


Government of Karnataka
Department of Technical Education
Bengaluru

	Course Title: Web Programming Lab		
	Scheme (L:T:P) : 0:2:4	Total Contact Hours: 78	Course Code: 15CS55P
	Type of Course: Tutorial and Practical's	Credit : 03	Core/ Elective: Core
CIE- 25 Marks		SEE- 50 Marks	

Prerequisites

Knowledge of HTML, CSS.

Course Objectives

To study the concepts of web applications which includes XHTML, XML, PHP, Java, Ruby with data base access.

Course Outcome

On successful completion of the course, the students will be able to attain CO:

Course Outcome		Experiment linked	CL	Linked PO	Teaching Hrs
CO1	Create dynamic documents using XHTML and java script.	<i>1 and 2</i>	U,A,AL	1 to 10	18
CO2	Develop programs by XML which includes user defined tags.	<i>3 and 4</i>	U,A,AL	1 to 10	18
CO3	Construct PHP documents by using string, arrays, methods and also database access through PHP.	<i>5 to 8</i>	U,A,AL	1 to 10	24
CO4	Create applications using Java Servlets and JSP.	<i>9 to 12</i>	U,A,AL	1 to 10	18
			Total sessions		78

Legends: R = Remember U= Understand; A= Apply AL= Analyze E= Evaluate C= Create and above levels (Bloom's revised taxonomy)

Course-PO Attainment Matrix

Course	Programme Outcomes									
	1	2	3	4	5	6	7	8	9	10
Web Programming Lab	3	3	3	3	3	3	3	3	3	3

Level 3- Highly Addressed, Level 2-Moderately Addressed, Level 1-Low Addressed.

Method is to relate the level of PO with the number of hours devoted to the COs which address the given PO.

If $\geq 40\%$ of classroom sessions addressing a particular PO, it is considered that PO is addressed at Level 3

If 25 to 40% of classroom sessions addressing a particular PO, it is considered that PO is addressed at Level 2

If 5 to 25% of classroom sessions addressing a particular PO, it is considered that PO is addressed at Level 1

If $< 5\%$ of classroom sessions addressing a particular PO, it is considered that PO is considered not-addressed.

List of Graded Practical Exercises

Sl.No	Practical/Exercise
Dynamic Documents with Java Script	
1	The document must have a paragraph of text that describes your home. Choose atleast three different phrases (3 to 6 words) of this paragraph and make them change font, font style, color and font size when the mouse cursor is placed over them. Each of the different phrases must change to different fonts, font styles, colors and font sizes.
2	The document must contain four short paragraphs of text stacked on top of each other with only enough of each showing so that the mouse cursor can also be placed over some part of them. When the cursor is placed over the exposed part of any paragraph it should raise to the top to become completely visible.
XML	
3	Design an XML document to store information about patients in a hospital. Information about patients must include name (in 3 parts, first name, middle name, last name), social security number (SSN), age, room number, primary insurance company – including member identification number, group number and address – secondary insurance company (in the same sub parts as for the primary insurance company), known medical problems, and known drug allergies. Both attributes and nested tags must be included. Make up sample data of atleast 4 patients. Create a CSS style sheet for the above XML document and use it to create a display of that document.
4	Create the XSLT style sheet to format all the patient elements of the XML, document of exercise 3 and use it to create a display of whole element.
PHP- Write, test and debug PHP scripts for the following specification	
5	Write an XHTML document to include an anchor tag, that calls a PHP document also write the called PHP document which returns a randomly chosen greeting from a list of five different greetings. The greetings must be stored as constant strings in the script. A random number between 0 and 4 can be computed with these line. <pre>#set the seed for mtrand with the number of microseconds #since the last full second of the clock mt_strand((double) microtime() * 1000000); \$number=mtrand(0,4); #computes a random integer 0-4</pre> <p>Write the PHP script for above to count the number of visitors and display that number for each visitor. Hint: Use a file to store current count.</p>
6	Write the XHTML code using JavaScript Object Notation (JSON) to create the form with the following capabilities <ol style="list-style-type: none"> A text widget to collect the users name Four check boxes, one each for the following items <ol style="list-style-type: none"> Four 100 watt light bulbs for Rs. 20=39 Eight 100 watt light bulbs for Rs 40=20 Four 100 watt long life light bulbs for Rs. 30=95 Eight 100 watt long life light bulbs for Rs 70=49 A collection of 3 radio buttons that are labeled as follows <ol style="list-style-type: none"> Visa Master Card Discover <p>Write a PHP script that computes the total cost of the ordered light bulbs for the above program after adding 13.5% VAT. The program must inform the buyer of</p>

	exactly what was ordered in table.
7	Write a XHTML code to provide a form that collects names and telephone numbers. The phone numbers must be in the format ddd-ddd-dddd. Write a PHP script that checks the submitted telephone number to be sure that it confirms to the required format and then returns a response that indicates whether the number was correct.
8	Write the XHTML code using JavaScript Object Notation (JSON) to accept from the user name, phone no, mail-id, stored in database. Retrieve same information from database using a separate PHP script.
Java Servlets and JSP	
9	Write a servlet that returns a randomly chosen greeting from a list of five different greetings. The greeting must be stored as constant strings in the program.
10	Write a servlet for the XHTML code of exercise 6 that computes the total cost of ordered light bulbs after adding 2% sales tax. The servlet must inform the buyer of exactly what was ordered in table.
11	Write and test a JSP document that displays the form of exercise 6 and produces the same response document as exercise 10.
12	Write a markup document to create a form that collects favourite popular songs, including the name of the song, the composer and the performing artist or group. This document must call a servlet when the form is submitted and another servlet to request a current list of survey results.
13	Create a simple Java web application using Servlet and JDBC
14	Open Ended exercise- Mini project using Responsive Web Design (RWD) concept. <i>Not for exam, but compulsory to be included in record.</i>

Reference

1. <http://www.tutorialspoint.com>
2. <http://www.w3schools.com/>
3. Programming the World Wide Web, 7th edition, Robert W. Sebesta , Pearson Education, ISBN- 9789332518827
4. Web Programming – Building Internet Applications, 3rd edition, Chris Bates, Wiley publisher
5. Web Technologies— HTML, JavaScript, PHP, Java, JSP, ASP.Net, XML & Ajax – Black Book, Wiley, ISBN : 978-81-7722-997-4

Suggested list of student activities

Note: the following activities or similar activities for assessing CIE (IA) for 5 marks (Any one)
Student activity like mini-project, surveys, quizzes. Activity should be done individually.

1. Each individual student should do any one of the following type activity or any other similar activity related to the course and before conduction, get it approved from concerned course co-ordinator and programme co-ordinator.
2. Each student should conduct different activity and no repeating should occur.

1	Make presentation on latest web designing softwares.
2	Demonstrate any application using word press or joomla.
3	Quiz

Course Delivery

The course will be delivered through Demonstration and Practices

Course Assessment and Evaluation Scheme

Method	What		To whom	When/Where (Frequency in the course)	Max Marks	Evidence collected	Course outcomes
Direct Assessment	CIE (Continuous Internal Evaluation)	IA	Students	Two tests (average of two tests)	10	Blue books	1,2,3,4,5
		Record		10	Record	1,2,3,4,5	
		Student activity.		05	Report.		
		Total		25			
	SEE (Semester End Examination)	End Exam	End of the course	50	Answer scripts at BTE	1,2,3,4,5	
Indirect Assessment	Student Feedback on course		Students	Middle of the course		Feedback forms	1,2,3 Delivery of course
	End of Course Survey			End of the course		Questionnaires	1,2,3, 4 & 5 Effectiveness of Delivery of instructions & Assessment Methods

*CIE – Continuous Internal Evaluation

*SEE – Semester End Examination

Note:

- I.A. test shall be conducted as per SEE scheme of valuation. However obtained marks shall be reduced to 10 marks. Average marks of two tests shall be rounded off to the next higher digit.
- Rubrics to be devised appropriately by the concerned faculty to assess Student activities.

Questions for CIE and SEE will be designed to evaluate the various educational components (Bloom's taxonomy) such as:

Sl. No	Bloom's Category	%
1	Remembrance	10
2	Understanding	20
3	Application	70

Note to IA verifier: The following documents to be verified by CIE verifier at the end of semester

- Blue books (10 marks)

2. Record (10 marks)
3. Student suggested activities report for 5 marks
4. Student feedback on course regarding Effectiveness of Delivery of instructions & Assessment Methods.

Format for Student Activity Assessment

DIMENSION	Unsatisfactory 1	Developing 2	Satisfactory 3	Good 4	Exemplary 5	Score
Collection of data	Does not collect any information relating to the topic	Collects very limited information; some relate to the topic	Collects some basic information; refer to the topic	Collects relevant information; concerned to the topic	Collects a great deal of information; all refer to the topic	3
Fulfill team's roles & duties	Does not perform any duties assigned to the team role	Performs very little duties	Performs nearly all duties	Performs all duties	Performs all duties of assigned team roles with presentation	4
Shares work equally	Always relies on others to do the work	Rarely does the assigned work; often needs reminding	Usually does the assigned work; rarely needs reminding	Does the assigned job without having to be reminded.	Always does the assigned work without having to be reminded and on given time frame	3
Listen to other Team mates	Is always talking; never allows anyone else to speak	Usually does most of the talking; rarely allows others to speak	Listens, but sometimes talk too much	Listens and contributes to the relevant topic	Listens and contributes precisely to the relevant topic and exhibit leadership qualities	3
TOTAL						13/4=3.25=4

Note: This is only an example. Appropriate rubrics/criteria may be devised by the concerned course co-ordinator for assessing the given activity.

Scheme of Valuation for End Examination

SN	Particulars	Marks
1	Writing one program from Java scripting or XHTML or XML	10
2	Writing one program from PHP or Java Servlets and JSP	10
3	Executing any one program with result.	20
4	Viva Voce	10
Total		50

***Evaluation should be based on the screen output only. No hard copy required.*

***Change of question is allowed only once. Marks of 05 should be deducted in the given question.*

Resource requirements for Web Programming Lab

(For an Intake of 60 Students [3 Batches])

Sl. No.	Equipment	Quantity
1	PC systems (latest configurations with speakers)	20
2	Laser Printers	01
3	Networking (Structured) with CAT 6e / wireless 24 Port switches / Wireless Router I/O Boxes for networking(as required)	03
4	Broad Band Connection	01

***Open Source Software should be encouraged*

MODEL QUESTION BANK

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