, Oracle Press-2014.

T3: An Introduction to Web Design + Programming, Wang, Katila , CENGAGE-2003.

REFERENCE BOOKS:

R1: Web Technologies Uttam K Roy-Oxford-2010.

R2: Head First Java-Kathy sierra-Orielly-2005.

WEB SITE LINKS:

1. <https://www.w3schools.com/>
2. <https://www.tutorialspoint.com/>
3. <https://www.roseindia.net/>
4. <https://www.javatpoint.com/>

S. No.	Course Lecturers	Branch & Section
1	Mr. Dileep Kumar K	CSE – A, B and Shift
Course Coordinator		Mr. Dileep Kumar K

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