CSIT 5th Semester Web Technology Labs

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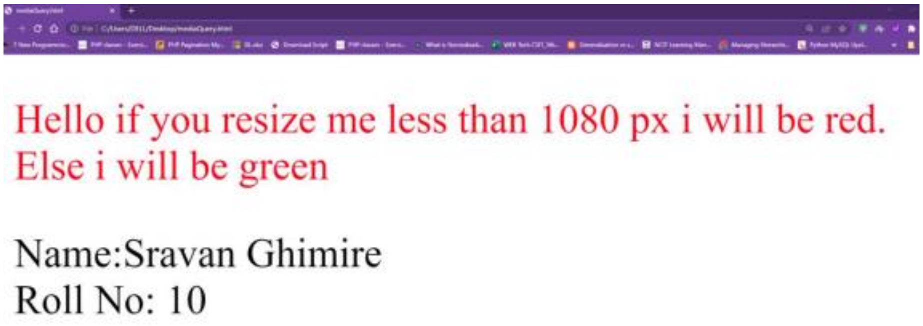
Guidelines:

- All submitted work will be subjected to plagiarism checks. If any instance of plagiarism is found, the work must be redone or reprinted.
- All variable name must contain your ID Card Roll no. as suffix.
- For PHP, all files must be inside xampp > htdocs > yourname_idcardrollno folder.
- For HTML, CSS, JS, folder name must be HTML_idcardrollno, CSS_idcardrollno & JS_idcardrollno respectively.
- The content in the output should be visible.
- All the labs of PHP, JavaScript and XML should be handwritten from now. It will not be applicable in case of HTML and CSS.

As per the recent guidelines by TU, All the code should be handwritten and output should be printed. The output should contain your name and roll no as shown below in the following sample output.

Sample output



Hello if you resize me less than 1080 px i will be red.
Else i will be green

Name:Sravan Ghimire
Roll No: 10

A. HTML

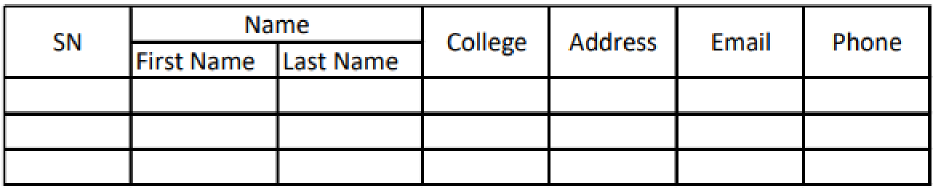
1. Display your name as plain text in a web browser.
2. Display your name in a web browser declared inside the body.
3. Write a complete source code to demonstrate the use of HTML, head, title, and body tags.
4. Write a source code to demonstrate whitespace collapsing.
5. Create two paragraphs. Paragraph 1 with the heading "Management Colleges in Nepal" and Paragraph 2 with the heading "Engineering Colleges in Nepal." Heading of Paragraph 2 must be smaller than the heading of Paragraph 2. Use various HTML tags like **b, i, sup, sub, small, strong, abbr, acronym, blockquote with cite attribute, cite, q** inside the paragraphs.
6. Create an html page to display your bio data using <pre> tag. (Do not use table).
7. Write HTML code to demonstrate the use of
   a. code
   b. kbd
   c. var
   d. samp
8. Write HTML code to demonstrate:
   a. Unordered list
   b. Ordered list
   c. Nested unordered list
   d. Nested ordered list
   e. Definition list
9. Write HTML code to demonstrate an image as a list.
10. Write HTML code to demonstrate the use of URLs along with absolute and relative URLs.
11. How can you create a link in HTML? Show a proper section of the code.
12. Write HTML code to generate the output with the use of anchor tags:

    Home About Gallery

    Home is in parent directory, About is in sub directory of Home and Gallery is in root directory. Write the code for each and every tabs.

13. Create an image gallery of any three popular places in Nepal along with their short description with the images aligned in left or right.
14. Demonstrate the use of align, vspace and hspace attribute using minimum of six images. (Make a gallery).
15. Create a web page that demonstrates the use of destination anchors using name and id attributes.
16. Create a webpage to containing brief description about your college and links to your college and university website.
17. Demonstrate the use of top to bottom and bottom to top link using anchor tags.
18. Write HTML code to add image using img tag.
19. Write HTML code to create an image gallery of 9 images with 3 images in a row each having 200 width and height 250.
20. Write a HTML code to map image as Client side and Server Side.
21. Write a HTML code to demonstrate how audio, video can be added to the web pages along with all the attributes.

22. Write the HTML code to print the following output:



<table>
<tr><th rowspan="2">SN</th><th colspan="2">Name</th><th rowspan="2">College</th><th rowspan="2">Address</th><th rowspan="2">Email</th><th rowspan="2">Phone</th></tr>
<tr><th>First Name</th><th>Last Name</th></tr>
<tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
</table>

Fill at least 5 details.

23. Write HTML code to create a webpage with a list of contents using HTML tables.

24. Design the following single table using HTML.

<table>
<tr><td>A</td><td colspan="2">B</td><td>C</td><td>D</td></tr>
<tr><td colspan="4" rowspan="2">E</td><td>F</td></tr>
<tr><td>G</td></tr>
<tr><td colspan="2">H</td><td colspan="2">J</td><td>K</td></tr>
<tr><td colspan="3">L</td><td colspan="2">M</td></tr>
</table>

25. Design the following table using nested tables in HTML.

<table>
<tr><td>Logo (image)</td><td colspan="2">ABC Company</td></tr>
<tr><td><table><tr><td>Home(link)</td></tr><tr><td>About Us(link)</td></tr><tr><td>Contact Us(link)</td></tr></table></td><td colspan="2"><table><tr><td>Content 1</td><td>News 1</td></tr><tr><td>Content 2</td><td>News 2</td></tr></table></td></tr>
<tr><td>Copyright</td><td>Facebook, Twitter(link)</td><td>Powered By</td></tr>
</table>

26. Design an html form to demonstrate the 10 different types of controls generated using INPUT tag. The form should contain text boxes, radio buttons, checkboxes, submit buttons, reset buttons, and hidden controls.

27. Design an html form to submit a job application form. Demonstrate the use of drop-down list, text areas and file upload control.

28. Demonstrate HTML5 tags (like article, aside, figure, section).

29. Demonstrate the use of the HTML5 datetime input type.

30. Demonstrate the use of HTML5 range input type.

B. CSS

1. Illustrate the use of background properties in CSS (for image).
2. Construct a web page with four paragraph and style using CSS.
3. Design a web page with six images and style them using external CSS.
4. Make a nested list using internal CSS.
5. Make a web page having 3 rows and 2 columns with all the hyperlinks and style it using external CSS.
6. Design an html form to demonstrate the 10 different types of controls generated using INPUT tag. Style the form as:
   - Set the background color of textbox yellow when it is focused.
   - Change the text color blue to textbox.
   - Increase the height of combo options when it is checked.
   - Set the border color red if the input is invalid in textbox and textarea.
   - Set green border to valid input.
   - Design the form using fieldset.
7. Design the given table and style as:

Class A	Class B
Class C	Class D

   - Set the border of any style and color.
   - Set width of all Classes 600 pixel and height 550 pixel.
   - Set different background color for all classes.
   - Every text color should be different.
   - Display Class C and Class D in uppercase and remaining in lower case.
8. Design a horizontal menu of any five options and style as:
   - Set border for all links.
   - Set different background color and text color.
   - Change the font color and increase the font size when mouse over it.
   - Remove the underline from link.
   - Change all the default behavior of links.
9. Develop a web page with a paragraph and add some contents before the paragraph with red color and yellow background using CSS.
10. Illustrate the concept of pseudo elements with example. (::after, ::first-letter, ::selection, ::first-line)
11. Design following list using html and CSS
    - ✓ Mouse
    - ✓ Keyboard
    - ✓ Monitor
    - ✓ Printer
    - ✓ Touchpad

C. Javascript

1. Declare variables of different data types (string, number, boolean). Perform operations on these variables and display the results using console.log().
2. Write a JavaScript program that uses if-else statements to determine if a number is even or odd. Implement a loop to print numbers from 1 to 10.
3. Create a function that accepts user input using the prompt method and displays the input using an alert box. Use a confirm box to ask the user for a yes/no response and display the result.
4. Define an object representing a person with properties like name, age, and address. Access and display these properties using console.log().
5. Declare an array of colors. Use a loop to iterate through the array and display each color on the webpage in HTML table.
6. Explain all the following built in objects with examples of each
   - Array Methods
   - Date Methods
   - String Methods
   - Math Methods
7. Utilize the Date object to display the current date and time.
8. Use the Math object to perform a mathematical operation (e.g., random number generation).
9. Create a user-defined object representing a car. Implement an event handler that triggers when a button is clicked, updating the car's properties.
10. Write a JavaScript program that includes a try-catch block to handle potential errors. Trigger an error intentionally and observe how it's caught.
11. How events are handled in JavaScript? Illustrate with examples
12. Implement JavaScript code to set and retrieve cookies. Display the stored cookie information on the webpage.
13. Integrate jQuery into an HTML document. Use different selectors (element, ID, class) to manipulate elements on the webpage.
14. Implement jQuery events for mouse interactions (e.g., click, hover) on specific elements. Display relevant information when these events occur.
15. Apply various jQuery effects (hide, show, fade, slide) to elements on the webpage. Create a button that triggers a combination of these effects.
16. Create a JSON object representing information about a book. Parse and display the data using JavaScript.
17. Write a JavaScript program that uses JSON to represent an array of students with different data types. Extract and display information from this JSON structure.
18. Develop a form with input fields. Use jQuery to validate the form, providing feedback to users for correct or incorrect entries.
19. Extend the previous form validation example to include more complex validation requirements. Validate email addresses, ensure passwords match, and check if a phone number follows a specific format.
20. How animation is done using jQuery? Illustrate with example.

21. WAP that contains a text field for name, age, phone number, email, dropdown for colleges, radio for gender and a checkbox for I accept all the terms. Perform the client-side validations in JavaScript as:
    a. All fields are required
    b. Name must contain alphabets and white spaces and of length greater than 6 characters long
    c. Age must be integer and must be between and 50
    d. Phone number must be exactly 10 digits long and must start with 98 or 97
    e. Email must be valid
22. Develop a form where validation occurs in real-time as the user types. Use events like keyup or input to trigger immediate feedback on the validity of the entered data.
23. Design a form with conditional validation. For example, validate a postal code only if a specific country is selected. Implement this logic using JavaScript and jQuery.

D. PHP

1. Write a simple PHP script that prints "Hello, PHP!" to the browser.
2. Declare variables of different data types (integer, float, string) and demonstrate the usage of constants in PHP.
3. Create a PHP program that uses if-else statements to check if a number is positive, negative, or zero. Utilize different operators for comparison.
4. Develop a function that calculates the average of an array of numbers. Test the function with various arrays.
5. Define a PHP class representing a "Book" with properties like title and author. Create objects of this class and display their attributes.
6. Design a simple HTML form with input fields. Create a PHP script that retrieves and displays the form data when submitted.
7. Enhance the previous form with PHP validation. Ensure that required fields are filled, and validate email addresses and make sure the phone number starts with 98 or 97 using regex.
8. Implement PHP code that responds to a button click event on a form. Display a message when the button is clicked.
9. Create a PHP script that sets a cookie with user preferences. Retrieve and display this information on subsequent visits.
10. Develop a PHP script that reads content from a text file, modifies it, and then writes the updated content back to the file.

Connecting to Database

1. Write PHP code to establish a connection to a MySQL database, including the necessary credentials.
2. Develop a PHP script to insert a new record into a MySQL database table. Ensure proper validation and sanitation of input data.
3. Create a PHP script that retrieves and displays all records from a MySQL database table.
4. Modify a specific record in a MySQL table using PHP. Ensure that the update is based on user input or specific criteria.
5. Implement PHP code to delete a record from a MySQL table. Provide options for the user to select the record to be deleted.

E. Ajax and XML

1. Develop a simple HTML page with a button. Implement AJAX to make a request to a server-side script (e.g., PHP or Python) when the button is clicked. Display the response on the webpage without refreshing.
2. Create a simple XML element.
3. Create a XML document with simple and complex type.
4. Create an XML document that conforms to the following DTD.

```
<?xml version="1.0" encoding="UTF-8"?>
<!ELEMENT Report (Students, Classes, Courses)>
<!ELEMENT Students (Student*)>
<!ELEMENT Classes (Class*)>
<!ELEMENT Courses (Course*)>
<!ELEMENT Student (Name, Status, CrsTaken*)>
<!ELEMENT Name (First, Last)>
<!ELEMENT First (#PCDATA)>
<!ELEMENT Last (#PCDATA)>
<!ELEMENT Status (#PCDATA)>
<!ELEMENT CrsTaken (#PCDATA)>
<!ELEMENT Class (Semester, ClassRoster)>
<!ELEMENT Semester (#PCDATA)>
<!ELEMENT ClassRoster (#PCDATA)>
<!ELEMENT Course (#PCDATA)>
<!ATTLIST Student StudId ID #REQUIRED>
<!ATTLIST Course CrsCode ID #REQUIRED>
<!ATTLIST CrsTaken CrsCode IDREF #REQUIRED>
<!ATTLIST ClassRoster Members IDREFS #REQUIRED>
```

5. Create an HTML form that collects user information (e.g., name, email). Use JavaScript to dynamically generate an XML document based on the form data when the user submits the form.
6. Construct an XML tree with various elements and attributes. Use JavaScript to manipulate the tree dynamically, adding new elements, modifying attributes, or removing existing elements.
7. Write an XML document representing a list of products. Create an XSLT stylesheet to transform the XML data into an HTML table format. Apply the transformation using JavaScript.
8. Design an XML dataset representing a collection of books. Implement XQuery to retrieve specific information from the XML dataset, such as titles or authors, and display the results on a webpage.