**Tutorial No. 04**

**Title:** CSS3 – Background, Gradient, Opacity, Drop shadows, Transition, Transformation, Pseudo selectors and Pseudo element**.**

**Batch: B2 Roll No.: 1914078 Tutorial No.: 4**

**Aim**: To design a Web page using HTML 5 and stylise it using CSS3 – Background, Gradient, Opacity, Drop shadows, Transition, Transformation, Pseudo selectors and Pseudo element.

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**Resources needed: Notepad++, Web Browser**

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**Theory:**

**Cascading Style Sheets** (**CSS**) is a style sheet language used for describing the presentation of a document written in a markup language.HTML was NEVER intended to contain tags for formatting a web page.HTML was created to **describe the content** of a web page. CSS is designed primarily to enable the separation of document content from document presentation, including aspects such as the layout, colors, and fonts. This separation can improve content accessibility, provide more flexibility and control in the specification of presentation characteristics, enable multiple HTML pages to share formatting by specifying the relevant CSS in a separate .css file, and reduce complexity and repetition in the structural content. The file should not contain any html tags. The style sheet file must be saved with a .css extension.

CSS has various levels and profiles like CSS1, CSS2, CSS3, CSS4.

There are three ways of inserting a style sheet:

* External style sheet
* Internal style sheet
* Inline style

## External Style Sheet

Each page must include a reference to the external style sheet file inside the <link> element. The <link> element goes inside the <head> section of html page. An external style sheet is ideal when the style is applied to many pages.

## Internal Style Sheet

An internal style sheet may be used if one single page has a unique style.Internal styles are defined within the <style> element, inside the<head> section of an HTML page

## Inline Styles

An inline style may be used to apply a unique style for a single element.To use inline styles, add the style attribute to the relevant element. The style attribute can contain any CSS property.

**CSS Rule-Set**

A CSS rule-set consists of a selector and a declaration block:



Eg:-

p {  
    text-align: center;  
    color: red;  
}

Here p stands for paragraph element.

**CSS Colors and Backgrounds**

Colors can be applied by using colors and background-color. Colors are displayed combining RED, GREEN, and BLUE light.The CSS background properties are used to define the background effects for elements.

## CSS Margin and Padding Properties.

The CSS margin properties are used to generate space around elements. Margin is the space outside something whereas padding is the space inside something. The margin properties set the size of the white space OUTSIDE the border.The CSS padding properties are used to generate space around content.The padding properties set the size of the white space between the element content and the element border.

## CSS Dimension Properties

The CSS dimension properties allow you to control the height and width of an element.

## Navigation Bars

Having easy-to-use navigation is important for any web site. With CSS you can transform boring HTML menus into good-looking navigation bars.

**CSS3**

CSS3 is the latest evolution of the Cascading Style Sheets language and aims at extending CSS2.1. It brings a lot of long-awaited novelties, like rounded corners, shadows, gradients, transitions or animations, as well as new layouts like multi-columns, flexible box or grid layouts.Some of the most important CSS3 modules are:

* Selectors
* Box Model
* Backgrounds and Borders
* Image Values and Replaced Content
* Text Effects
* 2D/3D Transformations
* Animations
* Multiple Column Layout
* User Interface

**CSS3 Selectors:**

CSS3 gives incredible power for selecting elements within a page. CSS3 defines three attribute selector variations. These new selectors give us the ability to make partial matches to attribute values—we can match strings at the start, end, or anywhere within an attribute value. There are element, id and class selector.

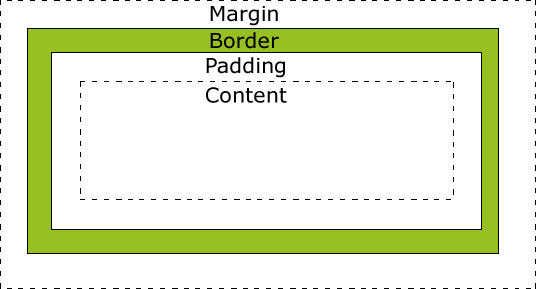
## CSS3Backgrounds

CSS3 contains a few new background properties, which allow greater control of the background element.

* background-size
* background-origin
* background-clip

**CSS3 Box Model**

The CSS box model is essentially a box that wraps around every HTML element. It consists of: margins, borders, padding, and the actual content. The image below illustrate the box model:



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**Activity**

Design a web page using the CSS properties like Colors and Background-color,Lengths and percentages,Margin and padding,Borders,Navigation bars , Background, Gradient, Opacity, Drop shadows, Transition, Transformation, Pseudo selectors and Pseudo element.

etc.

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**Results: (Program with output)**

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**Questions:**

1. Describe how the application of cascading style sheet effects web page?

Ans) CSS is the style sheet language for describing the presentation and design of web pages including colors, fonts, and layouts. It is mainly designed to enable the distinction between presentation and content, including colors, layouts, and fonts. It can be used in different types of devices, like large or small screens and printers. It is independent of HTML and can be used with any [XML-based markup language](https://www.educba.com/xml-interview-questions/).  The CSS file makes the website look and feels more flexible and it can be altered in a more convenient manner. Also, it makes the HTML formatting and the corresponding data elements modification easier. Because of which, website maintenance becomes more convenient from the development perspective.

1. What are the merits and demerits of external, internal and inline styling?

Ans) Advantages of Inline CSS are you can easily and quickly insert CSS rules to an HTML page. That’s why this method is useful for testing or previewing the changes, and performing quick-fixes to your website. You don’t need to create and upload a separate document as in the external style.

Disadvantages of Inline CSS are adding CSS rules to every HTML element is time-consuming and makes your HTML structure messy. Styling multiple elements can affect your page’s size and download time.

The greatest points of interest in external style sheets are that they can be connected to different records while being overseen from a single style sheet. This keeps code DRY and improves productivity and comfort. The weaknesses are that it might decrease the loading time in some situations.

An internal stylesheet holds CSS rules for the page in the head section of the HTML file. The rules only apply to that page, but you can configure CSS classes and IDs that can be used to style multiple elements in the page code.

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**Outcomes:** Create Web pages using HTML 5 and CSS .

**Conclusion:** Wedesigned a Web page using HTML 5 and stylise it using CSS3 – Background, Gradient, Opacity, Drop shadows, Transition, Transformation, Pseudo selectors and Pseudo element.

**Grade: AA / AB / BB / BC / CC / CD /DD**

Signature of faculty in-charge with date

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**References:**

**Books/ Journals/ Websites:**

* “Web technologies: Black Book”, Dreamtech Publications
* http://www.w3schools.com

Program:

<!DOCTYPE html>

<html lang="en" >

<head>

    <meta charset="UTF-8">

    <meta name="viewport" content="width=device-width, initial-scale=1.0">

    <title>Document</title>

    <style>

        body {

            font-family: roboto;

            color:white;

            background: linear-gradient(to bottom,#000,#444);

        }

        \* {

            box-sizing: border-box;

        }

        input:focus{

            outline-color: #6C63FF;

        }

        input[type=text],input[type=email], select, textarea {

            width: 100%;

            padding: 12px;

            margin-top: 6px;

            margin-bottom: 16px;

            resize: vertical;

        }

        input[type=submit] {

            background-color: black;

            color: white;

            margin-top: 15px;

            padding: 12px 20px;

            border: none;

            cursor: pointer;

            border-bottom: 1px solid aqua;

            border-top: 1px solid transparent;

        }

        input[type=submit]:hover {

            border-bottom: 1px solid aqua;

            border-top: 1px solid aqua;

        }

        .container {

            border-radius: 5px;

            padding: 5px;

        }

        .column {

        float: left;

        width: 50%;

        margin-top: 6px;

        padding: 20px;

        }

        .centered{

            text-align: center;

        }

        .centered p::selection{

            color: #6C63FF;

            background: white;

            font-weight: 500;

        }

        .centered p::first-letter{

            text-transform: capitalize;

        }

        .centered::first-line{

            background-color: #6C63FF;

        }

        a{

            text-decoration: none;

            color: black;

        }

        a:visited{

            color: #6C63FF;

            background: aliceblue;

        }

        #whyMe:link{

            color: aliceblue;

        }

        span:lang(hi){

            color: #6C63FF;

            background-color: aliceblue;

        }

        label:first-child{

            color: #ff6363;

        }

        nav{

            padding: 0 25px;

            margin: 0;

            width: 100%;

            display: flex;

            justify-content: space-between;

        }

        .navbar{

            list-style-type: none;

            display: flex;

            justify-content: start;

            margin: 0;

            padding: 0;

        }

        .nav-link{

            display: inline-block;

            padding: 15px;

            color: #6C63FF;

        }

        .nav-link a{

            color: white;

            font-size: 1.2rem;

            padding: 5px 10px;

        }

        .brandname{

            font-size: 1.2rem;

        }

        .btn{

            /\* width: 120px; \*/

            padding: 5px;

            margin: 10px 20px 10px 0;

            font-weight: 600;

            text-align: center;

            line-height: 50px;

            color: #FFF;

            border-radius: 5px;

            transition: all 0.2s ;

            position: relative;

        }

        .btnBlueGreen {

            background: #6C63FF;

        }

        .btnBlueGreen.btnPush {

            box-shadow: -5px 5px 0px 0px #dbd9ff;

        }

        .btnPush:hover {

            margin-top: 15px;

            margin-bottom: 5px;

        }

        .btnBlueGreen.btnPush:hover {

            box-shadow: 0px 0px 0px 0px #504ac4;

        }

    </style>

</head>

<body>

    <nav>

        <a href="/?" class="brandname btn btnBlueGreen btnPush">Devansh Shah</a>

        <ul class="navbar">

            <li class="nav-link"><a href="#Home" class="btn btnBlueGreen btnPush">Home</a></li>

            <li class="nav-link"><a href="#About" class="btn btnBlueGreen btnPush">About</a></li>

            <li class="nav-link"><a href="#Projects" class="btn btnBlueGreen btnPush">Projects</a></li>

            <li class="nav-link"><a href="#Contact" class="btn btnBlueGreen btnPush">Contact</a></li>

        </ul>

    </nav>

    <div class="container">

        <div class="centered">

          <h2>Contact Me</h2>

          <p>

            i think for any relationship to be successful, there needs to be loving communication, appreciation, and understanding.

            The art of communication is the language of leadership.

          </p>

          <p>let's start here! <span lang="hi">इसे देखो</span></p>

        </div>

        <div class="row">

          <div class="column">

            <img src="./undraw\_delivery\_address\_03n0.svg" width="500px" alt="Image">

            <p>Don't believe me?

                <a href="https://www.linkedin.com/in/devansh-shah-8b598b192/" id="whyMe">

                    Look me up

                </a>

            </p>

          </div>

          <div class="column">

            <form>

                <label for="fname">Name</label>

                <input type="text" id="fname" name="name" placeholder="Your name.." required autofocus>

                <label for="email">Email</label>

                <input type="email" id="email" name="email" placeholder="abc@def.com" required>

                <label for="country">Country</label>

                <datalist>

                    <option value="india">India</option>

                    <option value="australia">Australia</option>

                    <option value="canada">Canada</option>

                    <option value="usa">USA</option>

                </datalist>

                <select id="country" name="country">

                    <option value="india">India</option>

                    <option value="australia">Australia</option>

                    <option value="canada">Canada</option>

                    <option value="usa">USA</option>

                </select>

                <label for="subject">Tell me your thoughts</label>

                <textarea id="subject" name="subject" placeholder="Write something.." style="height:140px" required></textarea>

                <div>

                    <input type="checkbox" name="agree" id="agree">

                    <label for="agree">Do you want to be updated with latest news?</label>

                </div>

                <input type="submit" formnovalidate value="Submit">

            </form>

          </div>

        </div>

      </div>

</body>

</html>

OUTPUT:

