WEB PROGRAMMING (3160713)



**VVP**

**Engineering**

**College**

SUBMITTED BY: [[NAME\_OF\_STUDENT]]

[[enrollment\_no]]

# Practical 1

To Study WWW, HTTP Protocol & Web Design Issues.

You need to explain WWW, How HTTP Works and various web design issues.

* **WWW**

WWW stands for World Wide Web and is commonly known as the Web. The WWW was started by CERN in 1989.  WWW is defined as the collection of different websites around the world, containing different information shared via local servers(or computers).

Web pages are linked together using hyperlinks which are HTML-formatted and, also referred to as hypertext, these are the fundamental units of the Internet and are accessed through Hypertext Transfer Protocol(HTTP). Such digital connections, or links, allow users to easily access desired information by connecting relevant pieces of information. The benefit of hypertext is it allows you to pick a word or phrase from the text and click on other sites that have more information about it. This data may be presented in text, picture, audio, or video formats on the internet.

* **HTTP**

HTTP (Hypertext Transfer Protocol) is a fundamental protocol of the Internet, enabling the transfer of data between a client and a server. It is the foundation of data communication for the World Wide Web.

HTTP provides a standard between a web browser and a web server to establish communication. It is a set of rules for transferring data from one computer to another. Data such as text, images, and other multimedia files are shared on the World Wide Web. Whenever a web user opens their web browser, the user indirectly uses HTTP. It is an application protocol that is used for distributed, collaborative, hypermedia information systems.

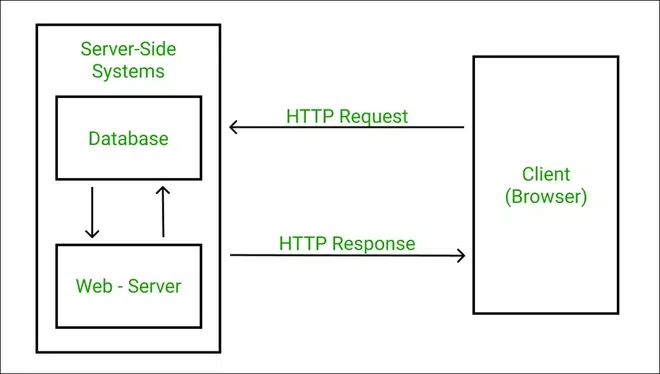
**Methods of HTTP**

* **GET**: Used to retrieve data from a specified resource. It should have no side effects and is commonly used for fetching web pages, images, etc.
* **POST**: Used to submit data to be processed by a specified resource. It is suitable for form submissions, file uploads, and creating new resources.
* **PUT**: Used to update or create a resource on the server. It replaces the entire resource with the data provided in the request body.
* **PATCH**: Similar to PUT but used for partial modifications to a resource. It updates specific fields of a resource rather than replacing the entire resource.
* **DELETE**: Used to remove a specified resource from the server.
* **HEAD**: Similar to GET but retrieves only the response headers, useful for checking resource properties without transferring the full content.
* **OPTIONS**: Used to retrieve the communication options available for a resource, including supported methods and headers.
* **TRACE**: Used for debugging purposes to echo the received request back to the client, though it's rarely used due to security concerns.
* **CONNECT**: Used to establish a tunnel to the server through an HTTP proxy, commonly used for SSL/TLS connections.

**HTTP Request/Response:**

HTTP is a request-response protocol, which means that for every request sent by a client (typically a web browser), the server responds with a corresponding response. The basic flow of an HTTP request-response cycle is as follows:

* **Client sends an HTTP request**: The client (usually a web browser) initiates the process by sending an HTTP request to the server. This request includes a request method (GET, POST, PUT, DELETE, etc.), the target URI (Uniform Resource Identifier, e.g., a URL), headers, and an optional request body.
* **Server processes the request**: The server receives the request and processes it based on the requested method and resource. This may involve retrieving data from a database, executing server-side scripts, or performing other operations.
* **Server sends an HTTP response:** After processing the request, the server sends an HTTP response back to the client. The response includes a status code (e.g., 200 OK, 404 Not Found), response headers, and an optional response body containing the requested data or content.
* **Client processes the response**: The client receives the server's response and processes it accordingly. For example, if the response contains an HTML page, the browser will render and display it. If it's an image or other media file, the browser will display or handle it appropriately.



* **Web design issues.**

**Following are common Web Design Issues:**

1. **Browser & OS**

* Browser’s version affects Web page rendering.
* Browsers may interpret same HTML tags in different way.
* May support CSS, XHTML.
* May work differently on different OS.

1. **Bandwidth & Cache**

* Users may have different speed for internet.
* If web pages contains media, it will take time to load for low bandwidth (speed) internet.
* Solution One, Browsers have Cache Memory to store Graphics and repetitive contents (web pages).

1. **Display Resolution**

* No control on Display resolution of Monitors on which user views page.
* Common resolution are 800x600 or 1024x786.
* Now a day, it becomes Pure HD.

1. **Look & Feel**

* Generates overall appearance of website
* Includes –

theme

fonts

colours

graphical designs

visual structure

navigations

typography

etc…. etc…

1. **Page Layout & Linking**

* In website, web pages are inter linked with navigation link.
* Keep proper track of Navigation Link and also show hierarchy to users.
* Page layout, aka template, defines visual structure.
* Page layout, divides page area into different parts to display information, which should be effective and eye-catching.

1. **Locating Information**

* Place important and attentive information in Centre of Layout Portion to get attention of users
* Provide information onto Left, Top, Bottom and Right part according their importance and priority of accessing.
* Eg. Menus are on Left side, Titles is on Top, Most common links at Bottom.
* It’s totally depends on type of website.

1. **Sitemap**

* Website may contain large number of sections and web pages.
* Visitor may face difficulty to move around.
* Visitor may forget where it was linked from and to…
* To make it simple, create hierarchy of website which gives all information related to navigation.
* Also provide navigation on hierarchy to move directly there.

1. **User Centric Design**

* Difficult to judge behaviour of users who serf websites.
* User’s expectation may change as per their requirements.
* People’s habit to scan screen is clockwise direction.
* Use, standards related to global behaviour of common user, which helps to make design user-centric.
* Give high-lighting on important information through marquee / underline / hyperlink.

# Practical 2

To Study and Implement HTML elements with various tags and attribute.

1. Demonstrate various html formatting tag.
2. Demonstrate various list tag with its attributes in html.
3. Demonstrate table tag with its elements and attributes.
4. Create below table layout using HTML.

* **Table-1**

**CODE:**

<!DOCTYPE html>

<html lang="en">

<head>

    <meta charset="UTF-8">

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

    <title>Document</title>

</head>

<body>

    <table border="1" align="center">

        <tr>

            <td align="center" width="100px" >

                <ol  >

                    <li >abc</li>

                    <li >def</li>

                    <li >ghi</li>

                </ol>

            </td>

            <td>

                <ul>

                    <li>sfs</li>

                    <li>sdjs</li>

                    <li>sdda</li>

                </ul>

            </td>

        </tr>

        <tr>

            <td>

                <a href="www.google.com" title="google" target="\_blank">Google</a>

            </td>

            <td>

                <img src="cube.jpg" alt="cube" width="100px" height="100px">

            </td>

        </tr>

    </table>

</body>

</html>

**OUTPUT:**

**A cube on a table

AI-generated content may be incorrect.**

* **Table-2**

**CODE:**

<html>

    <head>

        <title>table 2</title>

    </head>

    <body>

        <table align="center" border="1">

            <tr>

                <td><b>A</b></td>

                <td><i>B</i></td>

                <td><u>C</u></td>

            </tr>

            <tr>

                <td>X<sup>2</sup></td>

                <td>X<sub>2</sub></td>

                <td><del>X</del></td>

            </tr>

            <tr>

                <td>

                    <ol>

                        <li type="I">ABS</li>

                        <li type="B">sdfs</li>

                    </ol>

                </td>

                <td>

                    <ul>

                        <li type="squre">gautam</li>

                        <li type="circul">mihir</li>

                        <li type="disk">harsh</li>

                    </ul>

                </td>

                <td>

                    <img src="cube.jpg" alt="cube" width="100px" height="100px">

                </td>

            </tr>

        </table>

    </body>

</html>

**OUTPUT:**

**A cube on a table

AI-generated content may be incorrect.**

* **Table-3**

**CODE:**

<html>

    <head>

        <title>Table 3</title>

    </head>

    <body>

        <table align="center" border="1">

            <tr>

                <td>Positon</td>

                <td>Name</td>

                <td>City</td>

            </tr>

            <tr>

                <td>

                    Sales Manger

                </td>

                <td>

                    <ol type="I">

                        <li>harsh</li>

                        <li>Gauatm</li>

                    </ol>

                </td>

                <td>

                    <ol type="A">

                        <li>Rajkot</li>

                        <li>morbi</li>

                    </ol>

                </td>

            </tr>

        </table>

    </body>

</html>

**OUTPUT:**

**A white box with black text

AI-generated content may be incorrect.**

* **Table-4**

**CODE:**

<html>

    <head>

        <title>Table 4</title>

    </head>

    <body>

        <table align="center" border="1" width="500px" height="500px">

            <tr align="center">

                <td colspan="4">A</td>

            </tr>

            <tr align="center">

                <td rowspan="2">B</td>

                <td colspan="2">C</td>

                <td>D</td>

            </tr>

            <tr align="center">

                <td>E</td>

                <td>F</td>

                <td>G</td>

            </tr>

            <tr align="center">

                <td>H</td>

                <td>I</td>

                <td colspan="2">J</td>

            </tr>

        </table>

    </body>

</html>

**OUTPUT:**

**A white rectangular object with black letters

AI-generated content may be incorrect.**

* **Table-5**

**CODE:**

<html>

<head>

    <title>Table 5</title>

</head>

<body>

    <table align="center" border="2">

        <tr>

            <td>First</td>

            <td>Second</td>

            <td>Third</td>

        </tr>

        <tr>

            <td>Computer</td>

            <td rowspan="2">Civil</td>

            <Td></td>

        </tr>

        <tr>

            <td>Result</td>

            <td>:</td>

        </tr>

    </table>

</body>

</html>

**OUTPUT:**

**A white rectangular box with black text

AI-generated content may be incorrect.**

* **Table-6**

**CODE:**

<html>

    <head>

        <title> Table 6 </title>

    </head>

    <body>

        <table align="center" border="2">

            <tr>

                <td rowspan="2" ></td>

                <td colspan="3" align="center">Exam Time Table</td>

            </tr>

            <tr>

                <td>GreenPark</td>

                <td>Oxford</td>

                <td>Euston</td>

            </tr>

            <tr>

                <td>12/10/2012</td>

                <td>WT</td>

                <td>TOC</td>

                <td>CU</td>

            </tr>

            <tr>

                <td>13/10/2012</td>

                <td>TOC</td>

                <td>CU</td>

                <td>WT</td>

            </tr>

        </table>

    </body>

</html>

**OUTPUT:**

**A table with text on it

AI-generated content may be incorrect.**

* **Table-7**

**CODE:**

<html>

<head>

    <title> Table 7 </title>

</head>

<body>

    <table border="2" align="center" width="200px">

        <tr>

            <td colspan="2" align="center">January</td>

            <td align="center">February</td>

        </tr>

        <tr align="center">

            <td rowspan="2" align="center">March</td>

            <td>1</td>

            <td>2</td>

        </tr>

        <tr align="center">

            <td>3</td>

            <td>4</td>

        </tr>

    </table>

</body>

</html>

**OUTPUT:**

**A calendar with numbers and letters

AI-generated content may be incorrect.**

* **Table-8**

**CODE:**

<html>

<head>

    <title>Table 8 </title>

</head>

<body>

    <table align="center" border="2" width="200px">

        <tr>

            <td colspan="4">India</td>

        </tr>

        <tr>

            <td rowspan="2">Aus</td>

            <td colspan="2">USA</td>

            <td>Spain</td>

        </tr>

        <tr>

            <td>Switerland</td>

            <td>Italy</td>

            <td rowspan="2">Japan</td>

        </tr>

        <tr>

            <td>China</td>

            <td>Myanmar</td>

            <td>SouthKorea</td>

        </tr>

    </table>

</body>

</html>

**OUTPUT:**

**A screenshot of a computer

AI-generated content may be incorrect.**

* **Table-9**

**CODE:**

<html>

<head>

    <title>

        Table 9

    </title>

</head>

<body>

    <table align="center" border="2">

        <tr>

            <td rowspan="2"></td>

            <td colspan="2">Average</td>

            <td rowspan="2" width="50px">Other Category</td>

        </tr>

        <tr>

            <td>Height</td>

            <td>Width</td>

        </tr>

        <tr>

            <td>Males</td>

            <td>1.9</td>

            <td>0.003</td>

            <td>YYY</td>

        </tr>

        <tr>

            <td>Female</td>

            <td>1.7</td>

            <td>0.002</td>

            <td>XXX</td>

        </tr>

    </table>

</body>

</html>

**OUTPUT:**

**A table with numbers and letters

AI-generated content may be incorrect.**

* **Table 10:**

**CODE:**

<html>

    <head>

        <title>

            Table 10

        </title>

        <style>

            table,tr,td{

                border-collapse:collapse;

            }

        </style>

    </head>

    <body>

        <table align="center"  border="2" width="500px">

<tr align="center"  >

    <td rowspan="3">A</td>

    <td>B</td>

    <td colspan="2">C</td>

    <td>D</td>

    <td rowspan="2" colspan="2">E</td>

</tr>

<tr align="center">

    <td>F</td>

    <td>G</td>

    <td rowspan="3">H</td>

    <td>I</td>

</tr>

<tr align="center">

    <td rowspan="2">J</td>

    <td>K</td>

    <td>L</td>

    <td>M</td>

    <td>N</td>

</tr>

<tr align="center">

    <td>O</td>

    <td>P</td>

    <td colspan="3">Q</td>

</tr>

        </table>

    </body>

</html>

**OUTPUT:**

**A white rectangular box with black letters and numbers

AI-generated content may be incorrect.**

# Practical 3

To Study and Implement HTML meta tag , form tag.

1. Demonstrate the various form element and its attributes and create one simple registration form as per your requirement.

**CODE:**

<html>

    <head>

        <title>

            Form-2

        </title>

    </head>

    <body>

        <table align="center">

            <tr>

                <td>

                    <form action="#" method="get">

                        <fieldset>

                            <legend>Registration Form</legend>

                            <table>

                                <tr>

                                    <td>Username:</td>

                                    <td><input type="text" name="username" placeholder="enter user name"></td>

                                </tr>

                                <tr>

                                    <td>Password:</td>

                                    <td><input type="password" name="password" placeholder="\*\*\*\*\*\*\*\*"></td>

                                </tr>

                                <tr>

                                    <td>Email:</td>

                                    <td><input type="email" name="email" placeholder="abc@abc.com"></td>

                                </tr>

                                <tr>

                                    <td>Mobile no.</td>

                                    <td><input type="number" name="Mobile no." placeholder="enter mobile no."></td>

                                </tr>

                                <tr>

                                    <td>

                                        Gender:

                                    </td>

                                    <td>

                                        <input type="radio" name="gender" value="Male"> Male

                                        <input type="radio" name="gender" id="" value="Female"> Female

                                    </td>

                                </tr>

                                <tr>

                                    <td>Hobbies:</td>

                                    <td><input type="checkbox" name="H1" id="H1" value="H1">H1

                                        <input type="checkbox" name="H2" id="H2" value="H2">H2

                                        <input type="checkbox" name="H3" id="H3" value="H3">H3

                                    </td>

                                </tr>

                                <tr>

                                    <td>Address:</td>

                                    <td><textarea name="Address"  cols="30" rows="3" placeholder="enter address"></textarea></td>

                                </tr>

                                <tr>

                                    <td>City:</td>

                                    <td>

                                        <select name="city" id="city">

                                            <option value="Rajkot" selected>Rajkot</option>

                                            <option value="Ahemdabad">Ahemdabad</option>

                                            <option value="Morbi">Morbi</option>

                                            <option value="Junagadh">Junagadh</option>

                                        </select>

                                    </td>

                                </tr>

                                <tr>

                                    <td>state:</td>

                                    <td>

                                        <select name="state" id="state">

                                            <option value="Gujrat" selected>Gujrat</option>

                                            <option value="UP">UP</option>

                                            <option value="Bihar">Bihar</option>

                                            <option value="Rajsthan">Rajsthan</option>

                                        </select>

                                    </td>

                                </tr>

                                <tr>

                                    <td>

                                        <input type="submit" name="submit">

                                    </td>

                                </tr>

                            </table>

                        </fieldset>

                    </form>

                </td>

            </tr>

        </table>

    </body>

</html>

**OUTPUT:**

**A screenshot of a registration form

AI-generated content may be incorrect.**

2. Design Login Page HTML. Page must have fields in page Username, Password, Remember Me and Login Button.

**CODE:**

<html>

<head>

    <title>

        Form-1

    </title>

</head>

<body>

    <table align="center">

        <tr>

            <td>

                <form action="#" method="get">

                    <fieldset>

                        <legend>Login</legend>

                        <table>

                            <tr>

                                <td>Username:</td>

                                <td><input type="text" placeholder="enter user name" name="username"></td>

                            </tr>

                            <tr>

                                <td>Password:</td>

                                <td><input type="password" placeholder="\*\*\*\*\*\*\*\*" name="password"></td>

                            </tr>

                            <tr>

                                <td>

                                    <input type="checkbox" name="remember me">

                                </td>

                               <td>Remember me</td>

                            </tr>

                            <tr><td><input type="submit" name="submit" id="submit"></td></tr>

                        </table>

                    </fieldset>

                </form>

            </td>

        </tr>

    </table>

</body>

</html>

**OUTPUT:**

**A screenshot of a computer screen

AI-generated content may be incorrect.**

3. Write a form to collect details of a user such as name, address, radio button to choose subject of book he wants to buy, Dropdown to choose favorite author and comments for the last book he read.

**CODE:**

<html>

    <head>

        <title>Form 3</title>

    </head>

    <body>

        <table align="center">

            <tr>

                <td>

                    <form action="#" method="get">

                        <fieldset>

                            <legend>Collect Details</legend>

                            <table >

                                <tr>

                                    <td>Name:</td>

                                    <td><input type="text" name="name" placeholder="name"></td>

                                </tr>

                                <tr>

                                    <td>Address:</td>

                                    <td>

                                        <textarea name="address" cols="30" rows="3" placeholder="address"></textarea>

                                    </td>

                                </tr>

                                <tr>

                                    <td>Subject</td>

                                    <td>

                                        <input type="radio" name="subject" value="SE">SE

                                        <input type="radio" name="subject" value="TOC">TOC

                                        <input type="radio" name="subject" value="WT">WT

                                        <input type="radio" name="subject" value="AJAVA">AJAVA

                                    </td>

                                </tr>

                                <tr>

                                    <td>Favorite Auther</td>

                                    <td>

                                        <select name="auther" id="">

                                            <option value="01">01</option>

                                            <option value="02">02</option>

                                            <option value="03">03</option>

                                        </select>

                                    </td>

                                </tr>

                                <tr>

                                    <td>Comment:</td>

                                    <td>

                                        <textarea name="comment"  cols="30" rows="3" placeholder="comment"></textarea>

                                    </td>

                                </tr>

                                <tr>

                                    <td>

                                        <input type="submit" name="submit" >

                                    </td>

                                </tr>

                            </table>

                        </fieldset>

                    </form>

                </td>

            </tr>

        </table>

    </body>

</html>

**OUTPUT:**

**A screenshot of a computer

AI-generated content may be incorrect.**

4. Demonstrate the use of meta tag and character entities.

**Meta Tags:** Provide information about the webpage like encoding, viewport settings for mobile responsiveness, SEO-related keywords, and author details.

**Character Entities:** Ensure special symbols (like <, >, ©) are displayed correctly in HTML without breaking the structure.

This keeps your webpage well-structured and optimized.

**CODE:**

<!DOCTYPE html>

<html lang="en">

<head>

    <meta charset="UTF-8">  <!-- Defines character encoding -->

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

    <meta name="description" content="A demo page showcasing meta tags & character entities."> <!-- SEO-friendly description -->

    <meta name="keywords" content="HTML, meta tags, character entities"> <!-- Keywords for search engines -->

    <meta name="author" content="Your Name"> <!-- Author of the page -->

    <title>Meta Tags & Character Entities Example</title>

</head>

<body>

    <h1>Character Entities in HTML</h1>

    <p>Using special characters safely:</p>

    <ul>

        <li>Copyright symbol: &copy;</li>

        <li>Registered trademark: &reg;</li>

        <li>Trademark symbol: &trade;</li>

        <li>Less than: &lt; and Greater than: &gt;</li>

        <li>Non-breaking space: &nbsp;</li>

    </ul>

</body>

</html>

**OUTPUT:**

**A white text with black text

AI-generated content may be incorrect.**

5. Demonstrate the use of frameset and iframe.

* **Frame-1 example**

**CODE:**

<!DOCTYPE html>

<html lang="en">

<head>

    <meta charset="UTF-8">

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

    <title>Document</title>

</head>

<frameset cols="25%,50%,25%">

    <frame src="home.html" name="home">

    <frame src="aboutUs.html" name="aboutUs">

    <frame src="contactUs.html" name="contactUs">

</frameset>

</html>

**OUTPUT:**

**A white background with black text

AI-generated content may be incorrect.**

* **Frame-2 example**

**CODE:**

<!DOCTYPE html>

<html lang="en">

<head>

    <meta charset="UTF-8">

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

    <title>Rows Frame</title>

</head>

<frameset rows="50%,25%,\*">

    <frame src="./home.html">

    <frame src="./contactUs.html">

    <frame src="./aboutUs.html">

</frameset>

</html>

**OUTPUT:**

**A white rectangular object with a white background

AI-generated content may be incorrect.**

* **Frame-3 example**

**CODE:**

<!DOCTYPE html>

<html lang="en">

<head>

    <meta charset="UTF-8">

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

    <title>Rows Frame</title>

</head>

<frameset rows="25%,50%,\*">

    <frame src="./home.html">

        <frameset cols="50%,50%">

            <frame src="./marque.html">

            <frame src="./aboutUs.html">

        </frameset>

        <frame src="./aboutUs.html">

</frameset>

</html>

**OUTPUT:**

**A white rectangular object with black text

AI-generated content may be incorrect.**

# Practical 4

Build the HTML Layout as per predefined requirement.

1. Resume Layout as given in your lab.

**CODE:**

<!DOCTYPE html>

<html lang="en">

<head>

    <meta charset="UTF-8">

    <title>Resume</title>

</head>

<body>

    <table width="100%" border="5" cellpadding="15" cellspacing="0" bordercolor="blue">

        <tr>

            <td>

                <table width="100%" cellpadding="10" cellspacing="0">

                    <tr>

                        <td colspan="2">

                            <h2>

                                <font color="blue">MELINDA</font> GATES

                            </h2>

                            <h4>GRAPHIC DESIGNER</h4>

                        </td>

                        <td align="right">

                            <table cellpadding="5">

                                <tr>

                                    <td>mgates@outlook.com</td>

                                </tr>

                                <tr>

                                    <td>1244567890</td>

                                </tr>

                                <tr>

                                    <td>https://linkedin.com/in/mgates</td>

                                </tr>

                                <tr>

                                    <td>www.meigates.com</td>

                                </tr>

                            </table>

                        </td>

                    </tr>

                    <tr>

                        <td colspan="3">

                            <h3><b>GRAPHIC DESIGNER SUMMARY</b></h3>

                            <hr color="blue">

                            <ul>

                                <li>

                                    Graphic designer with 10+ years of experience creating results-driven graphics and

                                    promaotional materials for clients like Chanel, Gucci, American Eagle, Raiph Lauren

                                    & more.

                                </li>

                                <li>

                                    Managed a team of 15 designers to produce entire portfolio for 2018 Victoria's

                                    Secret Fashion show.

                                </li>

                                <li>

                                    Co-founder of Girls Who Design a community that aims to empower women in design to

                                    share their stories and support one another.

                                </li>

                            </ul>

                        </td>

                    </tr>

                    <tr>

                        <td colspan="3">

                            <h3><b>WORK EXPERIENCE</b></h3>

                            <hr color="blue">

                        </td>

                    </tr>

                    <tr>

                        <td colspan="2">

                            <b>THE KLAMBI GROUP</b>

                            <p>Manage a team of 30+ designer to produce high qulit, results-driven material for our top

                                clients including Gucci, Victoria's Secret, Louis Vuitton, & Hermes</p>

                        </td>

                        <td align="right">

                            <b>CREATIVE DIRECTOR</b><br>

                            June 2018-Present

                        </td>

                    </tr>

                    <tr>

                        <td colspan="2">

                            <b>LEFT OF CENTER</b>

                            <p>Managed a team of 3 designers to create promotional materials for client in our fashion

                                vertical</p>

                            <p>

                                Spearthead implementation of new design process which increased time to completion

                                efficiency by 26% nd reduced cost by 14%

                            </p>

                        </td>

                        <td align="right">

                            <b>SENIOR GRAPHIC DESIGNER</b><br>

                            May 2015 - May 2018

                        </td>

                    </tr>

                    <tr>

                        <td colspan="2">

                            <b>POLO RALPH LAUREN</b>

                            <p>Designed Raiph Lauren catalogs for Summer, Fall, and Spring</p>

                        </td>

                        <td align="right">

                            <b>GRAPIC DESIGNER</b><br>

                            Ocober 2013 - April 2015

                        </td>

                    </tr>

                    <tr>

                        <td colspan="3">

                            <h3><b>EDUCATION</b></h3>

                            <hr color="blue">

                        </td>

                    </tr>

                    <tr>

                        <td colspan="2">

                            <b>RHODE ISLAND SCHOOL OF DESIGN</b>

                        </td>

                        <td align="right">

                            <b>MASTERS, DIGITAL DESIGN</b>

                            <br>

                            September 2011-May 2013

                        </td>

                    </tr>

                    <tr>

                        <td colspan="2">

                            <b>SAVANNAH COLLEGE OF ART & DESIGN</b>

                        </td>

                        <td align="right">

                            <b>FINE ART DESIGNER</b>

                            <br>

                            September 2007-May 2011

                        </td>

                    </tr>

                    <tr>

                        <td colspan="3">

                            <table width="100%" cellpadding="10">

                                <tr>

                                    <td width="50%">

                                        <h3><b>SKILLS</b></h3>

                                        <hr color="blue">

                                        <ul>

                                            <li>Fashio Illustration</li>

                                            <li>Technical Design</li>

                                            <li>CAD</li>

                                            <li>Adobe Photoshop</li>

                                            <li>Adobe Illustrator</li>

                                        </ul>

                                    </td>

                                    <td width="50%">

                                        <h3><b>INTERESTS</b></h3>

                                        <hr color="blue">

                                        <ul>

                                            <li>Cooking- I'm making new recipe from samin Nosrat every night for 90days.

                                            </li>

                                            <li>Reading- I'm currently working my way through every volume of CS Lewis's

                                                Chronicles of Narnia</li>

                                        </ul>

                                    </td>

                                </tr>

                            </table>

                        </td>

                    </tr>

                </table>

            </td>

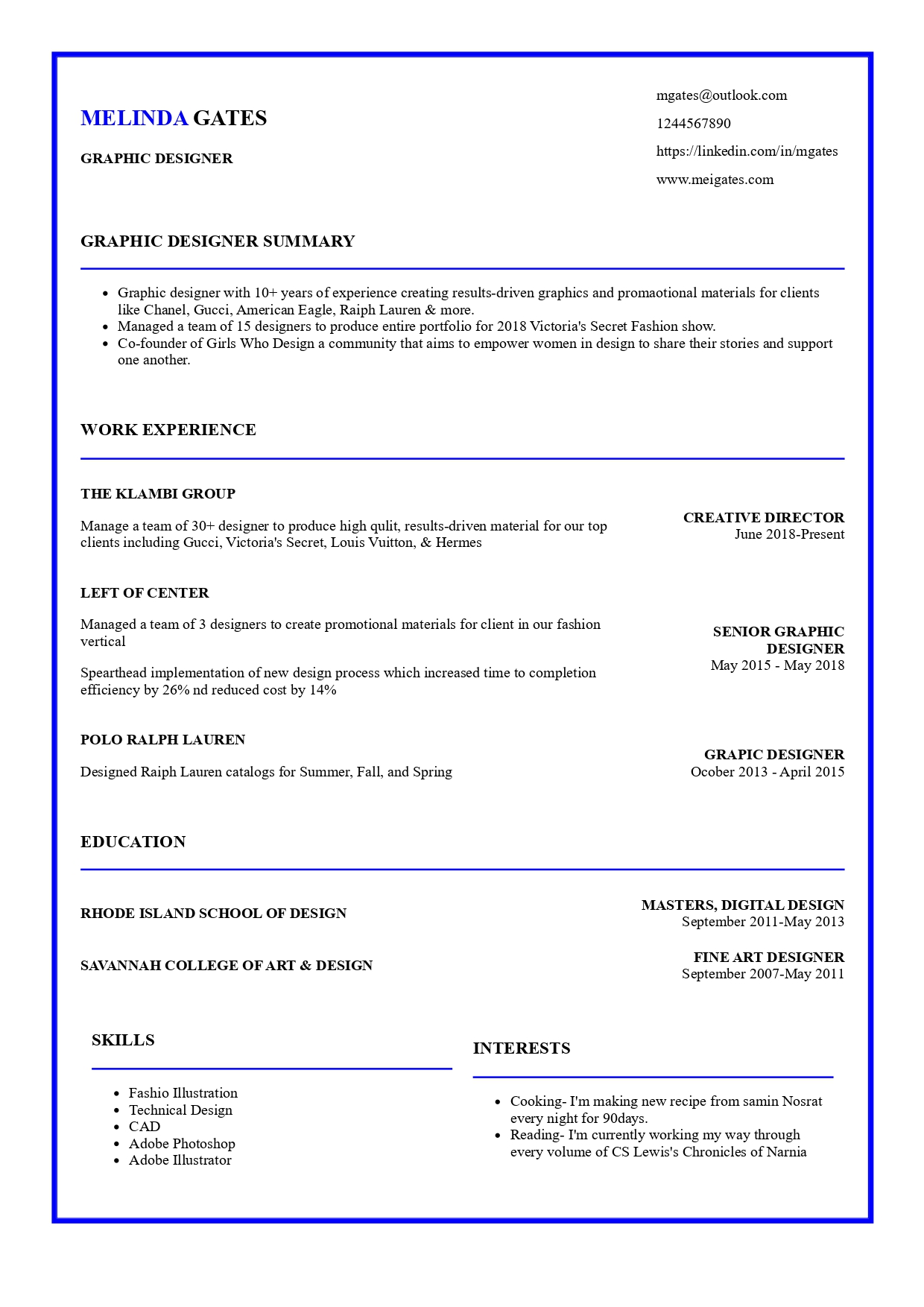
        </tr>

    </table>

</body>

</html>

**OUTPUT:**



# Practical 5

Study and Implement different types of Style Sheet with all properties and their values.

1. Demonstrate the use of background and text manipulation property.

**CODE:**

<!DOCTYPE html>

<html>

<head>

    <style>

        body {

            background-color: #f0f8ff;

            background-image: url('https://www.transparenttextures.com/patterns/diagonal-noise.png');

            background-repeat: repeat;

            background-size: cover;

        }

        .styled-text {

            color: #2e8b57;

            font-size: 20px;

            font-family: 'Courier New', Courier, monospace;

            text-align: justify;

            text-transform: capitalize;

            letter-spacing: 2px;

            word-spacing: 5px;

            line-height: 1.8;

            margin: 30px;

            padding: 20px;

            background-color: rgba(255, 255, 255, 0.8);

            border-radius: 10px;

        }

    </style>

</head>

<body>

    <div class="styled-text">

        this is a demonstration of background and text manipulation properties using css. the text is styled with

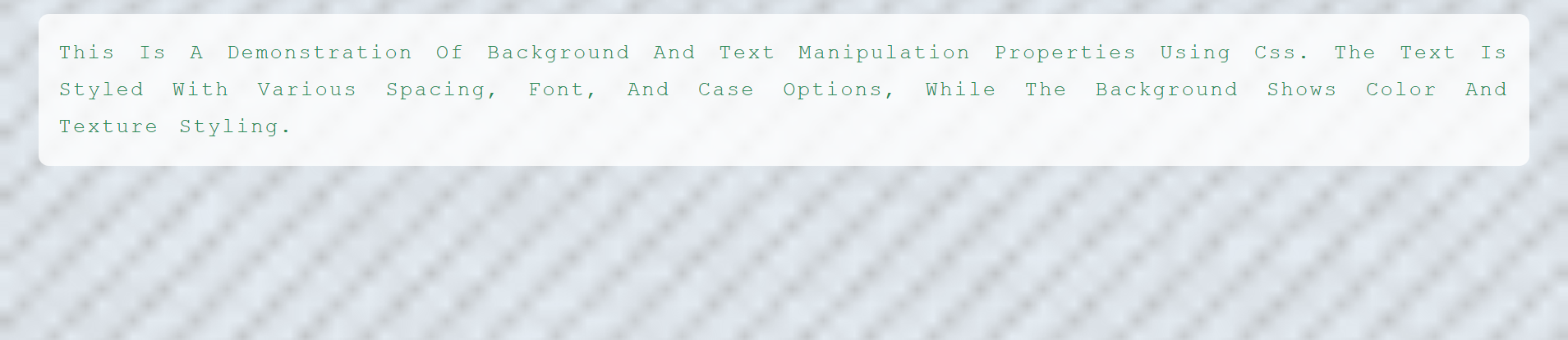
        various spacing, font, and case options, while the background shows color and texture styling.

    </div>

</body>

</html>

**OUTPUT:**

****

2. Demonstrate the use of margin, padding and border property.

**CODE:**

<!DOCTYPE html>

<html>

<head>

    <style>

        .box {

            background-color: #e0f7fa;

            color: #006064;

            font-family: Arial, sans-serif;

            margin: 50px;

            padding: 30px;

            border: 5px solid #00838f;

            border-radius: 10px;

            width: 300px;

        }

    </style>

</head>

<body>

    <div class="box">

        This box demonstrates the use of margin, padding, and border in CSS.

    </div>

</body>

</html>

**OUTPUT:**

**A close-up of a sign

AI-generated content may be incorrect.**

3. Demonstrate the use of CSS List and Positioning.

**CODE:**

<!DOCTYPE html>

<html>

<head>

    <style>

        ul.custom-list {

            list-style-type: square;

            background-color: #f1f8e9;

            padding: 20px;

            width: 200px;

            border: 2px solid green;

        }

        ol.custom-list {

            list-style-type: upper-roman;

            background-color: #fff3e0;

            padding: 20px;

            width: 200px;

            border: 2px solid orange;

        }

        .static-box {

            position: static;

            background-color: #e0f7fa;

            padding: 10px;

            margin: 10px;

        }

        .relative-box {

            position: relative;

            top: 20px;

            left: 20px;

            background-color: #ffe0b2;

            padding: 10px;

            margin: 10px;

        }

        .absolute-box {

            position: absolute;

            top: 100px;

            left: 300px;

            background-color: #c8e6c9;

            padding: 10px;

            width: 200px;

        }

        .fixed-box {

            position: fixed;

            top: 10px;

            right: 10px;

            background-color: #d1c4e9;

            padding: 10px;

        }

    </style>

</head>

<body>

    <h2>CSS List Styling</h2>

    <ul class="custom-list">

        <li>Apple</li>

        <li>Banana</li>

        <li>Cherry</li>

    </ul>

    <ol class="custom-list">

        <li>First</li>

        <li>Second</li>

        <li>Third</li>

    </ol>

    <h2>CSS Positioning</h2>

    <div class="static-box">Static Position (default)</div>

    <div class="relative-box">Relative Position (shifted 20px down & right)</div>

    <div class="absolute-box">Absolute Position (relative to page)</div>

    <div class="fixed-box">Fixed Position (stays even when scrolling)</div>

</body>

</html>

**OUTPUT:**

**A close-up of a line

AI-generated content may be incorrect.**

4. Demonstrate the use of CSS Gradients.

**CODE:**

<!DOCTYPE html>

<html>

<head>

    <style>

        body {

            font-family: Arial, sans-serif;

            margin: 20px;

        }

        .linear-gradient-box {

            width: 300px;

            height: 150px;

            background: linear-gradient(to right, #ff7e5f, #feb47b);

            border: 2px solid #333;

            margin-bottom: 30px;

            text-align: center;

            line-height: 150px;

            color: white;

            font-weight: bold;

        }

        .radial-gradient-box {

            width: 300px;

            height: 150px;

            background: radial-gradient(circle, #2196f3, #21cbf3);

            border: 2px solid #333;

            text-align: center;

            line-height: 150px;

            color: white;

            font-weight: bold;

        }

    </style>

</head>

<body>

    <h2>CSS Gradient Demo</h2>

    <div class="linear-gradient-box">Linear Gradient</div>

    <div class="radial-gradient-box">Radial Gradient</div>

</body>

</html>

**OUTPUT:**

**A two rectangular rectangles with text

AI-generated content may be incorrect.**

5. Demonstrate the use of CSS Animation.

**CODE:**

<!DOCTYPE html>

<html>

<head>

    <style>

        .animated-box {

            width: 100px;

            height: 100px;

            background-color: #ff6347;

            position: relative;

            animation-name: slideAndColorChange;

            animation-duration: 4s;

            animation-timing-function: ease-in-out;

            animation-iteration-count: infinite;

            animation-direction: alternate;

            border-radius: 10px;

            text-align: center;

            line-height: 100px;

            color: white;

            font-weight: bold;

        }

        @keyframes slideAndColorChange {

            0% {

                left: 0;

                background-color: #ff6347;

                transform: scale(1);

            }

            50% {

                left: 200px;

                background-color: #4caf50;

                transform: scale(1.2);

            }

            100% {

                left: 0;

                background-color: #2196f3;

                transform: scale(1);

            }

        }

    </style>

</head>

<body>

    <h2>CSS Animation Demo</h2>

    <div class="animated-box">Animate</div>

</body>

</html>

**OUTPUT:**

**A green square with white text

AI-generated content may be incorrect.**

6. Demonstrate the use of CSS Variables.

**CODE:**

<!DOCTYPE html>

<html>

<head>

    <style>

        :root {

            --main-bg-color: #f0f8ff;

            --box-color: #4caf50;

            --text-color: white;

            --box-padding: 20px;

            --box-radius: 10px;

        }

        body {

            background-color: var(--main-bg-color);

            font-family: Arial, sans-serif;

        }

        .box {

            background-color: var(--box-color);

            color: var(--text-color);

            padding: var(--box-padding);

            border-radius: var(--box-radius);

            width: 300px;

            text-align: center;

            margin: 50px auto;

            font-weight: bold;

        }

        .box:hover {

            background-color: darkgreen;

        }

    </style>

</head>

<body>

    <h2 style="text-align: center;">CSS Variables Demo</h2>

    <div class="box">

        This box uses CSS variables!

    </div>

</body>

</html>

**OUTPUT:**

**A green box with white text

AI-generated content may be incorrect.**

7. Demonstrate the use of CSS Pseudo Class & Pseudo Elements.

**CODE:**

<!DOCTYPE html>

<html>

<head>

    <style>

        a:visited {

            color: gray;

        }

        a:hover {

            color: red;

            text-decoration: underline;

        }

        input:focus {

            border: 2px solid blue;

            background-color: #e0f7fa;

        }

        li:nth-child(odd) {

            background-color: #f9fbe7;

        }

        li:nth-child(even) {

            background-color: #e0f2f1;

        }

        p::first-letter {

            font-size: 30px;

            color: darkblue;

        }

        p::first-line {

            font-weight: bold;

        }

        .box::before {

            content: "👉 ";

            color: green;

        }

        .box::after {

            content: " ✔";

            color: green;

        }

    </style>

</head>

<body>

    <h2>CSS Pseudo-Class & Pseudo-Element Demo</h2>

    <a href="#">Hover or Visit this Link</a><br><br>

    <input type="text" placeholder="Focus to see effect"><br><br>

    <ul>

        <li>List item 1</li>

        <li>List item 2</li>

        <li>List item 3</li>

        <li>List item 4</li>

    </ul><br>

    <p>This paragraph demonstrates the use of pseudo-elements like first-letter and first-line. The styles only affect

        specific parts of the paragraph.</p>

    <div class="box">This uses ::before and ::after</div>

</body>

</html>

**OUTPUT:**

**A screenshot of a computer

AI-generated content may be incorrect.**

8. Write down HTML/CSS code to create table with 5 rows and 3 columns. Even no. of rows displays in green color and odd no. of rows display in yellow color.

**CODE:**

<html>

    <head>

        <title>

            Table Example

        </title>

        <style>

            tr:nth-child(even){

                background-color: green;

            }

            tr:nth-child(odd){

                background-color: yellow;

            }

        </style>

    </head>

    <body>

        <table align="center" border="1" width="400px" height="400px">

            <tr align="center">

                <td>R1 C1</td>

                <td>R1 C2</td>

                <td>R1 C3</td>

            </tr>

            <tr align="center">

                <td>R2 C1</td>

                <td>R2 C2</td>

                <td>R2 C3</td>

            </tr>

            <tr align="center">

                <td>R3 C1</td>

                <td>R3 C2</td>

                <td>R3 C3</td>

            </tr>

            <tr align="center">

                <td>R4 C1</td>

                <td>R4 C2</td>

                <td>R4 C3</td>

            </tr>

            <tr align="center">

                <td>R5 C1</td>

                <td>R5 C2</td>

                <td>R5 C3</td>

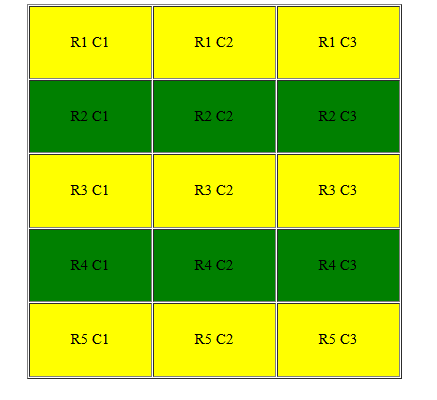
            </tr>

        </table>

    </body>

</html>

**OUTPUT:**

****

9. Specify the CSS to provide; link: after visited blue color and before visited red color, table with odd rows white and even rows blue color.

**CODE:**

<html>

    <head>

        <title>Link</title>

    </head>

    <style>

        a:link{

            color:red;

        }

        a:visited{

            color: blue;

        }

        tr:nth-child(even){

            background-color: blue;

        }

    </style>

    <body>

        <div>

            <h1><a href="https://www.google.com/">click me</a></h1>

        </div>

        <div>

            <table align="center" border="1" width="400px" height="400px">

                <tr align="center">

                    <td>R1 C1</td>

                    <td>R1 C2</td>

                    <td>R1 C3</td>

                </tr>

                <tr align="center">

                    <td>R2 C1</td>

                    <td>R2 C2</td>

                    <td>R2 C3</td>

                </tr>

                <tr align="center">

                    <td>R3 C1</td>

                    <td>R3 C2</td>

                    <td>R3 C3</td>

                </tr>

                <tr align="center">

                    <td>R4 C1</td>

                    <td>R4 C2</td>

                    <td>R4 C3</td>

                </tr>

                <tr align="center">

                    <td>R5 C1</td>

                    <td>R5 C2</td>

                    <td>R5 C3</td>

                </tr>

            </table>

        </div>

    </body>

</html>

**OUTPUT:**

**A blue and white squares

AI-generated content may be incorrect.**

10. Write cascading style sheet to get following formatting for the paragraph.

Text color-green

Text-indentation – 2 cm

Font-courier

Font style-italic

Text case-uppercase

**CODE:**

<!DOCTYPE html>

<html>

<head>

    <title>Font</title>

    <style>

        h1 {

            color: green;

            text-indent: 2cm;

            font-family: Courier, monospace;

            font-style: italic;

            text-transform: uppercase;

        }

    </style>

</head>

<body>

    <h1>This is a sample paragraph with the specified formatting.</h1>

</body>

</html>

**OUTPUT:**



# Practical 6

Build HTML & CSS Webpage as per predefined requirement.

1. GMAIL SIGNUP LAYOUT as per attachment

**CODE:**

<!DOCTYPE html>

<html lang="en">

<head>

    <meta charset="UTF-8">

    <title>Gmail Sign Up</title>

    <style>

        body {

            width: 100%;

            height: 100%;

            font-family: Arial, sans-serif;

            margin: 0;

            background: #fff;

            color: #333;

        }

        header {

            padding: 20px;

            border-bottom: 1px solid #ddd;

        }

        header img {

            height: 40px;

        }

        .container {

            display: flex;

            justify-content: space-between;

            padding: 30px;

            max-width: 100vw;

            margin: auto;

        }

        .left {

            width: 50%;

        }

        .left>table img {

            width: 200px;

        }

        .left img {

            width: 100%;

            height: 100%;

            margin-bottom: 20px;

        }

        .left h2 {

            color: #d93025;

        }

        .left p {

            margin-bottom: 20px;

        }

        .right {

            width: 50%;

            height: 100%;

            /\* border-left: 1px solid #ccc; \*/

            padding-left: 40px;

            padding-right: 40px;

        }

        form {

            background-color: #dadada;

            border: 2px solid black;

            width: 100%;

            height: 100%;

            padding: 20px;

        }

        form table {

            width: 100%;

            height: 100%;

        }

        #submit {

            background-color: blue;

            padding: 10px;

            color: white;

            border-radius: 5px;

        }

        .captcha {

            width: 200px;

            height: 50px;

        }

    </style>

</head>

<body>

    <header>

        <img src="https://www.google.com/images/branding/googlelogo/1x/googlelogo\_color\_92x30dp.png" alt="Google">

    </header>

    <div class="container">

        <!-- Left Side -->

        <div class="left">

            <h2>Create a new Google Account</h2>

            <table>

                <tr>

                    <td>

                        <img src="https://www.gstatic.com/images/branding/product/2x/googleg\_64dp.png"

                            alt="Google Services">

                    </td>

                    <td>

                        <p><strong>Your Google Account is more than just Gmail.</strong> Talk, chat, share, schedule,

                            store,

                            organize, collaborate, discover, and create…</p>

                    </td>

                </tr>

                <tr>

                    <td>

                        <img src="https://th.bing.com/th/id/OIP.QMvnKQHSbuam7zgPPWIqxAHaEK?rs=1&pid=ImgDetMain"

                            alt="image">

                    </td>

                    <td>

                        <p><strong>Take it all with you.</strong> A Google Account lets you access your stuff from any

                            device…</p>

                    </td>

                </tr>

                <tr>

                    <td>

                        <img src="https://thumbs.dreamstime.com/z/google-18250175.jpg" alt="image">

                    </td>

                    <td>

                        <p><strong>Share a little. Or share a lot.</strong> Share selectively with friends, family, or

                            just follow

                            posts from people who fascinate you…</p>

                    </td>

                </tr>

                <tr>

                    <td>

                        <img src="https://cdn.analyticsvidhya.com/wp-content/uploads/2024/04/Google\_to\_make\_generative\_AI-powered\_search\_exclusive\_to\_paid-tier-\_Report-scaled.jpg"

                            alt="image">

                    </td>

                    <td>

                        <p><strong>Work in the future.</strong> Get a jump on the next era of doing everything. Watch as

                            colleagues

                            drop in a photo or edit a document live…</p>

                    </td>

                </tr>

            </table>

        </div>

        <!-- Right Side -->

        <div class="right">

            <form action="#">

                <table>

                    <tr>

                        <td>Name

                            <br>

                            <input type="text" placeholder="First">

                        </td>

                        <td><br>

                            <input type="text" placeholder="Second">

                        </td>

                    </tr>

                    <tr>

                        <td colspan="2">

                            Choose Your Username

                            <br>

                            <input type="text" placeholder="enter user name">

                        </td>

                    </tr>

                    <tr>

                        <td colspan="2">

                            Create a Password

                            <br>

                            <input type="password" name="password">

                        </td>

                    </tr>

                    <tr>

                        <td colspan="2">

                            Confirm Your Password

                            <br>

                            <input type="password">

                        </td>

                    </tr>

                    <tr>

                        <td colspan="2">

                            Birthday

                            <br>

                            <input type="date">

                        </td>

                    </tr>

                    <tr>

                        <td colspan="2">

                            Gender

                            <br>

                            <select name="Gender" id="Gender">

                                <option value="none" selected>I am..</option>

                                <option value="Male">Male</option>

                                <option value="Woman">Woman</option>

                            </select>

                        </td>

                    </tr>

                    <tr>

                        <td colspan="2">

                            Mobile Phone

                            <br>

                            <input type="number" name="number" value="+91">

                        </td>

                    </tr>

                    <tr>

                        <td colspan="2">

                            Your current email address

                            <br>

                            <input type="email">

                        </td>

                    </tr>

                    <tr>

                        <td colspan="2">Prove You're not a robot

                            <br>

                            <input type="checkbox"> Skip this verification(Phone verification may be required)

                        </td>

                    </tr>

                    <tr>

                        <td colspan="2">

                            <table>

                                <tr>

                                    <td><img class="captcha"

                                            src="https://images.fastcompany.net/image/upload/w\_1280,f\_auto,q\_auto,fl\_lossy/fc/captcha-internet-translate.jpg"

                                            alt="captcha"></td>

                                    <td>

                                        <img class="captcha"

                                            src="https://th.bing.com/th/id/OIP.e-FmeUfoSRQZ-uuZKeMsOwHaCQ?rs=1&pid=ImgDetMain"

                                            alt="captcha">

                                    </td>

                                </tr>

                                <tr>

                                    <td>

                                        Type the two pieces of text

                                        <br>

                                        <input type="text">

                                    </td>

                                </tr>

                            </table>

                        </td>

                    </tr>

                    <tr>

                        <td colspan="2">

                            Location

                            <br>

                            <select name="Location" id="location">

                                <option value="none" selected>Choose your location</option>

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

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

                                <option value="UK">UK</option>

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

                            </select>

                        </td>

                    </tr>

                    <tr>

                        <td colspan="2">

                            <input type="checkbox"> I agree to the Google Terms of Service and Privacy Policy

                        </td>

                    </tr>

                    <tr>

                        <td colspan="2">

                            <input type="checkbox">

                            Google may use my account information to personalize +1's on content and ads on non-Google

                            websites. About personlization.

                        </td>

                    </tr>

                    <tr>

                        <td colspan="2" align="right" width="100%">

                            <input id="submit" type="submit" value="Next step">

                        </td>

                    </tr>

                </table>

            </form>

            <p>Learn more about why we ask for this information</p>

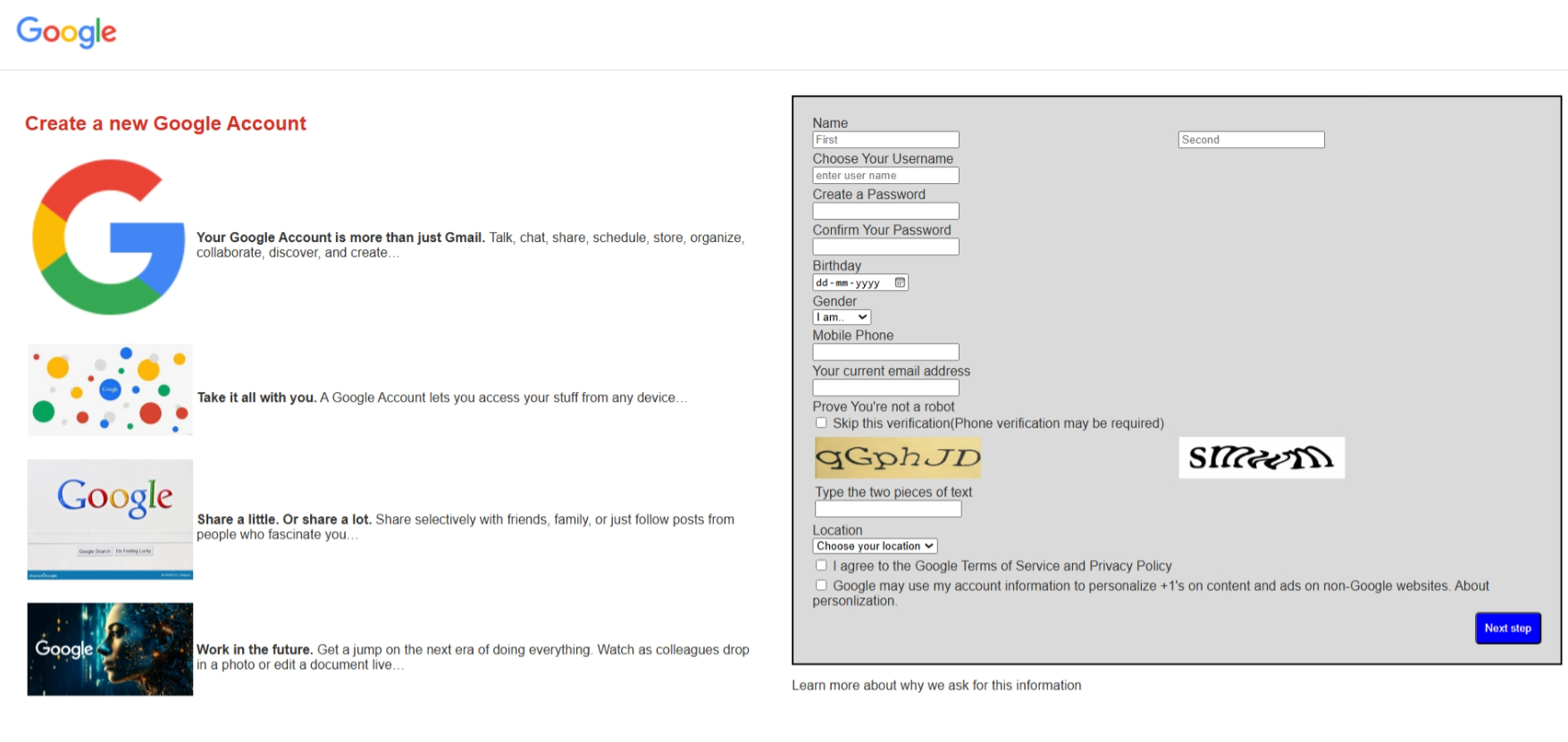
        </div>

    </div>

</body>

</html>

**OUTPUT:**

****

# Practical 7

Study and Implement JavaScript with function and procedure.

1. Write an HTML and JavaScript program which accepts N as input and displays first N Fibonacci numbers as list.

**CODE:**

<!DOCTYPE html>

<html lang="en">

<head>

    <meta charset="UTF-8">

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

    <title>Question-1</title>

</head>

<body>

    <p>Write an HTML and JavaScript program which accepts N as input and displays first N

        Fibonacci numbers as list.</p>

    Enter number N: <input type="number" id="number" name="number">

    <br>

    <br>

    <button id="button">get Fibonacci numbers</button>

    <p id="answare" style="font-size: larger;"></p>

    <script>

        function getFibonacci() {

            var answare = document.getElementById("answare");

            var number = document.getElementById("number").value;

            var n = Number(number);

            if (number === "") {

                answare.innerText = "enter number first"

                answare.style.color = "red"

            }

            else {

                var list = [0, 1];

                var first = list[0];

                var second = list[1];

                for (var i = 3; i <= n; i++) {

                    var next = first + second;

                    list.push(next);

                    first = second;

                    second = next;

                }

                answare.innerText = list;

                answare.style.color = "blue"

            }

        }

        var button = document.getElementById("button");

        button.onclick = function (e) {

            getFibonacci();

        }

    </script>

</body>

</html>

**OUTPUT:**

**A white background with black text

AI-generated content may be incorrect.**

2. Write a JavaScript, that uses function to calculate how many days are left in your birthday.

**CODE:**

<!DOCTYPE html>

<html lang="en">

<head>

  <meta charset="UTF-8">

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

  <title>Question-2</title>

</head>

<body>

  <p>Write a JavaScript, that uses function to calculate how many days are left in your birthday.</p>

  Enter Your Birthdate: <input type="date" id="date" name="date">

  <br>

  <br>

  <button id="button">Enter</button>

  <div id="answare"></div>

  <script>

    var date = document.getElementById("date")

    var answare = document.getElementById("answare")

    function getDays() {

      var birthdate = date.valueAsDate

      var nextbirthdate;

      var curruntDate = new Date;

      if (birthdate.getMonth() < curruntDate.getMonth()) {

        nextbirthdate = birthdate;

        nextbirthdate.setYear(curruntDate.getFullYear() + 1);

        console.dir(nextbirthdate);

      }

      else if (birthdate.getMonth() == curruntDate.getMonth() && birthdate.getDate() < curruntDate.getDate()) {

        nextbirthdate = birthdate;

        nextbirthdate.setYear(curruntDate.getFullYear() + 1);

        console.dir(nextbirthdate);

      }

      else {

        nextbirthdate = birthdate;

        nextbirthdate.setYear(curruntDate.getFullYear());

      }

      var time\_diffrence = nextbirthdate.getTime() - curruntDate.getTime()

      var days = Math.floor(time\_diffrence / (1000 \* 60 \* 60 \* 24));

      var hours = Math.floor((time\_diffrence / (1000 \* 60 \* 60 \* 24) - days) \* 24)

      var minits = Math.floor((((time\_diffrence / (1000 \* 60 \* 60 \* 24) - days) \* 24) - hours) \* 60);

      var second = Math.floor((((((time\_diffrence / (1000 \* 60 \* 60 \* 24) - days) \* 24) - hours) \* 60) - minits) \* 60);;

      if (days >= 0) {

        answare.innerHTML = `

        <h1>Your birtheday is in</h1>

        <h2> ${days} Days <br> ${hours} Hours <br> ${minits} Minits <br> ${second} Second </h2>

        `

      }

      else {

        answare.innerHTML = `

        <h1>Happy Birthday it's Your Day buddy</h1>

        `

        answare.style.color = "blue"

      }

    }

    document.getElementById("button").addEventListener("click", function () {

      answare.style.color = "black"

      if (date.value == "") {

        answare.innerText = " please enter yout birthdate";

        answare.style.color = "red";

        return

      }

      getDays()

      // getDays();

    })

  </script>

</body>

</html>

**OUTPUT:**

**A screenshot of a computer

AI-generated content may be incorrect.**

3. Write a JavaScript, that uses a loop, that searches a word in sentence held in an array, returning the index of word.

**CODE:**

<!DOCTYPE html>

<html lang="en">

<head>

    <meta charset="UTF-8">

    <title>Word Search in Sentence</title>

</head>

<body>

    <h2>Search a Word in a Sentence</h2>

    <p>Sentence: <strong id="sentenceDisplay"></strong></p>

    <label for="wordInput">Enter word to search:</label>

    <input type="text" id="wordInput" placeholder="Type word here">

    <button onclick="searchWord()">Search</button>

    <p id="result"></p>

    <script>

        // Sentence stored in array (split by words)

        const sentence = "JavaScript is a powerful scripting language".split(" ");

        // Display sentence on page

        document.getElementById("sentenceDisplay").textContent = sentence.join(" ");

        function searchWord() {

            const word = document.getElementById("wordInput").value.trim();

            let index = -1;

            // Loop through the array to search for the word

            for (let i = 0; i < sentence.length; i++) {

                if (sentence[i].toLowerCase() === word.toLowerCase()) {

                    index = i;

                    break;

                }

            }

            // Display result

            const resultText = index !== -1

                ? `The word "${word}" was found at index: ${index}`

                : `The word "${word}" was not found in the sentence.`;

            document.getElementById("result").textContent = resultText;

        }

    </script>

</body>

</html>

**OUTPUT:**

**A screenshot of a computer

AI-generated content may be incorrect.**

4. Write a JavaScript to print characters of a string at odd positions. (for example, for the string India, I, d and a should get printed).

**CODE:**

<!DOCTYPE html>

<html lang="en">

<head>

    <meta charset="UTF-8">

    <title>Odd Position Characters</title>

</head>

<body>

    <h2>Print Characters at Odd Positions</h2>

    <label for="inputString">Enter a string:</label>

    <input type="text" id="inputString" placeholder="Type here...">

    <button onclick="printOddCharacters()">Show Odd Position Characters</button>

    <p id="result"></p>

    <script>

        function printOddCharacters() {

            const str = document.getElementById("inputString").value;

            let result = "";

            for (let i = 0; i < str.length; i++) {

                if (i % 2 === 0) { // odd position (1-based), i.e., 0, 2, 4 in 0-based index

                    result += str[i] + " ";

                }

            }

            document.getElementById("result").textContent =

                "Characters at odd positions: " + result.trim();

        }

    </script>

</body>

</html>

**OUTPUT:**

**A screenshot of a computer

AI-generated content may be incorrect.**

5. Write a JavaScript to take 2 -digit number and then separate these 2 digits, then multiply first digit by itself for second digit times. (for example, 23 should be separated as 2 and 3. 2 should multiply with itself 3 times).

**CODE:**

<!DOCTYPE html>

<html lang="en">

<head>

    <meta charset="UTF-8">

    <title>Digit Power Calculator</title>

</head>

<body>

    <h2>Multiply First Digit by Itself (Second Digit Times)</h2>

    <label for="twoDigit">Enter a 2-digit number:</label>

    <input type="number" id="twoDigit" placeholder="e.g. 23" min="10" max="99">

    <button onclick="calculatePower()">Calculate</button>

    <p id="result"></p>

    <script>

        function calculatePower() {

            const input = document.getElementById("twoDigit").value;

            if (input.length !== 2) {

                document.getElementById("result").textContent = "Please enter a valid 2-digit number.";

                return;

            }

            const firstDigit = parseInt(input[0]);

            const secondDigit = parseInt(input[1]);

            const result = Math.pow(firstDigit, secondDigit);

            document.getElementById("result").textContent = `${firstDigit} raised to the power ${secondDigit} is: ${result}`;

        }

    </script>

</body>

</html>

**OUTPUT:**

**A screenshot of a computer

AI-generated content may be incorrect.**

6. Write a JavaScript that handles following mouse events. Add necessary elements. Show the use of event in following:

a. If the mouse is over the heading, heading should turn yellow and if the mouse goes out of the heading it should turn black.

b. If find time button is clicked show time and date information.

c. If button named “red” is clicked, background should change to red and If button named “green” is clicked, background should change to green.

**CODE:**

<!DOCTYPE html>

<html lang="en">

<head>

    <meta charset="UTF-8">

    <title>Mouse Events Example</title>

    <style>

        body {

            font-family: Arial, sans-serif;

            padding: 20px;

            transition: background-color 0.3s ease;

        }

        h1 {

            color: black;

            cursor: pointer;

        }

        button {

            margin: 10px 10px 10px 0;

            padding: 10px 15px;

            font-size: 16px;

        }

    </style>

</head>

<body>

    <h1 id="mainHeading">Hover over me!</h1>

    <button onclick="showTime()">Find Time</button>

    <button onclick="changeBackground('red')">Red</button>

    <button onclick="changeBackground('green')">Green</button>

    <p id="output"></p>

    <script>

        // Handle mouse over and mouse out for heading

        const heading = document.getElementById("mainHeading");

        heading.addEventListener("mouseover", () => {

            heading.style.color = "yellow";

        });

        heading.addEventListener("mouseout", () => {

            heading.style.color = "black";

        });

        // Show current time and date

        function showTime() {

            const now = new Date();

            document.getElementById("output").textContent =

                "Current Date & Time: " + now.toString();

        }

        // Change background color

        function changeBackground(color) {

            document.body.style.backgroundColor = color;

        }

    </script>

</body>

</html>

**OUTPUT:**

**A green screen with black text

AI-generated content may be incorrect.**

# Practical 8

Study and Implement PHP with variables, function, procedures and various operation.

1. Demonstrate the use of associative array in PHP.

**CODE:**

<?php

// Creating an associative array

$student = array(

    "name" => "Rahul",

    "age" => 21,

    "course" => "Computer Engineering",

    "city" => "Ahmedabad"

);

// Accessing values

echo "<h1>Student Details</h1>";

echo "Name: " . $student["name"] . "<br>";

echo "Age: " . $student["age"] . "<br>";

echo "Course: " . $student["course"] . "<br>";

echo "City: " . $student["city"] . "<br>";

// Looping through the array

echo "<h2>All details using foreach loop:</h2>";

foreach ($student as $key => $value) {

    echo ucfirst($key) . ": " . $value . "<br>";

}

?>

**OUTPUT:**

**A close up of a document

AI-generated content may be incorrect.**

2. Demonstrate the use of Session & Cookie in PHP.

**Session**

**CODE:**

<?php

// Start the session

session\_start();

// Set session variable

$\_SESSION["username"] = "Rahul";

echo "<h3>Session Example</h3>";

echo "Session variable 'username' is set to: " . $\_SESSION["username"];

?>

**OUTPUT:**

**A black text on a white background

AI-generated content may be incorrect.**

**Cookies**

**CODE:**

<?php

// Set a cookie named "user" with value "Gautam", expires in 1 hour

setcookie("user", "Jhon", time() + 3600, "/");

echo "<h3>Cookie Example</h3>";

// Check if cookie is set

if(isset($\_COOKIE["user"])) {

    echo "Cookie 'user' is set!<br>";

    echo "Value is: " . $\_COOKIE["user"];

} else {

    echo "Cookie 'user' is not set!";

}

?>

**OUTPUT:**

**A white background with black text

AI-generated content may be incorrect.**

3. Write a program to upload image file with size less than 2MB.

**CODE:**

<!DOCTYPE html>

<html>

<head>

    <title>Image Upload (Max 2MB)</title>

</head>

<body>

<h2>Upload Image (Max Size: 2MB)</h2>

<form action="" method="post" enctype="multipart/form-data">

    Select image to upload:

    <br><br>

    <input type="file" name="image">

    <br><br>

    <input type="submit" name="submit" value="Upload">

</form>

<?php

if (isset($\_POST['submit'])) {

    // Directory to save file

    $target\_dir = "./";

    // File details

    $target\_file = $target\_dir . basename($\_FILES["image"]["name"]);

    $file\_type = strtolower(pathinfo($target\_file, PATHINFO\_EXTENSION));

    $file\_size = $\_FILES["image"]["size"];

    $check = getimagesize($\_FILES["image"]["tmp\_name"]);

    // Validate if image

    if ($check === false) {

        echo "<p style='color:red;'>Error: File is not an image.</p>";

    } elseif ($file\_size > 2 \* 1024 \* 1024) {

        echo "<p style='color:red;'>Error: File is larger than 2MB.</p>";

    } elseif (!in\_array($file\_type, ["jpg", "jpeg", "png", "gif"])) {

        echo "<p style='color:red;'>Error: Only JPG, JPEG, PNG, GIF files are allowed.</p>";

    } else {

        if (move\_uploaded\_file($\_FILES["image"]["tmp\_name"], $target\_file)) {

            echo "<p style='color:green;'>Success: File uploaded.</p>";

            echo "<img src='$target\_file' width='200'>";

        } else {

            echo "<p style='color:red;'>Error: Failed to upload file.</p>";

        }

    }

}

?>

</body>

</html>

**OUTPUT:**

**A cube on a table

AI-generated content may be incorrect.**

4. Write PHP programs to

a. To print whether current year is leap year or not.

**CODE:**

<?php

$year = date("Y"); // Get current year

echo "Current Year: $year<br>";

if (($year % 4 == 0 && $year % 100 != 0) || ($year % 400 == 0)) {

    echo "$year is a Leap Year.";

} else {

    echo "$year is Not a Leap Year.";

}

?>

**OUTPUT:**

**A black text on a white background

AI-generated content may be incorrect.**

b. To print whether entered year is leap year or not.

**CODE:**

<!DOCTYPE html>

<html>

<body>

<h3>Check if Entered Year is a Leap Year</h3>

<form method="post">

    Enter Year: <input type="number" name="year">

    <input type="submit" value="Check">

</form>

<?php

if ($\_SERVER["REQUEST\_METHOD"] == "POST") {

    $year = $\_POST["year"];

    if (($year % 4 == 0 && $year % 100 != 0) || ($year % 400 == 0)) {

        echo "$year is a Leap Year.";

    } else {

        echo "$year is Not a Leap Year.";

    }

}

?>

</body>

</html>

**OUTPUT:**

**A close up of a message

AI-generated content may be incorrect.**

c. To print whether given number is odd or even.

**CODE:**

<!DOCTYPE html>

<html>

<body>

<h3>Check if Number is Odd or Even</h3>

<form method="post">

    Enter Number: <input type="number" name="num">

    <input type="submit" value="Check">

</form>

<?php

if ($\_SERVER["REQUEST\_METHOD"] == "POST") {

    $num = $\_POST["num"];

    if ($num % 2 == 0) {

        echo "$num is an Even Number.";

    } else {

        echo "$num is an Odd Number.";

    }

}

?>

</body>

</html>

**OUTPUT:**

**A white background with black text

AI-generated content may be incorrect.**

# Practical 9

Develop small Database application with PHP with insert, update, delete and search record from database.

1. Write module using php and html to insert, delete and show employee info: id,name, job title, year of experience in employee table and output the information in ascending order of its experience.

**CODE:**

<?php

// MySQL Connection

$host = "localhost";

$user = "root";

$pass = "";

$db = "gautam";

$conn = new mysqli($host, $user, $pass, $db);

// Check connection

if ($conn->connect\_error) {

    die("Connection failed: " . $conn->connect\_error);

}

// Insert Record

if (isset($\_POST['insert'])) {

    $id = $\_POST['id'];

    $name = $\_POST['name'];

    $job = $\_POST['job'];

    $exp = $\_POST['exp'];

    $sql = "INSERT INTO employee (id, name, job\_title, experience) VALUES ('$id', '$name', '$job', '$exp')";

    if ($conn->query($sql)) {

        echo "<p style='color:green;'>Employee inserted successfully!</p>";

    } else {

        echo "<p style='color:red;'>Error: " . $conn->error . "</p>";

    }

}

// Delete Record

if (isset($\_POST['delete'])) {

    $id = $\_POST['id'];

    $sql = "DELETE FROM employee WHERE id=$id";

    if ($conn->query($sql)) {

        echo "<p style='color:orange;'>Employee deleted successfully!</p>";

    } else {

        echo "<p style='color:red;'>Error: " . $conn->error . "</p>";

    }

}

?>

<!DOCTYPE html>

<html>

<head>

    <title>Employee Management</title>

</head>

<body>

<h2>Employee Record Management</h2>

<form method="post">

    <label>ID:</label><input type="number" name="id" required><br><br>

    <label>Name:</label><input type="text" name="name" required><br><br>

    <label>Job Title:</label><input type="text" name="job" required><br><br>

    <label>Experience (in years):</label><input type="number" name="exp" required><br><br>

    <input type="submit" name="insert" value="Insert">

    <input type="submit" name="delete" value="Delete by ID">

</form>

<hr>

<h3>All Employees (Sorted by Experience)</h3>

<table border="1" cellpadding="8">

    <tr>

        <th>ID</th>

        <th>Name</th>

        <th>Job Title</th>

        <th>Experience</th>

    </tr>

    <?php

    $result = $conn->query("SELECT \* FROM employee ORDER BY experience ASC");

    while ($row = $result->fetch\_assoc()) {

        echo "<tr>

                <td>{$row['id']}</td>

                <td>{$row['name']}</td>

                <td>{$row['job\_title']}</td>

                <td>{$row['experience']}</td>

              </tr>";

    }

    ?>

</table>

</body>

</html>

**OUTPUT:**

****

# Practical 10

Study and Implement AJAX, jQuery basic operation.

1. Write a program that retrieve the content from text file using Jquery & Ajax.

**CODE:**

<!DOCTYPE html>

<html>

<head>

    <title>Load File using jQuery AJAX</title>

    <script src="https://code.jquery.com/jquery-3.6.0.min.js"></script>

</head>

<body>

<h2>Load Text File Content</h2>

<button id="loadBtn">Load Content</button>

<p id="output" style="margin-top: 20px; font-weight: bold;"></p>

<script>

    $(document).ready(function(){

        $("#loadBtn").click(function(){

            $.ajax({

                url: "data.txt",

                success: function(result){

                    $("#output").html(result);

                },

                error: function(){

                    $("#output").html("Error loading file.");

                }

            });

        });

    });

</script>

</body>

</html>

**OUTPUT:**

**A white background with black text

AI-generated content may be incorrect.**

2. Write a program that validate entered username from PHP array using AJAX.

**CODE:**

**INDEX.HTML:**

<!DOCTYPE html>

<html>

<head>

    <title>Username Validation using AJAX</title>

    <script src="https://code.jquery.com/jquery-3.6.0.min.js"></script>

</head>

<body>

<h2>Check Username Availability</h2>

<label>Enter Username: </label>

<input type="text" id="username" />

<p id="status" style="font-weight: bold;"></p>

<script>

$(document).ready(function(){

    $("#username").on("keyup", function(){

        var username = $(this).val();

        if(username.length > 0){

            $.ajax({

                url: "validate.php",

                method: "POST",

                data: { username: username },

                success: function(response){

                    $("#status").html(response);

                }

            });

        } else {

            $("#status").html("");

        }

    });

});

</script>

</body>

</html>

**Validate.php**

<?php

// Predefined list of usernames

$users = ["gautam", "admin", "test", "john", "developer"];

// Get posted username

$username = strtolower(trim($\_POST['username']));

// Check if username exists in the array

if (in\_array($username, $users)) {

    echo "<span style='color: red;'>Username is already taken</span>";

} else {

    echo "<span style='color: green;'>Username is available</span>";

}

?>

**OUTPUT:**

A screen shot of a computer

AI-generated content may be incorrect.