

**LAB MANUAL
FOR
FULL STACK DEVELOPMENT
Semester - 1
[Subject Code: 23OMC108]**

Master of Computer Applications



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MCA 1st Semester – Full Stack Development Laboratory

Program	Master of Computer Applications
Semester	1
Course Title	Full Stack Development Laboratory
Course Code	23OMC108
Course Credits	2
Course Type	Laboratory

1. Course Summary

The aim of this course is to gain the skills and knowledge necessary to build simple web applications as well as full-stack web applications using modern and scalable web technologies and increase employability as a full-stack developer. The students are taught the basics of HTML, CSS, JavaScript, PHP, and the basic components of Full Stack development using MERN stack widely used in the industry for developing web pages. Students will learn the use of XHTML and CSS for developing presentable web pages. They will also be able to create dynamic web pages by applying event-handling mechanisms using JavaScript. Students will understand the concepts of cookies and sessions in PHP for creating large web applications. Students will learn to develop simple ReactJS applications.

2. Course Outcomes (COs)

After the successful completion of this course, the student will be able to:

- CO-1. Demonstrate the usage of XHTML tags, and CSS for developing presentable web pages [L-3]
- CO-2. Develop dynamic web pages by applying event-handling mechanisms using JavaScript [L-5]
- CO-3. Demonstrate the use of COOKIES and SESSION in PHP [L-3]
- CO-4. Develop simple ReactJS applications. [L-5]

3. Course Contents – Full Stack Development Laboratory Programs List

Sr No.	Programs	Page No.
1	Create an XHTML page that provides information about the MCA department, at Graphic Era University. The XHTML page must use the following tags: <ul style="list-style-type: none"> • Links - Anchor tag • Images • Tables (If needed use other tags for better presentation)	4
2	Create an XHTML page that demonstrates the usage of lists and tables	7
3	Create an XHTML page that displays a Form with all types of controls (Text Boxes, Radio buttons, Checkboxes, Dropdown, Submit, and Reset buttons) with proper formatting.	10
4	Develop a web page and demonstrate the usage of inline style, internal style, and external style sheets using CSS.	15
5	Write a JavaScript function called "MaxandMinofArray" that accepts an array of integers as a parameter and displays the largest and smallest number in the array. Test the function with different inputs. Embed the JavaScript function within the XHTML document.	18
6	Write a JavaScript function called "SumofDigits" that accepts a number as a parameter and returns the sum of all digits of that number. Test the function with different inputs. Write the JavaScript function in a separate .js file	21
7	Create an XHTML document with two buttons. Write a JavaScript function that triggers an alert message when the button is clicked. It should display the message "First button is clicked" or "Second button is clicked" depending on the button being clicked.	24
8	Create an XHTML page with 3 paragraphs displayed using different colors. Implement a JavaScript function that changes the font color of a paragraph to blue when a user hovers over it and reverts it back to the original color when the mouse leaves.	27
9	Create an XHTML document with a form that collects the mobile number. On submitting the form validate the input using an event handler. The mobile number should be a 10-digit number. On validating display, a success or failure message using "alert()".	30

10	Write a PHP program using COOKIE to store the current date and time and on reopening the same web page display the "Last visited date and time".	33
11	Write a PHP program to demonstrate the use of SESSIONS to increment a count on each page refresh, and display the same on the web page.	35
12	Create a React Application to display the message "Developing using ReactJS, Graphic Era University".	

Full Stack Development Laboratory Programs

10. Write a PHP program using COOKIE to store the current date and time and on reopening the same web page display the "Last visited date and time".

Program 10 :

"prg10-cookies.php"

```
<?php
    // Define the cookie name
    $cookie_name = "last_visited";

    // Get the current date and time and store it in a variable
    $present_datetime = date("d-F-Y H:i:s A");

    // Set the cookie with the present date and time and expiry time 2 hours
    // (7200 seconds)
    setcookie($cookie_name, $present_datetime, time() + 7200, "/");

    // Display the present date and time

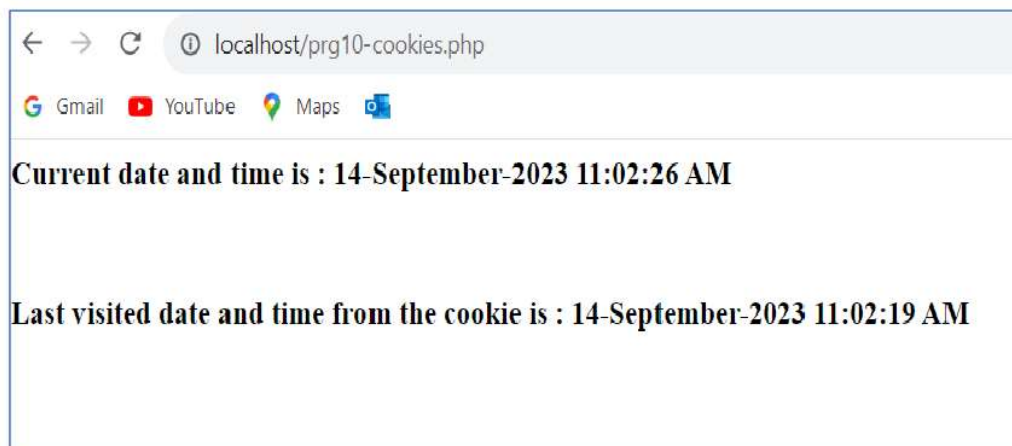
    echo " <h3> Current date and time is : $present_datetime </h3>";
    echo "<br/>";

    // Check if the cookie is set, if it is set display its value

    if(isset($_COOKIE[$cookie_name])) {
        echo "<h3> Last visited date and time from the cookie is : "
            . $_COOKIE[$cookie_name]. "</h3>";
        echo "<br/>";
    } else {
        echo "<h3> Cookie is not set. It will be set after first
            execution </h3>";
    }

?>
```

Program 10 – Output:



11. Write a PHP program to demonstrate the use of SESSIONS to increment a count on each page refresh, and display the same on the web page.

Program 11 :

"prg11-sessions.php"

```
<?php
    session_start();
    if(IsSet($_SESSION['count']))
    {
        $_SESSION['count'] = $_SESSION['count'] + 1;
        echo '<h3> Session count is ' . $_SESSION['count'] . '</h3>';
    }
    else
    {
        $n = 1;
        echo '<h3> This page is visited ' . $n . ' time(s) </h3>';
        $_SESSION['count'] = 1;
    }

?>
```

Program 11 – Output:

