LAB MANUAL

WEB TECHNOLOGY LAB

CIE-356P

MAIT/CSE

Maharaja Agrasen Institute of Technology
PSP area, Sector – 22, Rohini, New Delhi – 110085

(Affiliated to Guru Gobind Singh Indraprastha University, New Delhi)

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1. INTRODUCTION TO THE LAB

Lab Objective

- To explain web application development with HTML and CSS
- Learn about scripting languages Java Script and JSP Technologies
- To Learn Server-side Development with PHP
- Develop web applications using PHP and MYSQL

Program Outcomes (POs)

Engineering Graduates will be able to:

1. **Engineering knowledge**: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
2. **Problem analysis**: Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
3. **Design/development of solutions**: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
4. **Conduct investigations of complex problems**: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
5. **Modern tool usage**: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.
6. **The engineer and society**: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.
7. **Environment and sustainability**: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
8. **Ethics**: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
9. **Individual and team work**: Function effectively as an individual, and as a member or leader indiverse teams, and in multidisciplinary settings.
10. **Communication**: Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.
11. **Project management and finance**: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one’s own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.
12. **Life-long learning**: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change

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Program Specific Outcomes (PSOs)

PSO1: Able to explore and apply emerging technologies in computer science and engineering such as Artificial Intelligence, Machine Learning, Data Science, etc.

PSO2: Able to independently and collaboratively design, develop and evaluate innovative solutions to existing problems, addressing the needs of industry and society.

PSO3: Able to pursue advanced studies, conduct research and development, and cultivate entrepreneurship skills in the modern computing environment.

Program Educational Objectives (PEOs)

PEO1: Graduates will work with the top institutions and researchers, dedicating themselves to lifelong learning and social responsibility. **(M1, M2)**

PEO2: Graduates will exhibit outstanding communication skills and the capacity to collaborate effectively within diverse teams. **(M3)**

PEO3: Graduates cultivating skills in computer science and engineering contribute to driving innovation, entrepreneurship, and economic growth. **(M4)**

PEO4: Graduates network with stakeholders to contribute to the growth of the department. **(M5)**

Course Outcomes

At the end of the course, a student will be able to:

CO1: Design static web pages using HTML and CSS to present information about different sections such as college, courses, departments, and faculty.

CO2: Implement interactive features in web pages using JavaScript, including form validation and dynamic content display.

CO3: Develop web pages that integrate server-side scripting using PHP to handle file input/output and user authentication.

CO4: Implement database connectivity in web applications using PHP and MySQL for storing, retrieving, and displaying data.

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1	3	2	1	2	2	-	-	-	1	1	-	2	3	2	3
CO2	2	3	2	2	3	-	-	-	2	2	-	2	3	3	2
CO3	2	2	3	3	3	-	-	-	3	2	1	3	3	3	2
CO4	3	2	3	2	3	-	-	-	3	3	1	3	3	3	3

2. LAB REQUIREMENTS

Hardware Details:	Intel i3/i5 Processor/Min 4 GB RAM/1 TB HDD/MB/ Lan Card/Keyboard/ Mouse/CD Drive/19” Color Monitor/ UPS	24 Nos.
	LaserJet Printer	1 No

Software Details: MS Window/CentOS/AlmaLinux/Ubuntu/Fedora Linux, Apache HTTP / Tomcat Server or Apache HTTP/XAMPP Server, MariaDB/MySQL, PHP, JDK

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3. LIST OF EXPERIMENTS

(As prescribed by G.G.S.I.P.U)

WEB TECHNOLOGIES LAB

	L	P	C
Paper Code: CIE-356P	**L**	**P**	**C**
Paper: Web Technologies Lab	**0**	**2**	**1**

Web Technologies Lab experiment based on syllabus of (CIE-356T).

1. Design web pages for your college containing a description of the courses, departments, faculties, library etc, use href, list tags.
2. Write html code to develop a webpage having two frames that divide the webpage into two equal rows and then divide the row into equal columns fill each frame with a different background color.
3. Design a web page of your home town with an attractive background color, text color, an Image, font etc. (use internal CSS).
4. Use External, Internal, and Inline CSS to format college web page that you created.
5. Create HTML Page with JavaScript which takes Integer number as input and tells whether the number is ODD or EVEN
6. Create HTML Page that contains form with fields Name, Email, Mobile No, Gender , Favorite Color and a button now write a JavaScript code to combine and display the information in textbox when the button is clicked and implement validation.
7. Create XML file to store student information like Enrolment Number, Name Mobile Number, Email Id.
8. Write a php script to read data from txt file and display it in html table (the file contains info in format Name: Password: Email)
9. Write a PHP Script for login authentication. Design an html form which takes username and password from user and validate against stored username and password in file.
10. Write PHP Script for storing and retrieving user information from MySql table.
    a. Design A HTML page which takes Name, Address, Email and Mobile No. From user (register.php)
    b. Store this data in Mysql database / text file.
    c. Next page display all user in html table using PHP (display.php)

NOTE:- At least 10 Experiments from the syllabus must be done in the semester.

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4. LIST OF EXPERIMENTS
(Beyond the syllabus)

1. Design a simple calculator using JavaScript.
2. Design a website that displays a quiz for students and calculates the score using JavaScript after the user submits.
3. Develop a Project for Online Bookstore.
4. Develop a Project for Event Management System.
5. Develop a Project for Online Portfolio.

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5. FORMAT OF THE LAB RECORD TO BE PREPARED BY THE STUDENTS

1. The front page of the lab record prepared by the students should have a cover page as displayed below.

NAME OF THE LAB
Paper Code

Font should be (Size 20”, italics bold, Times New Roman)

Faculty Name :

Student Name :
Roll No.:
Semester:

Font should be (12”, Times Roman)

MAHARAJA AGRASEN INSTITUTE OF TECHNOLOGY
MAIT
उद्यमेन हि सिध्यन्ति
कार्याणि न मनोरथैः

Maharaja Agrasen Institute of Technology, PSP
Area, Sector – 22, Rohini, New Delhi – 110085
Font should be (18”, Times Roman)

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The second page in the record should be the index as displayed below

PRACTICAL RECORD

PAPER CODE: FSD-435P
Name of the Student:
Roll Number:
Branch: Computer Science and Engineering
Group:

PRACTICAL DETAILS

S. No.	EXPERIMENTS	MARKS					TOTAL MARKS	DATE OF EXPERIMENT	DATE OF CHECKING	SIGN
		R1	R2	R3	R4	R5				

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6. MARKING SCHEME FOR PRACTICAL EXAMINATION

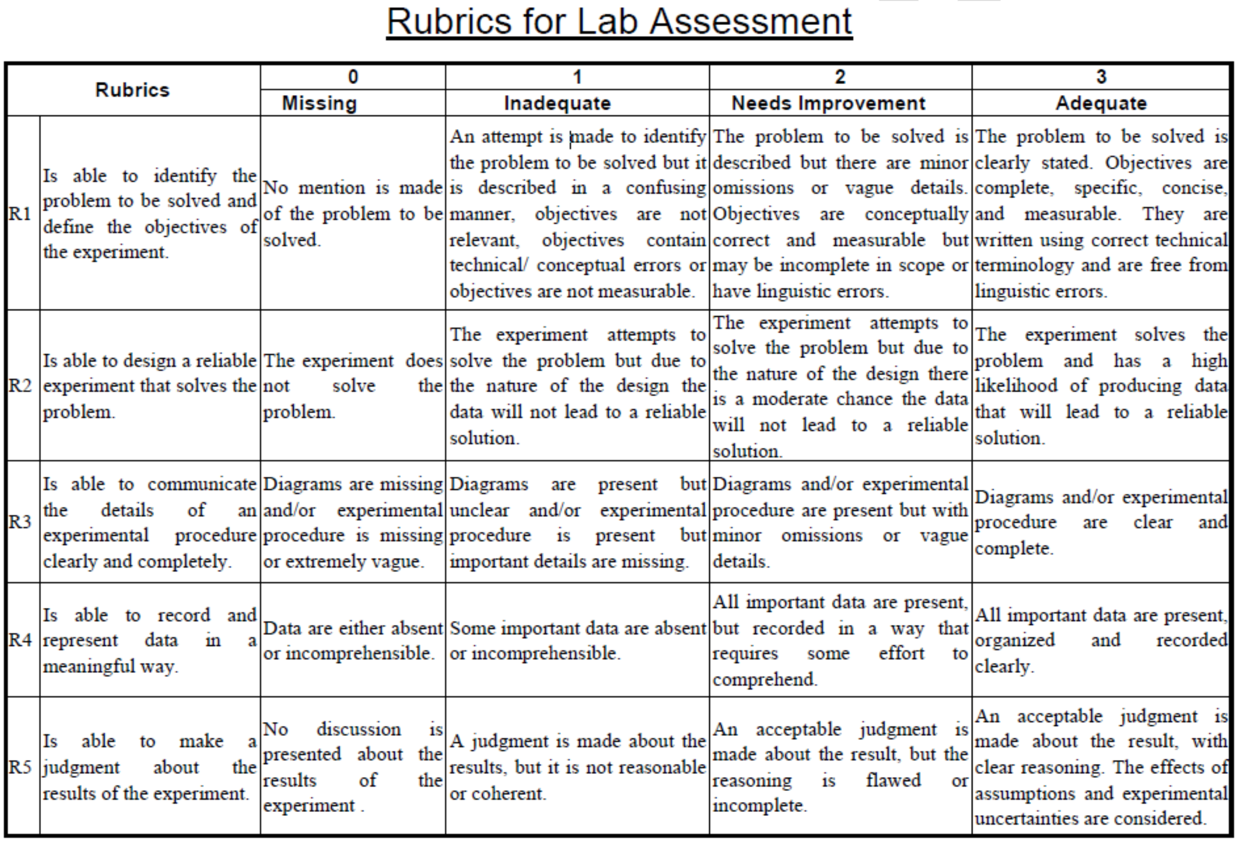
There will be two practical exams in each semester.

1. Internal Practical Exam
2. External Practical Exam

Internal Practical Examination

Total Marks:40

Marking of Internal Practical depends on the below rubrics.



Rubrics for Lab Assessment

Rubrics		0	1	2	3
		Missing	Inadequate	Needs Improvement	Adequate
R1	Is able to identify the problem to be solved and define the objectives of the experiment.	No mention is made of the problem to be solved.	An attempt is made to identify the problem to be solved but it is described in a confusing manner, objectives are not relevant, objectives contain technical/ conceptual errors or objectives are not measurable.	The problem to be solved is described but there are minor omissions or vague details. Objectives are conceptually correct and measurable but may be incomplete in scope or have linguistic errors.	The problem to be solved is clearly stated. Objectives are complete, specific, concise, and measurable. They are written using correct technical terminology and are free from linguistic errors.
R2	Is able to design a reliable experiment that solves the problem.	The experiment does not solve the problem.	The experiment attempts to solve the problem but due to the nature of the design the data will not lead to a reliable solution.	The experiment attempts to solve the problem but due to the nature of the design there is a moderate chance the data will not lead to a reliable solution.	The experiment solves the problem and has a high likelihood of producing data that will lead to a reliable solution.
R3	Is able to communicate the details of an experimental procedure clearly and completely.	Diagrams are missing and/or experimental procedure is missing or extremely vague.	Diagrams are present but unclear and/or experimental procedure is present but important details are missing.	Diagrams and/or experimental procedure are present but with minor omissions or vague details.	Diagrams and/or experimental procedure are clear and complete.
R4	Is able to record and represent data in a meaningful way.	Data are either absent or incomprehensible.	Some important data are absent or incomprehensible.	All important data are present, but recorded in a way that requires some effort to comprehend.	All important data are present, organized and recorded clearly.
R5	Is able to make a judgment about the results of the experiment.	No discussion is presented about the results of the experiment .	A judgment is made about the results, but it is not reasonable or coherent.	An acceptable judgment is made about the result, but the reasoning is flawed or incomplete.	An acceptable judgment is made about the result, with clear reasoning. The effects of assumptions and experimental uncertainties are considered.

External Practical Examination

It is taken by the concerned lecturer of the batch and by an external examiner. In this exam student needs to perform the experiment allotted at the time of the examination, a sheet will be given to the student in which some details asked bythe examiner needs to be written and at the last viva will be taken by the external examiner.

MARKING SCHEME FOR THIS EXAM IS:

Total Marks:	60
Division of 60 marks is as follows	
Sheet filled by the student:	15
Viva Voice:	20
Experiment performance:	15
File submitted:	10

NOTE:

Internal marks + External marks = Total marks given to the students
(40 marks) (60 marks) (100 marks)

Experiments given to perform can be from any section of the lab

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7. INSTRUCTIONS FOR EACH LAB EXPERIMENT

Install and Configure Apache HTTP/Tomcat/XAMPP Server for your web applications.

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Experiment 1

AIM: Design web pages for your college containing a description of the courses, departments, faculties, library etc, use href, list tags

OBJECTIVE: Design web pages for a college showcasing courses, departments, faculties, and library details using HTML href and list tags. This experiment aims to develop skills in creating structured, navigable, and user-friendly web pages.

INTRODUCTION: This experiment focuses on creating organized and user-friendly web pages for a college. Students will use href for linking pages and list tags to structure content, enhancing their HTML skills.

STEPS:

- **Create the HTML structure (**Start with a basic HTML file structure)
- **Create sections for each content area:**
- **Style your web page (**Use CSS to style your web page as desired.)
- **Add more details (**Enhance the sections with more details, images, and other content as needed.)
- **Link the sections in the navigation (**Update the <a> tags in the navigation to link to the corresponding sections using the id attribute)
- **Test your web page (**Test your web page to ensure that all links and content are working as expected.)

LAB EXERCISE

1. Create a photo gallery where clicking an image redirects to another webpage.
2. Create a directory of resources with links to external websites.
3. Design a multi-level menu using nested lists and href attributes.
4. Design a webpage with a navigation bar.
5. Create internal links that navigate to specific sections of the same webpage.

VIVA QUESTIONS

1. Can you explain how you would use href attribute in HTML to create hyperlinks for navigating to different sections of your college's website?
2. How would you structure the HTML code to list the courses offered by your college on the website?
3. Describe how you would use the id attribute in HTML to create a link that navigates to a specific section of the webpage.
4. Explain how you would use the list tags in HTML to display information about the faculties in your college.
5. How would you use the id attribute to create a link that navigates to the "Library" section of your college's website?

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Experiment 2

AIM: Write html code to develop a webpage having two frames that divide the webpage into two equal rows and then divide the row into equal columns fill each frame with a different background color.

OBJECTIVE: To create an HTML webpage using frames that divides the page into two equal rows and further splits each row into equal columns, with each frame having a unique background color.

INTRODUCTION: This experiment helps students understand how to use the **<frameset>** and **<frame>** tags to design multi-frame web pages. By applying background colors, students will enhance their skills in creating visually distinct and organized layouts.

STEPS:

- **Create the HTML file (**Start with a basic HTML file structure)
- **Create the frame content (**Create two separate HTML files, frame1.html and frame2.html, for the content of each frame)
- **View the webpage (**Open the main HTML file in a web browser to view the webpage with two frames)
- **Adjust frame sizes (**Modify the rows attribute in the <frameset> tag to adjust the size of the frames. For equal columns, use cols attribute instead.)
- **Modify frame content (**Update the content in frame1.html and frame2.html to display the desired content in each frame.)

LAB EXERCISE

1. Write HTML code to create a webpage with three equal vertical frames.
2. Create a webpage with two frames: one horizontal frame at the top and a second frame divided into two vertical columns below it.
3. Create a webpage with three sections: a header at the top, a sidebar on the left, and a main content area on the right.
4. Create a webpage with a content section and a footer using frames.
5. Create a webpage divided into five sections: a header, footer, left sidebar, right sidebar, and main content area.

VIVA QUESTIONS

1. How would you use HTML to create a webpage with two frames that divide the page into two equal rows?
2. How can you divide each row into equal columns using HTML and CSS?
3. Describe how you would fill each frame with a different background color using CSS.
4. How can you ensure that each row is divided equally on the webpage?
5. Explain how the display: flex; property works in CSS to create equal columns within a row.

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Experiment 3

AIM: Design a web page of your home town with an attractive background color, text color, an Image, font etc. (use internal CSS).

OBJECTIVE: To design a webpage showcasing your hometown using internal CSS for styling with an attractive background color, text color, fonts, and images.

INTRODUCTION: This experiment aims to teach students how to use internal CSS to create visually appealing web pages. Students will learn to enhance the aesthetics of a webpage by customizing colors, fonts, and images while structuring the content effectively.

STEPS:

- **Create the HTML file (**Start with a basic HTML file structure)
- **Add content and images (**Replace the placeholder text and image (hometown.jpg) with the actual content and image of your hometown.)
- **Adjust styles as needed (**Modify the styles (background color, text color, font, etc.) to match the design you want for your webpage.)
- **View the webpage (**Open the HTML file in a web browser to view the webpage with your hometown information)
- **Further customization (**You can further customize the page by adding more content, styling elements, or using CSS animations and transitions for a more dynamic look.)

LAB EXERCISE

1. Create a personal portfolio webpage with sections like About Me, Skills, Projects, and Contact using internal CSS.
2. Create a webpage highlighting a popular tourist destination using internal CSS.
3. Design a webpage for a restaurant menu using internal CSS.
4. Design a webpage for a music band with their profile, albums, and upcoming events.
5. Create a webpage for an upcoming event, such as a college fest or conference.

VIVA QUESTIONS

1. How would you use internal CSS to set an attractive background color for your hometown's web page?
2. Describe how you would use internal CSS to set a different text color for headings and paragraphs on the web page.
3. How can you use internal CSS to add an image to your hometown's web page?
4. Explain how you would use internal CSS to set a custom font for the text on your hometown's web page.
5. How would you use internal CSS to add styling to a navigation menu on your hometown's

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Experiment 4

AIM: Use External, Internal, and Inline CSS to format college web page that you created.

OBJECTIVE: To format a college webpage using External, Internal, and Inline CSS, showcasing the effective use of different CSS techniques for styling and layout.

INTRODUCTION: This experiment helps students understand and apply the three types of CSS External, Internal, and Inline—to design and style a college webpage. It emphasizes the flexibility and advantages of each CSS method in creating well-structured and visually appealing web pages.

STEPS:

- **External CSS (**Create an external CSS file named style.css to define styles for the entire website)
- **Internal CSS (in the <head> section of your HTML file) (**Add internal CSS to customize specific elements or sections of the page)
- **Link external CSS file (**Add a link to your external CSS file in the <head> section of your HTML file)
- **Use classes and IDs for styling (**Add classes or IDs to HTML elements to apply styles defined in the external or internal CSS)
- **Inline CSS (within specific HTML elements) (**Use inline CSS to style individual elements directly in the HTML file:

LAB EXERCISE

1. Create a personal blog webpage and use External, Internal, and Inline CSS for formatting.
2. Design a product showcase webpage using multiple CSS techniques.
3. Build a web-based resume using CSS for styling.
4. Create a webpage and make it responsive using CSS.
5. Create a webpage for an event, such as a college fest or conference.

VIVA QUESTIONS

1. How would you use external CSS to format the college web page you created?
2. How would you ensure that the external CSS file is linked correctly to the college web page?
3. How can you use inline CSS to format individual elements directly within the HTML document?
4. Explain the advantages of using external CSS over internal and inline CSS.
5. How would you use internal CSS to set a background color for the entire college web page?

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Experiment 5

AIM: Create HTML Page with JavaScript which takes Integer number as input and tells whether the number is ODD or EVEN

OBJECTIVE: To create an HTML page with JavaScript that accepts an integer as input and determines whether the number is odd or even.

INTRODUCTION: This experiment focuses on integrating JavaScript with HTML to build interactive web pages. Students will learn to take user input, process it using conditional logic in JavaScript, and display the result dynamically on the webpage.

STEPS:

- **Create the HTML file (**Start with a basic HTML file structure)
- **Add CSS for styling (**Add CSS to style the elements for better presentation)
- **Add JavaScript code (**Add JavaScript code to check if the input number is odd or even)
- **Test the webpage** (1. Open the HTML file in a web browser. 2. Enter an integer number in the input field and click the "Check" button to see if the number is odd or even.

LAB EXERCISE

1. Create an HTML page with JavaScript that takes an integer as input and calculates its factorial.
2. Create an HTML page with JavaScript that checks whether an input number is a prime number.
3. Create an HTML page with JavaScript to reverse the digits of an input number.
4. Create an HTML page with JavaScript to find the largest among three user-entered numbers.
5. Create an HTML page with JavaScript to check if a given year is a leap year.

VIVA QUESTIONS

1. How would you create an HTML form to take an integer input from the user?
2. Describe how you would use JavaScript to check if the entered number is odd or even.
3. How can you ensure that the user enters an integer and not a decimal or a non-numeric value?
4. How would you modify the JavaScript function to display the result on the webpage instead of using an alert box?
5. How would you handle the case where the user enters a non-integer value or leaves the input field empty?

Experiment 6

AIM: Create HTML Page that contains form with fields Name, Email, Mobile No, Gender, Favorite Color and a button now write a JavaScript code to combine and display the information in textbox when the button is clicked and implement validation.

OBJECTIVE: To create an HTML form with fields for Name, Email, Mobile No, Gender, Favorite Color, and a button, using JavaScript to display the combined input in a textbox and implement validation.

INTRODUCTION: This experiment teaches students to create dynamic web forms and validate user input using JavaScript. They will also learn to display the combined information in a textbox, improving their form handling and interactivity skills.

STEPS:

- **Create an HTML file** with the following structure (Name, Email, Mobile No, Gender , Favorite Color)
- **Add JavaScript code (**Add JavaScript code to combine and display the information in the textbox)
- **Implement validation (1.** Add required attribute to the input fields to make them required. 2. You can also add additional validation logic in the combineInfo() function as needed.)
- **Test the webpage** (1. Open the HTML file in a web browser. 2. Fill in the form fields and click the "Submit" button to see the combined information displayed in the textbox.)

LAB EXERCISE

1. Create an HTML page with a registration form that includes Name, Email, Password, and Date of Birth fields. Use JavaScript to validate the input and display the combined information in a textbox.
2. Design a feedback form with fields for Name, Email, Feedback Message, and Rating. Use JavaScript to validate the form and display the feedback information in a textbox.
3. Create a survey form that includes fields for Name, Age, Gender, and several multiple-choice questions. Validate that at least one option is selected for each question.
4. Create a login form that accepts a username and password. Implement JavaScript validation to check that the username and password are not empty and follow basic criteria.
5. Create an event registration form with fields for Name, Email, Phone Number, Event Date, and Gender. Use JavaScript to validate the data and display the registration details in a textbox.

VIVA QUESTIONS

1. What HTML elements are used to create the form fields?
2. What JavaScript function is called when the button is clicked?
3. How is the combined information displayed to the user?
4. How can you implement validation to ensure that the email field contains a valid email address?
5. How can you restrict the input in the mobile number field to accept only numeric values?

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Experiment 7

AIM: Create XML file to store student information like Enrolment Number, Name Mobile Number , Email Id.

OBJECTIVE: To create an XML file that stores student information such as Enrolment Number, Name, Mobile Number, and Email ID.

INTRODUCTION: This experiment helps students understand how to organize and store data in XML format. Students will gain hands-on experience in structuring information using XML tags and attributes.

STEPS:

- **Create the XML file** (Create a new file with a .xml extension (e.g., students.xml).
- **Define the XML structure** (Use the structure to define the XML file with student information)
- **Save the XML file (**Save the file with the .xml extension (e.g., students.xml).
- **Add more student entries (**To add more student entries, copy the <student> block and update the information accordingly.)
- **Test the XML file (**Open the XML file in a web browser or an XML viewer to ensure that the structure and data are displayed correctly.)

LAB EXERCISE

1. Create an XML file to store employee details such as Employee ID, Name, Department, and Contact Information.
2. Create an XML file to store details about books in a library, including Book ID, Title, Author, and Year of Publication.
3. Create an XML file to store product information for an e-commerce platform, including Product ID, Name, Price, and Category.
4. Create an XML file to store information about courses offered in a university, including Course ID, Course Name, Instructor, and Duration.
5. Create an XML file to store student grades for multiple subjects, including Student ID, Name, Subject, and Grade.

VIVA QUESTIONS

1. What is the root element of the XML document?
2. What elements are used to represent each student's information?
3. How can you add another student's information to this XML file?
4. How can you modify an existing student's information in this XML file?
5. How can you remove a student's information from this XML file?

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Experiment 8

AIM: Write a php script to read data from txt file and display it in html table (the file contains info in format Name: Password: Email)

OBJECTIVE: To write a PHP script that reads data from a text file containing Name, Password, and Email, and displays the information in an HTML table.

INTRODUCTION: This experiment focuses on using PHP to read data from a text file and present it in an HTML table. Students will learn how to handle file input and organize the content for display within a web page.

STEPS:

- **Create a text file (data.txt) (**Create a text file named data.txt and add some sample data in the format Name:Password:Email on each line)
- **Write the PHP script (**Create a PHP script named xyz.php to read the data from the text file and display it in an HTML table)
- **Save the PHP script (**Save the xyz.php file in the same directory as the data.txt file.)
- **Access the PHP script in a web browser** (Open a web browser and navigate to http://localhost/xyz.php to see the data from the data.txt file displayed in an HTML table.)

LAB EXERCISE

1. Write a PHP script that reads data from a CSV file and displays it in an HTML table.
2. Write a PHP script to read data from a JSON file and display it in an HTML table.
3. Write a PHP script to read entries from a log file and display them in an HTML table.
4. Write a PHP script to read data from a TXT file where data is delimited by a custom delimiter (e.g., semicolon ;) and display it in an HTML table.
5. Write a PHP script to read data from a MySQL database and display it in an HTML table.

VIVA QUESTIONS

1. How does the PHP script open the text file for reading?
2. What function is used to split each line into an array using ":" as the delimiter?
3. What does the feof() function do?
4. How can you improve the script to handle empty lines or lines with incorrect formatting in the text file?
5. How can you add CSS styling to the HTML table to improve its appearance?

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Experiment 9

AIM: Write a PHP Script for login authentication. Design an html form which takes username and password from user and validate against stored username and password in file.

OBJECTIVE: To write a PHP script for login authentication that validates the username and password entered by the user against stored credentials in a file.

INTRODUCTION: This experiment involves designing an HTML login form and implementing PHP to securely validate user input based on stored data.

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STEPS:

- **Create a text file (**Create a text file named users.txt and add some sample username and password combinations in the format username:password on each line)
- **Write the PHP script (**Create a PHP script named login.php to handle the login authentication)
- **Save the PHP script (**Save the login.php file in the same directory as the users.txt file)
- **Access the login form in a web browser (1.** Open a web browser and navigate to http://localhost/login.php to see the login form. 2. Enter a valid username and password from the users.txt file and click the "Login" button to see the login result.)

LAB EXERCISE

1. Write a PHP script to authenticate a user with a username and password stored in a PHP array.
2. Write a PHP script for login authentication with session handling. Use a session to track if the user is logged in.
3. Write a PHP script that authenticates a user by checking the entered username and password against records stored in a MySQL database.
4. Write a PHP script to authenticate users by validating the username and password against stored data in a plain text file.
5. Enhance the login authentication system by adding a CAPTCHA to the form to prevent automated login attempts.

VIVA QUESTIONS

1. How does the PHP script retrieve the username and password entered by the user from the HTML form?
2. How does the script read the stored usernames and passwords from the file?
3. What function is used to split each line of the file into an array using ":" as the delimiter?
4. How does the script display a message indicating whether the login attempt was successful or not?
5. How can you enhance the security of the login process?

Experiment 10

AIM: Write PHP Script for storing and retrieving user information from MySql table.

OBJECTIVE: To write a PHP script that stores user information in a MySQL table and retrieves it for display.

INTRODUCTION: This experiment helps students learn how to connect PHP with MySQL, allowing them to store and retrieve data using SQL queries.

STEPS:

a. Design A HTML page which takes Name, Address, Email and Mobile No. From user (register.php)
b. Store this data in Mysql database / text file.
c. Next page display all user in html table using PHP (display.php)

- **Create a MySQL database and table (**Create a MySQL database (e.g., user_info) and a table (e.g., users) with columns for Name, Address, Email, and Mobile No.)
- **Design the HTML form (register.php) (**Create an HTML form to collect user information)
- **Store user information in the MySQL database (register.php) (**Create a PHP script to process the form data and insert it into the MySQL database)
- **Display all users in an HTML table (display.php) (**Create a PHP script to retrieve user information from the MySQL database and display it in an HTML table)
- **Access the HTML form and display page in a web browser (**Access register.php to register new users and display.php to display all users in an HTML table.)

LAB EXERCISE

1. Write a PHP script to store and retrieve product information (e.g., Product Name, Price, and Quantity) from a MySQL database.
2. Write a PHP script that allows users to update their information (e.g., Name, Email) in a MySQL database.
3. Write a PHP script to delete a user from a MySQL table based on their UserID.
4. Write a PHP script to display all users from the users table in an HTML table.
5. Write a PHP script that allows new users to register by storing their information in a MySQL table and then authenticate them when they log in.

VIVA QUESTIONS

1. Explain the process of connecting PHP to a MySQL database.
2. How do you create a MySQL database and table for storing user information?
3. How do you insert user information into a MySQL table using PHP?
4. Explain the use of the mysqli_query() function in PHP for executing MySQL queries.
5. How can you secure user input before storing it in a MySQL database using PHP?

MAIT/CSE

8. INSTRUCTIONS FOR EACH LAB EXPERIMENT (BEYOND SYLLABUS)

EXPERIMENT 1

AIM: Design a simple calculator using JavaScript.

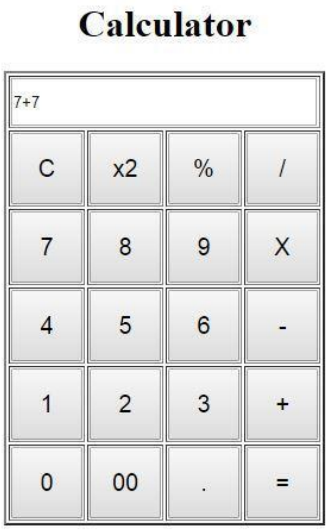
OBJECTIVE: To design a simple calculator using JavaScript that performs basic arithmetic operations like addition, subtraction, multiplication, and division.

INTRODUCTION: This experiment teaches students how to use JavaScript to create an interactive calculator. Students will learn how to handle user input and implement arithmetic functions to perform calculations dynamically on a webpage.

STEPS:

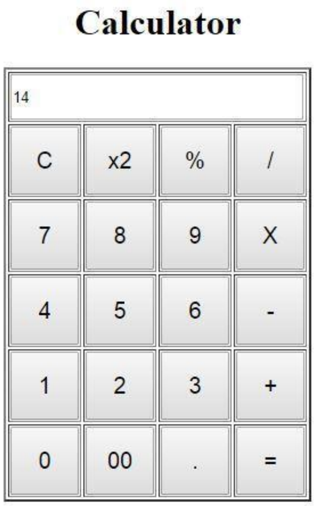
Create the HTML Structure for the Calculator (basic structure of the calculator with buttons for digits, operators, and a display area.)
Add CSS to Style the Calculator (layout, colors, button styles, and text alignment.)
Add JavaScript to Handle Calculator Functionality (user input, perform calculations, and update the display.)

Sample Output:



Calculator

7+7



Calculator

14

EXPERIMENT 2

AIM: Design a website that displays a quiz for students and calculates the score using JavaScript after the user submits.

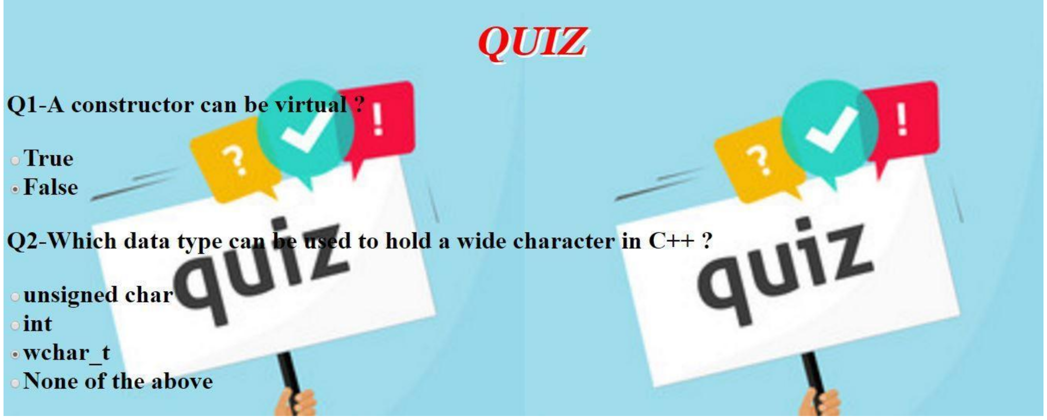
OBJECTIVE: To design a website that presents a quiz to students and calculates their score using JavaScript after submission.

INTRODUCTION: This experiment teaches students to build an interactive quiz, using JavaScript to capture answers and calculate the score dynamically upon submission.

STEPS:

- Create the HTML Structure for the Quiz (quiz questions and answer options.)
- Add CSS for Styling (quiz visually appealing)
- Write JavaScript to Calculate the Score (logic that will calculate the score based on the user's answers when the "Submit" button is clicked.)

Sample Output:



QUIZ

Q1-A constructor can be virtual ?

○ True
● False

Q2-Which data type can be used to hold a wide character in C++ ?

○ unsigned char
○ int
● wchar_t
○ None of the above

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Project Title: Online Bookstore

Description: Create a fully functional online bookstore where users can browse, search, and purchase books. The project should include features such as user authentication, browsing categories, adding books to a shopping cart, and securely processing payments.

Features:

- User Authentication: Allow users to create accounts, log in, and log out.
- Book Catalog: Display a list of books with details such as title, author, description, and price. Implement pagination for browsing large catalogs.
- Search Functionality: Enable users to search for books by title, author, or category.
- Book Details: Show detailed information about each book, including cover image, price, and reviews.
- Shopping Cart: Allow users to add books to a shopping cart and update quantities or remove items.
- Checkout Process: Implement a secure checkout process where users can enter shipping and payment information to complete their purchase.
- Order History: Provide users with a view of their order history and the status of their orders.
- Admin Panel: Create an admin panel where administrators can manage books, categories, orders, and user accounts.
- Responsive Design: Ensure that the website is responsive and works well on different devices and screen sizes.
- Security: Implement security measures such as encryption for sensitive data, validation of user input, and protection against common web vulnerabilities.

Technologies: Language: HTML, CSS, PHP, JavaScript, Bootstrap (for responsive design) Database: MySQL

MAIT/CSE

Project Title: Event Management System

Description: Create a platform for organizing and managing events, such as conferences, workshops, and meetups. Implement features like event registration, ticket sales, schedule management, and attendee communication.

Features:

- Event Creation: Allow event organizers to create new events by providing details such as event name, date, time, location, description, and event type (conference, workshop, meetup, etc.).
- Event Registration: Enable attendees to register for events by providing their personal information, including name, email address, phone number, and any additional required details. Optionally, allow for group registrations.
- Ticket Sales: Implement a ticketing system for selling event tickets online. Allow attendees to purchase tickets directly through the platform using various payment methods such as credit/debit cards, PayPal, or other payment gateways.
- Ticket Management: Provide event organizers with tools to manage ticket sales, including setting ticket prices, creating discount codes, setting ticket quantity limits, and generating sales reports.
- Schedule Management: Allow event organizers to create and manage event schedules, including session times, topics, speakers, and venue locations. Provide attendees with access to the event schedule, including the ability to view session details and create personalized agendas.
- Attendee Communication: Facilitate communication between event organizers and attendees by sending automated email confirmations upon registration, event reminders, updates, and post-event surveys. Provide a platform for attendees to ask questions, provide feedback, and interact with event organizers and fellow attendees.
- Speaker Management: Enable event organizers to manage speakers and presentations for each session, including speaker profiles, presentation topics, session durations, and presentation materials upload.
- Venue Management: Allow event organizers to manage venue details, including address, capacity, floor plans, and amenities. Provide attendees with access to venue information, including directions, parking details, and nearby accommodations.
- Check-in and Badge Printing: Implement a check-in system for event registration, allowing organizers to track attendee attendance and print event badges. Provide attendees with QR codes or barcodes for easy check-in at the event venue.
- Analytics and Reporting: Provide event organizers with analytics and reporting tools to track event performance, including attendee demographics, ticket sales, session attendance, and feedback. Generate reports to assess event success and identify areas for improvement.
- Mobile-Friendly Interface: Ensure that the platform is responsive and accessible on mobile devices, allowing attendees to register for events, view schedules, and access event information on the go.
- Customization and Branding: Allow event organizers to customize the platform with their branding elements, including logos, colors, and themes, to create a cohesive and branded event experience for attendees.

Technologies: Language: HTML, CSS, PHP, JavaScript, Bootstrap Database: MySQL

MAIT/CSE

Project Title: **Online Portfolio**

Description: Develop a personal or professional portfolio website to showcase your work, projects, and accomplishments. Use creative design elements and multimedia content to highlight your skills and experience.

Features

- Homepage: Create a visually appealing homepage that introduces yourself and provides a brief overview of your skills, experience, and areas of expertise. Include a professional profile picture and a catchy headline that summarizes your portfolio.
- Portfolio Showcase: Design a dedicated section to showcase your work, projects, and accomplishments. Organize your portfolio items into categories or sections, such as web design, graphic design, photography, writing, etc. Each portfolio item should include a title, description, images or multimedia content, and links to view more details or project demos.
- About Me Page: Create an About Me page where you can provide more detailed information about yourself, including your background, education, professional experience, skills, and interests. Use this page to tell your story and highlight what sets you apart from others in your field.
- Resume/CV: Include a downloadable version of your resume or curriculum vitae (CV) for visitors to view or download. Provide options for downloading your resume in different formats, such as PDF or Word.
- Contact Information: Make it easy for visitors to get in touch with you by including your contact information, such as your email address, phone number, and social media profiles. Consider adding a contact form for visitors to send you messages directly through the website.
- Testimonials: Showcase testimonials or recommendations from clients, colleagues, or employers to build credibility and trust. Include quotes, photos, or logos of the companies or individuals who provided the testimonials.
- Blog or News Section: If relevant, include a blog or news section where you can share updates, insights, or articles related to your field of expertise. Use this section to demonstrate your knowledge and expertise in your industry.
- Interactive Elements: Incorporate interactive elements such as sliders, galleries, animations, or scroll effects to engage visitors and make your portfolio more dynamic and visually appealing.
- Responsive Design: Ensure that your portfolio website is responsive and accessible on different devices and screen sizes, including desktops, laptops, tablets, and smartphones. Use a mobile-friendly design to provide a seamless user experience across all devices.
- SEO Optimization: Optimize your portfolio website for search engines by including relevant keywords, meta tags, and descriptions. Use descriptive filenames and alt text for images to improve visibility in search engine results.
- Analytics Integration: Integrate website analytics tools such as Google Analytics to track visitor traffic, behavior, and engagement on your portfolio website. Use this data to analyze performance and make informed decisions for improvement.

Technologies: Language: HTML, CSS, PHP, JavaScript, Bootstrap Database: MySQL

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VIVA - QUESTIONS

- What is JavaScript?
- What is the difference between JavaScript and jscript?
- How to use external JavaScript file?
- Is JavaScript case sensitive language?
- How to write comment in JavaScript?
- How to create function in JavaScript?
- What are the JavaScript data types?
- Why is XHTML needed? Isn't HTML good enough?
- What are the advantages of using XHTML rather than HTML?
- What are Style Sheets?

- What is alternate Style Sheet? How to link?
- How do you get the page background image to stay fixed when the page is scrolled?
- How do you call more than one JavaScript function in a body tag (or other) event handler?
- How do you make a window "pop under" when it is opened?
- How can you set a window's size when it is opened?
- How can you make certain a window will "come to the front" when it is loaded?
- Can we implement an interface in a JSP?
- How do you delete a Cookie within a JSP?
- Is it possible to send HTML mail with php?
- Explain the difference between GET and POST requests in HTTP.
- How do web browsers handle cookies and sessions?
- What are the benefits of using RESTful APIs for data exchange between client and server?

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