FACULTY OF COMPUTER APPLICATIONS
Bachelor of Computer Applications (B.C.A.)

Sem. : 5

Subject Code : 05BC2504

Subject : Web Application Development - 1 (PHP)

Course Objectives :

1. To be able to develop web application using open source technologies.
2. To learn scripting language with conditional and iterative statements.
3. To learn design forms to take user input with validations in PHP.
4. To learn MySQL database deployment for web application.
5. To learn JQuery and AJAX for more interactive web pages.

Prerequisites: Knowledge of Web, HTML, JavaScript, CSS and Database.

Unit No	Topics Covered	No of lectures required
1	**PHP Configuration with Flow and Building Blocks** **PHP Installation and Configuration:** Current version of PHP & MySQL, Apache Log file, PHP.INI file, XAMPP installation and basics of PHP scripts. **PHP Overview Flow control and building blocks:** Variables, Data types, Operators and expressions, Constants, Switching flow, Loops, Code blocks and browser Output. Comments, Include & require function	8

2	**Working with Functions, Arrays:** What is a function, Calling function, Defining a function, Returning values from User-defined functions, Variable scope, arguments, Testing for the existence of a function, What are Arrays, Creating arrays, Some array related functions. **Working with Strings, Date and Time:** Formatting Strings with PHP, Investigating Strings in PHP, Manipulating Strings with PHP, Using Date and Time functions in PHP, Other String, Date and Time Functions.	10
3	**Working with Forms, Cookies and User Sessions:** Creating a Simple Input Form, Accessing Form Input with User-Defined Arrays, Combining HTML and PHP Code on a Single Page, Using Hidden Fields to Save State, Redirecting the User, Working with File Uploads. Introducing Cookies, Setting a Cookie with PHP, Deleting a Cookie with PHP Session Function(s) Overview, Starting a Session, Working with Session Variables, Passing Session IDs in the Query String, Destroying Sessions and Un-setting Variables, Using Sessions in an Environment with Registered Users.	10
4	**Interacting with MySQL** Learning the MySQL Data Types, Frequently used String functions in MySQL, Using Date and Time functions in MySQL, Interacting with MySQL using PHP, MySQL Versus MySQLi Functions, Connecting to MySQL with PHP, Working with MySQL Data, PHPMyAdmin interface.	12
5	**AJAX and JQUERY** **AJAX:** Exploring AJAX, AJAX Web Application Model, How AJAX works? Creating a simple AJAX Application. Exploring interactions between AJAX and PHP, Validating Fields using AJAX and PHP, retrieving data from a Database using PHP and AJAX **JQUERY:** Exploring Fundamentals of JQUERY, Loading and using JQUERY, Describing call back functions, Exploring JQUERY Selectors, Methods, Manipulators, events and effects, Exploring JQuery and AJAX	10

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Course Outcomes:

1. Students will be accomplished to learn develop web application using open source technologies.
2. Students will be able to understand the concept of conditional and iterative statements.
3. Students will be efficient to design forms to take user input with validations in PHP.
4. Students will competent PHP scripting language and deploying application on web Server.
5. Students will be capable to integrate JQuery and AJAX for interactive web pages in PHP.

Course Outcomes – Program Outcomes Mapping Table:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3
CO1	L	M	H	L							M
CO2					H	H		H	M		
CO3			M			H				M	
CO4	M				L		H				H
CO5				H				L	H	M	

Text Book:

1. Julie C Meloni, "Sams Teach Yourself PHP, MySQL and Apache All in One" 4th edition, Pearson Education.
2. HTML5 Black Book: Covers CSS3, Javascript, XML, XHTML, Ajax, PHP and Jquery, 2ed, by Kogent Learning Solutions Inc.

Reference Books:

1. James Lee and Brent Ware, "Open source web development with LAMP" , Pearson Education
2. Jason Gerner, Morgan Owens, Elizabeth Naramore, Matt Warden, "Professional LAMP: Linux, Apache, MySQL and PHP5 Web Development" WROX publication
3. PHP6 and MySQL Bible –Steve Suehring, Tim Converse and Joyce Park – Wiley India Edition.
4. PHP and MySQL Web Development – Luke Welling, Laura Thomson –

Pearson
5. Beginning Ajax with PHP From Novice to Professional, By Lee BabinApress
6. Head First AJAX by Rebecca Riordan , O'Reilly Media
7. Head First PHP& MySQL by Lynn Beighley, Michael Morrison, O'Reilly Media
8. Head First jQuery by Ryan Benedetti and Ronan Cranley, O'Reilly Media
9. Learning jQuery By Jonathon chaffer and Karl Swedberg, O'Reilly Media

Web References:

1. http://www.codecademy.com/learn
2. https://www.udemy.com/learn-html5-programming-from-scratch/
3. http://www.w3schools.com
4. http://www.tutorialspoint.com/ajax/
5. http://www.tutorialspoint.com/jquery/
6. http://www.tutorialspoint.com/php

App References:

1. Udemy
2. Tutorialspoint
3. SoloLearn

Syllabus Coverage from text /reference book & web/app reference:

Book#	Unit	Topics
1	1	Chapter 2 (Page 21 to 32), 3, 4
	2	Chapter 5,6
	3	Chapter 7,8,9,10
	4	Chapter 11, 16,17,18
	5	Chapter 12,13,14
2	6	Chapter 33 (Page 916 to 932), Chapter 37 (Page 1043 to 1068)
	6	Chapter 39

PRACTICALS

Unit No	List of Practical
1	1.1 Write a PHP program for print Previous semester Result using variables & constants in PHP. 1.2 Write a PHP program to find out maximum and minimum number 1.3 Write a PHP program for operators in PHP. 1.4. Write a PHP program to print current month using if..else& switch case. 1.5 Write a PHP program to print 5 to 10 using For and ForEach. 1.6 Write a PHP program to print 15 to 20 using While and Do While. 1.7 Write a PHP program to include a file using include and require function 1.8 Write a PHP Program to print the values of array entered by user. 1.9 Write a PHP Program to reverse an array values entered by user. 1.10 Write a PHP Program to merge to arrays.

2	2.1	Write a PHP code to create numeric array for Monday to Saturday, associative array for month with total days of month such as January=>30,February=>28 upto December and multidimensional array for laptop along with company name inside that model and price(any two companies).
	2.2	Write a PHP code for sorting an array entered by user.
	2.3	Write a program to perform following array functions: 1) array_change_key_case($var, CASE_LOWER/CASE_UPPER). 2) array_chunk($var,size) //array of months 3) array_count_values() 4) array_pop() 5) array_push() 6) array_unshift() 7) array_shift()

	2.4	Write a that demonstrate the use of following string functions:
		
		1) strlen() // any string
		2) strpos() //find some specific word,letter
		3) str_word_count()
		4) strrev()
		5) strtolower()
		6) strtoupper()

	2.5	Write a PHP code for Type casting with settype, gettype function
	2.6	Write a PHP code for user define function for calculator, take input from user by creating simple html form.
	2.7	Write a PHP code to use mysql string manipulation functions as given bellow: 1) Length() 2) concat() 3) concat_ws() 4) trim(),rtrim(),ltrim() 5) lpad(),rpad(),locate()
	2.8	Write a PHP code to use mysql date and time functions as given bellow: 1) DAYOFWEEK() 2) WEEKDAY() 3) DAYOFMONTH() 4) DAYOFYEAR() 5) DAYNAME()
	2.9	Write a PHP code to use mysql date and time functions as given bellow: 1) HOUR() 2) MINUTE() 3) SECOND() 4) DATE_FORMAT() 5) DATE_SUB()
	2.10	Write a PHP code to use mysql date and time functions as given bellow: 1) CURDATE()/CURRENT_DATE, 2) CURTIME()/CURRENT_TIME(), 3) UNIX_TIMESTAMP(), 4) FROM_UNIXTIME()

3	3.1 Write a PHP script to create cookie in a form. 3.2 Write a PHP script to read the cookie of a form 3.3 Write a PHP script to use cookie with header 3.4 Write a PHP script to delete a cookie 3.5 Write a PHP script to create a session 3.6 Write a PHP script to destroy a session 3.7 Write a PHP script to create a session when the user log in using the form of Practical 12. Provide an option to logout. Once the user logs out then he/she should not be able to open the home page using the URL. 3.8 Write a PHP script to create a PHP script, which will store a cookie on the client's device to identify whether the user is a new one or a repeated one. 3.9 Create a PHP script, which will help the user to remember his/her username and password on the login form. 3.10 Write a PHP script to store the details of a registration form into the users table of a database.
4	4.1 Write a program that established Database connection 4.2 Create a MySQL Table Using MySQLi and PDO 4.3 Write a PHP program that Insert Data Into MySQL Using MySQLi and PDO 4.4 Write a program that Demonstrate PHP MySQL Prepared Statements 4.5 Write a PHP program that Select Data From a MySQL Database 4.6 Write a PHP code that Delete Data From a MySQL Table Using MySQLi and PDO 4.7 Write a program that Update Data In a MySQL Table Using MySQLi and PDO 4.8 Write a program that demonstrate the Limit Data Selections From a MySQL Database 4.9 Write a PHP script to authenticate the user using a login form where the user will provide a username and password. Find these username and password in the users table to see if the user is registered or not. If yes then take him to the home page otherwise give an error message. 4.10 Write a PHP script to provide an edit profile page to the user where he/she can see the existing details and if he/she wants to change details then he/she can change them.

5	5.1	Create a simple XMLHttpRequest, and retrieve data from a TXT file.
	5.2	Create a XMLHttpRequest with a callback function, and retrieve data from a TXT file.
	5.3	How to Retrieve all header information of a resource (file)
	5.4	How a web page can communicate with a web server while a user type characters in an input field.
	5.5	How a web page can fetch information from a database with AJAX.
	5.6	Create a simple HTML page that includes the jQuery library. Write a script to check if jQuery is successfully loaded. Display a message indicating whether jQuery is available or not.
	5.7	Design a button on your web page. When the user clicks the button, use jQuery to smoothly scroll to the top of the page. Implement this feature to enhance user experience.
	5.8	Select a few HTML elements (e.g., paragraphs, headings, buttons) and set their background color to red using jQuery. Experiment with different selectors and styles.
	5.9	Create an input field for search suggestions. As the user types, use jQuery to make asynchronous requests
	5.10	Build a navigation menu with links to different sections of your website. Use jQuery and AJAX to load content dynamically when the user clicks on a menu item. Fetch data from a server (e.g., blog posts, product details) and display it without refreshing the entire page.