

T.Y.B.Tech
Computer Engineering
Lab. : 20PECE501LB Java Full Stack Technologies

Assignment No # 1: (Group- 'A')

Title: Develop dynamic and interactive web client using HTML, CSS and JavaScript technologies. Make use of these technologies to develop suitable web forms, layout and to perform validation of form data, for this web client.

Problem Statement: Write a program to design registration form for students by using HTML and CSS

Objective:

1. To design static webpage using HTML.
2. To apply CSS to HTML pages.

Software Requirement: Notepad, Browser

Theory:

HTML: HTML is the standard markup language for creating Web pages.

- HTML stands for Hyper Text Markup Language
- HTML describes the structure of Web pages using markup
- HTML elements are the building blocks of HTML pages
- HTML elements are represented by tags
- HTML tags label pieces of content such as "heading", "paragraph", "table", and so on
- Browsers do not display the HTML tags, but use them to render the content of the page
- HTML Versions:

Table.1: HTML Versions

HTML	1991
HTML 2.0	1995
HTML 3.2	1997
HTML 4.01	1999
XHTML	2000
HTML 5	2014

Form Tag with Input Element:

HTML5 introduces a number of new input types.

Input type	Description
<input type="color">	Defines a color picker
<input type="number">	Defines a field for entering a number
<input type="url">	Defines a field for entering a URL.
<input type="image">	Defines an image as a submit button.
<input type="date">	Defines a date picker with the year, month and day
<input type="email">	Defines a field for an e-mail address

Input type	Description
<input type="month">	Defines a month and year control in format is "YYYY-MM"
<input type="range">	Define a range control. Default range is 0 to 100.
<input type="datetime-local">	Defines a date picker that includes the year, month, day and time.
<input type="time">	Defines a control for entering a time.
<input type="week">	Defines a week and year control.
<input type="search">	Defines a text field for entering a search string like a site search or Google search.
<input type="file">	Defines a file-select field and a "Browse" button for file uploads.
<input type="tel">	Used to define input fields that should contain a telephone number.

Input Restrictions:

Attribute	Description
disabled	Specifies that an input field should be disabled.
max	Specifies the maximum value for an input field.
min	Specifies the minimum value for an input field.
pattern	Specifies a regular expression to check the input values.
read only	Specifies that an input field is read only (cannot be changed).
placeholder	This acts as a temporary label showing the purpose of a text field without requiring a label tag.
required	Specifies that an input field is required (must be filled out).
autocomplete	Specifies whether a form or input field should have autocomplete On or Off.
autofocus	Specifies that the input field should automatically get focus when the page loads.
height and width	Specifies the height and width of an <input type="image">
multiple	Specifies that the user is allowed to enter more than one value in the <input> element. This works with input types like email and file.

Example:

```
<!DOCTYPE html> <html>
<head>
<title>Forms in html 5 </title></head>
<body>
<form> Name: <input type="text"autocomplete><br><br>
E-mail:<input type="email" name="email"><br><br>
Date of Inception: <input type="date" name="bday"><br><br>
Office time: <input type="time" name="usr_time"><br><br>
Number of years completed(between 1 and 100): <input type="number" min="1"
max="100"><br><br>
Office phone number: <input type="tel" name="phone" pattern="[0-9]{2}-[0-9]
{10}" required><br><br>
Add your homepage:
<input type="url" name="homepage"><br><br>
<input type="image" src="E:/submitbutton.png" alt="click here to submit" >
</form>
</body>
```

The output is as follows



CSS: CSS stands for Cascading Style Sheet. It is nothing, but design language intended to simplify the process of making web pages presentable. CSS handles the feel and look part of a web page. By using CSS, one can control the color of text, style of fonts, spacing between paragraphs, layout designs. CSS is easy to learn, easy to understand and it provides powerful control on presentation of an HTML document.

Advantages of CSS: It saves the time, Pages load faster, Easy maintenance, Superior styles to HTML, Multiple Device Compatibility, Global web standards, Offline Browsing, Platform Independence.

CSS3 Modules: CSS3 Modules are having old CSS specifications as well as extension features.

- Box Model
- Selectors
- Background
- Border
- Image Values and Replaced Content
- Text Effects
- Animations
- 2D/3D Transformations
- Multiple Column Layout
- User Interface

Technology / Tools

- The `<!DOCTYPE html>` declaration defines this document to be HTML5
- The `<html>` element is the root element of an HTML page
- The `<head>` element contains meta information about the document
- The `<title>` element specifies a title for the document
- The `<body>` element contains the visible page content
- The `<h1>` element defines a large heading
- The `<p>` element defines a paragraph
- HTML tags are element names surrounded by angle brackets:
`<tagname>content goes here...</tagname>`

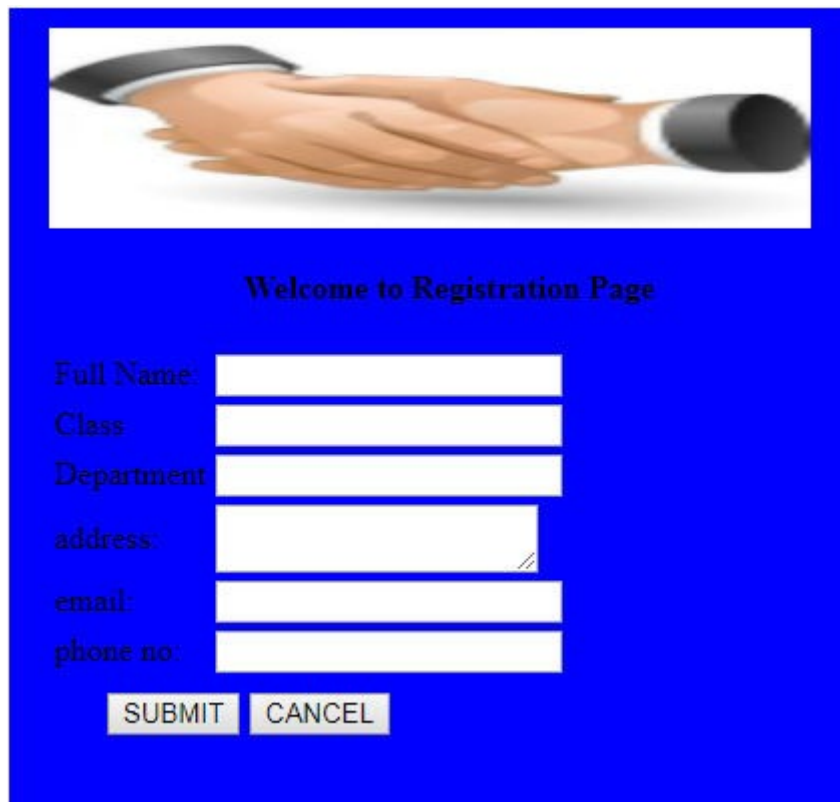
CSS can be added to HTML elements in 3 ways:

- Inline - by using the style attribute in HTML elements. An inline CSS is used to apply a unique style to a single HTML element.
Ex. `<h1 style="color:blue;">This is a Blue Heading</h1>`
- Internal - by using a `<style>` element in the `<head>` section. An internal CSS is used to define a style for a single HTML page. An internal CSS is defined in the `<head>` section of an HTML page, within a `<style>` element.
Example:`<style>`
`body {background-color: powderblue;}`
`h1 {color: blue;}`
`p {color: red;}`
`</style>`
- External - by using an external CSS file. An external style sheet is used to define the style for many HTML pages. With an external style sheet, you can change the look of an entire web site, by changing one file! To use an external style sheet, add a link to it in the `<head>` section of the HTML page.
Example: `<link rel="stylesheet" href="styles.css">`
 - Use the HTML `<head>` element to store `<style>` and `<link>` elements
 - Use the CSS color property for text colors
 - Use the CSS font-family property for text fonts
 - Use the CSS font-size property for text sizes
 - Use the CSS border property for borders
 - Use the CSS padding property for space inside the border
 - Use the CSS margin property for space outside the border

Design/ Algorithm / Execution Steps : Following steps are used to Create and Execute web applications,

1. Write the HTML code in notepad and save with .html extension.
2. Write the CSS code in notepad and save with .css extension.
3. Import CSS file in HTML page.
4. Open HTML page in the browser.

Sample Output:



Full Name:

Class

Department

address:

email:

phone no:

Web Reference: <https://www.tutorialrepublic.com/css-tutorial/>

Outcome: Hence, we have designed static web pages using HTML and CSS.