RAMAIAH
Institute of Technology

Department of Computer Science & Engineering
(Artificial Intelligence and Machine Learning)
& CSE (Cyber Security)

ADVANCE WEB TECHNOLOGIES LABORATORY

Course Code: CIL48/CYL48	**Credits:** 0:0:1
Pre – requisites: NIL	**Contact Hours:** 14P
Course Coordinator: Mrs. PALLAVI TP	

SL NO	List of Programs
1.	Write a HTML program to develop a static website for an online book management system tailored specifically for engineering students to view books related to their respective branches. The website should include the following pages and features. **Home Page:** The home page is divided into three frames: **Top Frame**: This frame displays the logo and the college name, along with navigation links to the Home page, Login page, and Registration page. **Left Frame:** This frame includes at least four navigation links of the branches, when clicked, display the catalogue of books relevant to each link of the department. **Right Frame:** This frame initially shows a description of the website and will load the pages corresponding to the links in the left frame. **Login Page:** The login page should provide fields for the user to enter their login credentials like username and password, along with submit and reset buttons. **Registration Page:** The registration page is where the student's details are entered which follows the below elements. • Name • Password • Email ID • Phone number • Gender • Dob • Language known • Submit and cancel button
2.	Design an Educational field trip travel blog webpage using HTML5 program that includes the title, Introduction, navigation menu, travel details table, feedback form by using the following elements: • Semantic Structure--Use <header>, <nav>, <main>, <article>, <section>, <aside>, and <footer>. • Multimedia Elements--Embed an image (<img>), a video (<video>), and an audio (<audio>). • Interactive Elements--Include a form (<form>, <input>, <textarea>, <button>) for visitor feedback. • Lists & Tables-- Display a list (or) and a table (<table>) to organize travel information. • Figures & Captions-- Use <figure> and <figcaption> to describe images. • Hyperlinks & Navigation-- Implement a navigation bar (<nav>) with working links. • HTML5 Structural Elements-- Utilize <section> for content division and <article> for detailed experiences. Metadata & Accessibility-- Include <meta> for character encoding, viewport settings, and accessibility attributes like alt text for images Introduction to Symbolic Computations
3.	Create an interactive and visually appealing online resume for a student using various CSS techniques. The resume should incorporate inline, internal, and external style sheets and demonstrate a wide range of CSS properties to enhance its appearance and functionality. Follow the detailed requirements below: **HTML Structure:** Create an HTML document with sections for personal information, education, skills, experience, and contact information. **Inline, Internal, and External Style Sheets:** Demonstrate the use of inline, internal, and external CSS in your HTML document. **Font and Text Styles:** Apply various font and text styles using CSS.

	Background Image: Set a background image for the entire page and another for a specific section. **Layers:** Use CSS positioning to create layered effects. **Customized Cursor:** Implement a customized cursor for the resume. **Link Styles:** Define styles for links, including hover effects. **Box Model:** Use margin, padding, border, and other box model properties. **Colors:** Apply different colors to various elements.
4.	Create an HTML page with 2 combo boxes populated with month & year, to display the calendar for the selected month & year from the combo box using JavaScript. Create an HTML file named "Calendar_month.html" **a.** Add two combo boxes, one to display the month & another for the year, and one button to generate a calendar. **b.** When the button is clicked, display the calendar for the selected values.
5.	Develop an online exam application for a CSE (AI/ML and CS) course. The exam consists of multiple-choice questions that students can answer by selecting radio buttons. The task is to create a web page that displays the exam, collects the student's answers, calculates the result, and allows the student to reset the page for a new attempt. Create an HTML file named exam.html. **Step 1**: Display four questions related to computer science. Each question should have four optional answers, represented by radio buttons. **Step 2**: When the student submits their answers, display the result in an alert box showing the number of correct answers. **Step 3**: Provide a reset button to clear the current answers and reset the page to its initial state for the next exam attempt.
6.	**A.** Write a JavaScript program that calculates the squares and cubes of the numbers from 0 to 10 and outputs HTML text that displays the resulting values in an HTML table format. **B.** Write a JavaScript code that displays text "TEXT-GROWING" with increasing font size in the interval of 100ms in RED COLOR, when the font size reaches 50pt, it displays "TEXT-SHRINKING" in BLUE colour. Then the font size decreases to 5pt
7.	Develop a simple program to create a calculator using HTML, CSS, and JavaScript that performs basic mathematical operations like addition, subtraction, multiplication, and division.
8.	You are tasked with developing a web application using HTML, CSS, and JavaScript that helps users convert an amount from one currency to another using fixed exchange rates. The UI must be user-friendly, responsive, and allow the user to select source and target currencies, enter the amount, and display the converted result.
9.	Write a **Node.js program** to create a simple web server that responds with "Hello, Node.js!". Modify the server to respond with different messages based on the URL path (e.g., /about responds with "About Us", /contact responds with "Contact Us").
10.	Write **Node.js program** that reads a text file and prints its contents to the console. Then, extend the program to create a new file and write some data into it.
11.	Write a **Node.js program** using the MySQL package to perform create database, create table, insert value, select from, update values, delete values on a MySQL collection using student database.
12.	Create a custom server using the http module in **Node.js** and explore the functionalities of the os, path, and events modules. Specifically, your program should: **1.**Import the necessary modules (http, os, path, events). **2.**Create an instance of Event Emitter. **3.**Set up a simple HTTP server that responds with "Hello, World!". **4.**Define the server's port and hostname. **5.**Start the server and listen for incoming requests. **6.**Print information about the operating system (OS type, platform, architecture, and number of CPU cores). **7.**Print the current working directory. **8.**Use the path module to join directory paths and print the result. **9.**Set up a custom event listener and emit a custom event.

Note: Student is required to solve one program.

Marks Distribution:

Conduction and Result	Write-Up	Execution	Viva/Demo	Change of Program	Total
Program 1	8	35	7	-Marks	50 Marks

verified by
25/6/25