GURU GOBIND SINGH INDRAPRASTHA UNIVERSITY

UNIVERSITY SCHOOL OF INFORMATION, COMMUNICATION & TECHNOLOGY

SECTOR-16C, DWARKA, NEW DELHI

PRACTICAL FILE
(IT - 664)

FRONT END DESIGN TECHNIQUES LAB

SUBMITTED TO	SUBMITTED BY
Mr. NITENDRA SINGH **(Research Scholar, USICT)**	**Mr. RAJ KHATRI** **MCA (Software Engineering)** Enrolment No.: **- 04316404523**

INDEX

Practical – 01

Aim: What is Frontend? Write a note on HTML, CSS and JavaScript

The Frontend of a website refers to the part users directly interact with, encompassing its visual elements, layout, and interactive functionality. It's the user interface (UI), the first impression that grabs attention and determines a website usability and accessibility. Think of it as the store front of a store, exciting customers and facilitating their browsing experience.

HTML

- HTML stands for Hyper Text Markup Language
- HTML is the standard markup language for creating Web pages
- HTML describes the structure of a Web page
- HTML consists of a series of elements
- HTML elements tell the browser how to display the content
- HTML elements label pieces of content such as "this is a heading", "this is a paragraph", "this is a link", etc.

An HTML element is defined by a start tag, some content, and an end tag:
<tag name> Content goes here... **</tag name>**

Example:

```
<!DOCTYPE html>
<html>
        <head>
                <title>Page Title</title>
        </head>
        <body>
                <h1>My First Heading</h1>
                <p>My first paragraph. </p>
        </body>
</html>
```

Example Explained

- The <!DOCTYPE html> declaration defines that this document is an HTML5 document
- The <html> element is the root element of an HTML page
- The <head> element contains meta information about the HTML page
- The <title> element specifies a title for the HTML page (which is shown in the browser's title bar or in the page's tab)
- The <body> element defines the document's body, and is a container for all the visible contents, such as headings, paragraphs, images, hyperlinks, tables, lists, etc.
- The <h1> element defines a large heading
- The <p> element defines a paragraph

HTML Headings

HTML headings are defined with the <h1> to <h6> tags.
<h1> defines the most important heading. <h6> defines the least important

Example

```
<h1>This is heading 1</h1>
<h2>This is heading 2</h2>
<h3>This is heading 3</h3>
```

HTML Paragraphs

HTML paragraphs are defined with the <p> tag.

Example

```
<p>This is a paragraph. </p>
<p>This is another paragraph. </p>
```

HTML Button

HTML buttons are created with the <button> tag.

Example

```
<button>Click me</button>
```

HTML Links

HTML links are defined with the <a> tag:

Example

```
<a href="https://www.usictipu.com">This is a link</a>
```

- The link's destination is specified in the href attribute.
- Attributes are used to provide additional information about HTML elements.
- You will learn more about attributes in a later chapter.

HTML Images

HTML images are defined with the <img> tag.

The source file (src), alternative text (alt), width, and height are provided as attributes:

Example

```
<img src="images/random.jpg" alt="image " width="164" height="142">
```

HTML List

HTML lists can be unordered (<ul>), ordered (<ol>), or definition lists (<dl>). Here's an example of an unordered list:

Example

```
<ul>
  <li>Item 1</li>
  <li>Item 2</li>
  <li>Item 3</li>
</ul>
```

CSS

- CSS stands for Cascading Style Sheets
- CSS describes how HTML elements are to be displayed on screen, paper, or in other media
- CSS saves a lot of work. It can control the layout of multiple web pages all at once
- External stylesheets are stored in CSS files

CSS Example

```
body {
  background-color: lightblue;
}
h1 {
  color: white;
  text-align: center;
}
p {
  font-family: verdana;
  font-size: 20px;
}
```

CSS Syntax

H1{color:blue; font-size:12px}

- The selector points to the HTML element you want to style.
- The declaration block contains one or more declarations separated by semicolons.
- Each declaration includes a CSS property name and a value, separated by a colon.
- Multiple CSS declarations are separated with semicolons, and declaration blocks are surrounded by curly braces.

Three Ways to Insert CSS

There are three ways of inserting a style sheet:

- External CSS
- Internal CSS
- Inline CSS

JAVASCRIPT

- JavaScript is a programming language that enables you to create dynamically updating content, control multimedia, animate images, and much more.
- JavaScript runs on the client side of the web, which enables interactions with the user and dynamic content.
- JavaScript is an essential part of web development, used to enhance user interfaces and add functionality to web pages.

JavaScript Comments

- Single-line comments start with `//` and are used for short comments.

Example

```
// This is a single-line comment
```

- Multi-line comments start with `/*` and end with `*/` and are used for longer comments.

Example

```
/* This is a
multi-line comment */
```

JavaScript Variables

- Variables are containers for storing data values.
- Use the `var`, `let`, or `const` keyword to declare variables.

Example

```
var x = 5; // Declaring a variable with the value of 5
var y = 6; // Declaring another variable with the value of 6
var z = x + y; // Adding x and y, and assigning the result to z
```

JavaScript Functions:

- Functions are blocks of code that perform a specific task.
- They are defined using the `function` keyword, followed by a name and parentheses containing parameters.

Example

```
function myFunction(p1, p2) { // Defining a function called myFunction with two parameters
  return p1 * p2; // Returning the product of p1 and p2
}
```

JavaScript Events:

- Events are actions that occur on web pages, such as when a user clicks a button.
- You can use JavaScript to respond to these events and perform actions.

Example

```
<button onclick="myFunction()">Click me</button>// Calling myFunction when the button is clicked
```

JavaScript Output:

- You can change the content of HTML elements using JavaScript with the innerHTML property.

Example

```
document.getElementById("demo").innerHTML = "Hello JavaScript!";
// Changing the content of an HTML element with the id "demo"
```

Practical – 02

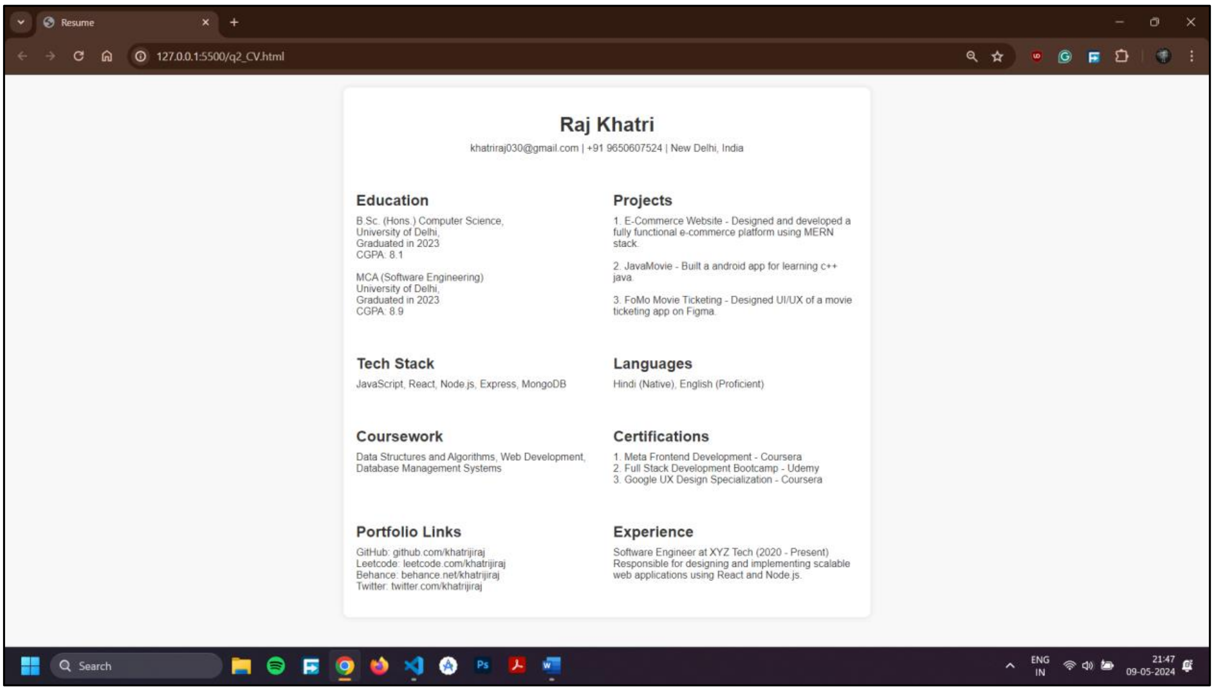
Aim - Using HTML Tags, design your own curriculum vitae

Program Code

```
<!DOCTYPE html>
<html lang="en">
  <head>
    <meta charset="UTF-8" />
    <meta http-equiv="X-UA-Compatible" content="IE=edge" />
    <meta name="viewport" content="width=device-width, initial-scale=1.0" />
    <title>Resume</title>
    <style>
      body {
        font-family: Arial, sans-serif;
        margin: 0;
        padding: 0;
        box-sizing: border-box;
        background-color: #f8f8f8; /* Light gray background color */
        background-size: cover;
        background-position: center;
        color: #333;
      }
      .container {
        max-width: 800px;
        margin: 20px auto;
        background-color: #fff; /* White background for content */
        padding: 20px;
        border-radius: 10px; /* Rounded corners */
        box-shadow: 0 0 10px rgba(0, 0, 0, 0.1); /* Shadow for depth */
        display: grid;
        grid-template-columns: 1fr 1fr;
        grid-gap: 20px;
      }
      .top {
        grid-column: span 2; /* Span across both columns */
        text-align: center;
        margin-bottom: 20px;
      }
      .top .heading1 {
        font-size: 32px;
        margin-bottom: 10px;
        color: #333;
      }
      .top .para {
        margin: 0;
        font-size: 16px;
      }
      .section {
        margin-bottom: 20px;
      }
      .section h2 {
        font-size: 24px;
        margin-bottom: 10px;
        color: #333;
      }
      .section p {
        margin: 0;
        font-size: 16px;
      }
      @media print {
        body {
          margin: 0;
          padding: 0;
          background-color: #fff;
          color: #333;
        }
        .container {
          max-width: 800px;
          margin: 20px auto;
          display: grid;
          grid-template-columns: 1fr 1fr;
          grid-gap: 20px;
        }
        .section {
          margin-bottom: 20px;
        }
        .section h2 {
          font-size: 24px;
          margin-bottom: 10px;
          color: #333;
        }
        .section p {
          margin: 0;
          font-size: 16px;
```

```
      }
    }
  </style>
</head>

<body>
  <div class="container">
    <div class="top">
      <h1 class="heading1">Raj Khatri</h1>
      <p class="para">
        khatriraj030@gmail.com | +91 9650607524 | New Delhi, India
      </p>
    </div>

    <div class="section">
      <h2>Education</h2>
      <p>
        B.Sc. (Hons.) Computer Science,<br />
        University of Delhi, <br />
        Graduated in 2023 <br />
        CGPA: 8.1
      </p>
      <br />
      <p>
        MCA (Software Engineering)<br />
        University of Delhi, <br />
        Graduated in 2023 <br />
        CGPA: 8.9
      </p>
    </div>

    <div class="section">
      <h2>Projects</h2>
      <p>
        1. E-Commerce Website - Designed and developed a fully functional
        e-commerce platform using MERN stack.
      </p>
      <br />
      <p>2. JavaMovie - Built a android app for learning c++ java.</p>
      <br />
      <p>
        3. FoMo Movie Ticketing - Designed UI/UX of a movie ticketing app on
        Figma.
        </p>
      </div>

      <div class="section">
        <h2>Tech Stack</h2>
        <p>JavaScript, React, Node.js, Express, MongoDB</p>
      </div>

      <div class="section">
        <h2>Languages</h2>
        <p>Hindi (Native), English (Proficient)</p>
      </div>

      <div class="section">
        <h2>Coursework</h2>
        <p>
          Data Structures and Algorithms, Web Development, Database Management Systems
        </p>
      </div>
      <div class="section">
        <h2>Certifications</h2>
        <p>1. Meta Frontend Development - Coursera</p>
        <p>2. Full Stack Development Bootcamp - Udemy</p>
        <p>3. Google UX Design Specialization - Coursera</p>
      </div>
      <div class="section">
        <h2>Portfolio Links</h2>
        <p>GitHub: github.com/khatrijiraj</p>
        <p>Leetcode: leetcode.com/khatrijiraj</p>
        <p>Behance: behance.net/khatrijiraj</p>
        <p>Twitter: twitter.com/khatrijiraj</p>
      </div>
      <div class="section">
        <h2>Experience</h2>
        <p>Software Engineer at XYZ Tech (2020 - Present)</p>
        <p>
          Responsible for designing and implementing scalable web applications
        </p>
      </div>
    </div>
  </body>
</html>
```

Output



Raj Khatri

khatriraj030@gmail.com | +91 9650607524 | New Delhi, India

Education

B.Sc. (Hons.) Computer Science,
University of Delhi,
Graduated in 2023
CGPA: 8.1

MCA (Software Engineering)
University of Delhi,
Graduated in 2023
CGPA: 8.9

Projects

1. E-Commerce Website - Designed and developed a fully functional e-commerce platform using MERN stack.

2. JavaMovie - Built a android app for learning c++ java.

3. FoMo Movie Ticketing - Designed UI/UX of a movie ticketing app on Figma.

Tech Stack

JavaScript, React, Node.js, Express, MongoDB

Languages

Hindi (Native), English (Proficient)

Coursework

Data Structures and Algorithms, Web Development, Database Management Systems

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Portfolio Links

GitHub: github.com/khatrijiraj
Leetcode: leetcode.com/khatrijiraj
Behance: behance.net/khatrijiraj
Twitter: twitter.com/khatrijiraj

Experience

Software Engineer at XYZ Tech (2020 - Present)
Responsible for designing and implementing scalable web applications using React and Node.js.

Practical - 03

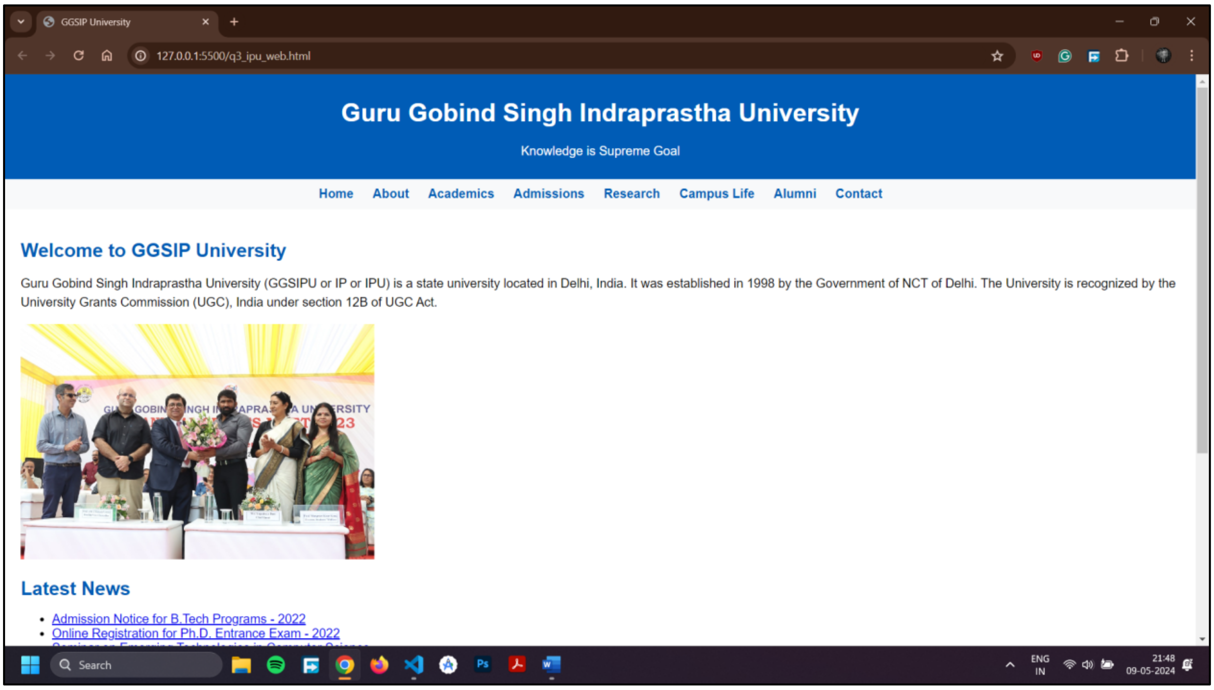
Aim: Using HTML Tags, redesign the home page of GGSIP university

Program Code

```
<!DOCTYPE html>
<html lang="en">
  <head>
    <meta charset="UTF-8" />
    <meta http-equiv="X-UA-Compatible" content="IE=edge" />
    <meta name="viewport" content="width=device-width, initial-scale=1.0" />
    <title>GGSIP University</title>
    <style>
      body {
        font-family: Arial, sans-serif;
        margin: 0;
        padding: 0;
        box-sizing: border-box;
      }
      header {
        background-color: #005cb6;
        color: #fff;
        padding: 10px 20px;
        text-align: center;
      }
      nav {
        background-color: #f8f9fa;
        padding: 10px 20px;
        text-align: center;
      }
      nav a {
        margin: 0 10px;
        color: #005cb6;
        text-decoration: none;
        font-weight: bold;
      }
      nav a:hover {
        text-decoration: underline;
      }
      main {
        padding: 20px;
      }
    footer {
      background-color: #005cb6;
      color: #fff;
      padding: 10px 20px;
      text-align: center;
    }
    .section {
      margin-bottom: 20px;
    }
    .section h2 {
      color: #005cb6;
      font-size: 24px;
      margin-bottom: 10px;
    }
    .section p {
      font-size: 16px;
      line-height: 1.5;
    }
    .section img {
      max-width: 100%;
      height: auto;
    }
  </style>
</head>
<body>
  <header>
    <h1>Guru Gobind Singh Indraprastha University</h1>
    <p>Knowledge is Supreme Goal</p>
  </header>
  <nav>
    <a href="#">Home</a>
    <a href="#">About</a>
    <a href="#">Academics</a>
    <a href="#">Admissions</a>
    <a href="#">Research</a>
    <a href="#">Campus Life</a>
    <a href="#">Alumni</a>
    <a href="#">Contact</a>
  </nav>
  <main>
    <section class="section">
      <h2>Welcome to GGSIP University</h2>
      <p>
```

```
          Guru Gobind Singh Indraprastha University (GGSIPU or IP or IPU) is a
          state university located in Delhi, India. It was established in 1998
          by the Government of NCT of Delhi. The University is recognized by the
          University Grants Commission (UGC), India under section 12B of UGC
        </p>
        <img
          style="height: 300px"
          src="http://ipu.ac.in/data0/images/1.jpg"
          alt="University Campus" />
      </section>
      <section class="section">
        <h2>Latest News</h2>
        <ul>
          <li><a href="#">Admission Notice for B.Tech Programs - 2022</a></li>
          <li>
            <a href="#">Online Registration for Ph.D. Entrance Exam - 2022</a>
          </li>
          <li>
            <a href="#">Seminar on Emerging Technologies in Computer </a>
          </li></ul>
      </section>
      <section class="section">
        <h2>Academic Programs</h2>
        <ul>
          <li>B.Tech in Computer Science</li>
          <li>BA (Hons) in Economics</li>
          <li>Master of Business Administration (MBA)</li>
          <li>Ph.D. in Biotechnology</li>
        </ul>
      </section>
      <section class="section">
        <h2>Events</h2>
        <ul>
          <li><a href="#">Tech Fest 2022 - Register Now!</a></li>
          <li><a href="#">Cultural Night - Celebrating Diversity</a></li>
        </ul>
      </section>
    </main>
    <footer>
      <p>&copy; 2022 GGSIP University. All rights reserved.</p>
    </footer>
  </body>
</html>
```

Output



Guru Gobind Singh Indraprastha University

Knowledge is Supreme Goal

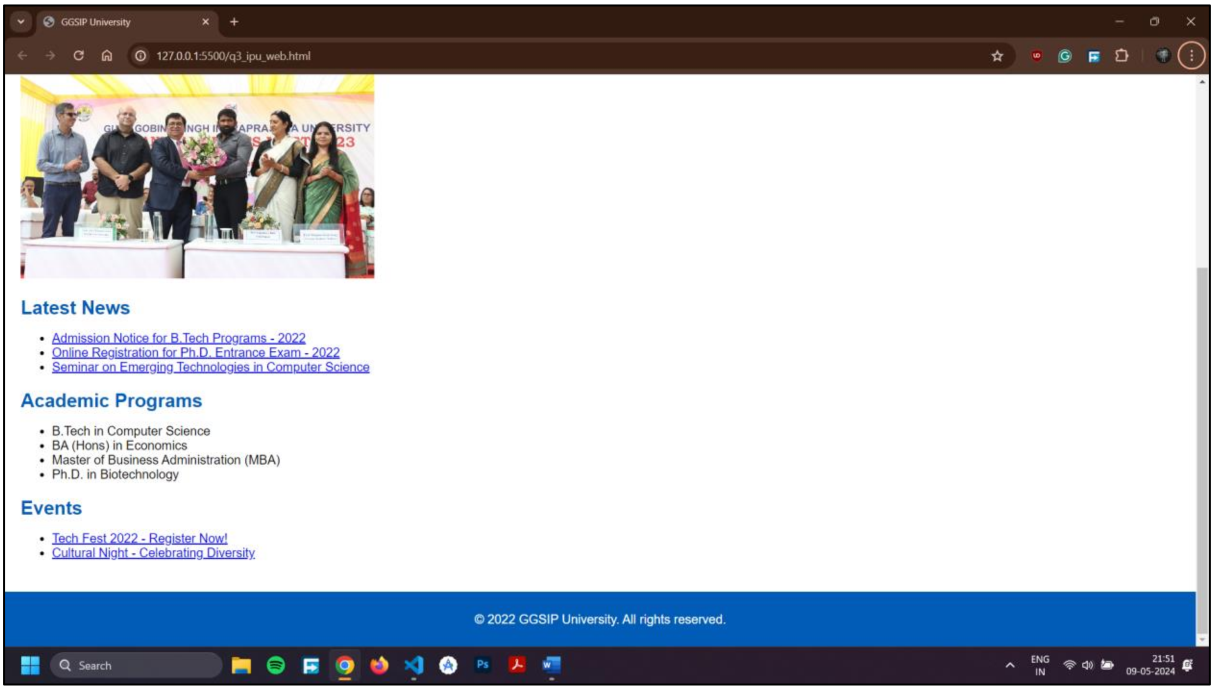
Home About Academics Admissions Research Campus Life Alumni Contact

Welcome to GGSIP University

Guru Gobind Singh Indraprastha University (GGSIPU or IP or IPU) is a state university located in Delhi, India. It was established in 1998 by the Government of NCT of Delhi. The University is recognized by the University Grants Commission (UGC), India under section 12B of UGC Act.

Latest News

- Admission Notice for B.Tech Programs - 2022
- Online Registration for Ph.D. Entrance Exam - 2022



Latest News

- Admission Notice for B.Tech Programs - 2022
- Online Registration for Ph.D. Entrance Exam - 2022
- Seminar on Emerging Technologies in Computer Science

Academic Programs

- B.Tech in Computer Science
- BA (Hons) in Economics
- Master of Business Administration (MBA)
- Ph.D. in Biotechnology

Events

- Tech Fest 2022 - Register Now!
- Cultural Night - Celebrating Diversity

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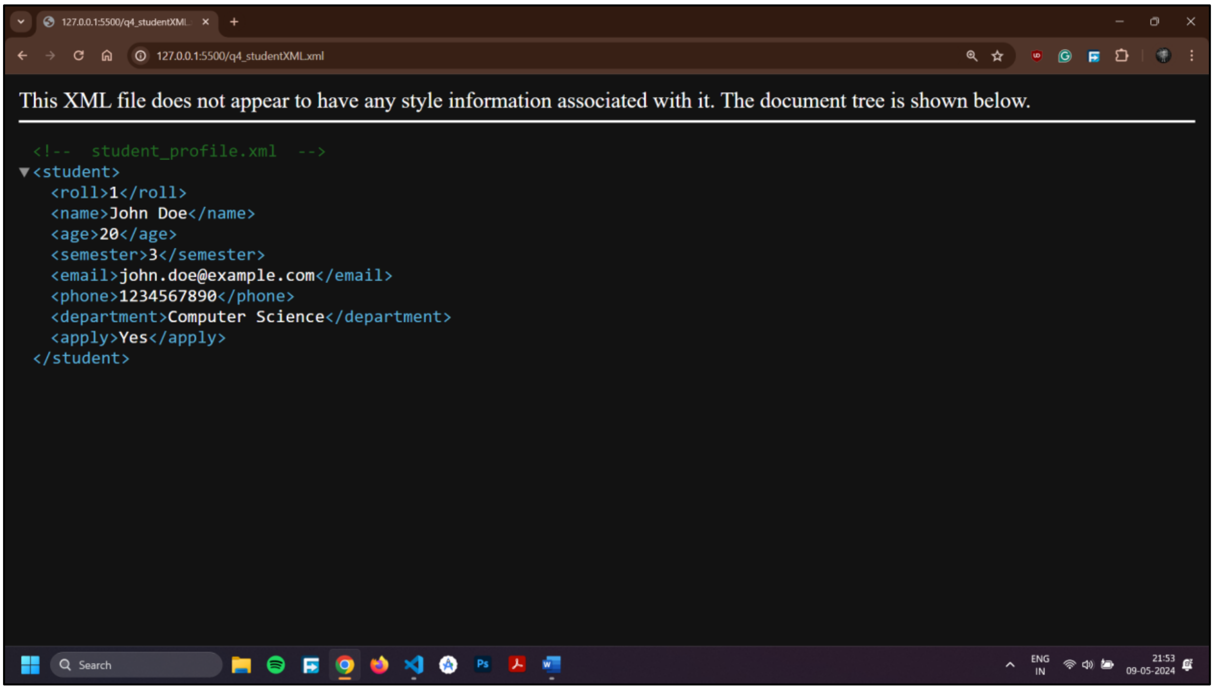
Practical - 04

Aim: Write an XML Program to display Student profile having age like student roll no., name age, semester, email id, phone number, department name, apply and validate using DTD

Program Code

```
<!-- student_profile.xml -->
<!DOCTYPE student [
   <!ELEMENT student (roll, name, age, semester, email, phone, department,
apply)>
   <!ELEMENT roll (#PCDATA)>
   <!ELEMENT name (#PCDATA)>
   <!ELEMENT age (#PCDATA)>
   <!ELEMENT semester (#PCDATA)>
   <!ELEMENT email (#PCDATA)>
   <!ELEMENT phone (#PCDATA)>
   <!ELEMENT department (#PCDATA)>
   <!ELEMENT apply (#PCDATA)>
]>

<student>
   <roll>1</roll>
   <name>John Doe</name>
   <age>20</age>
   <semester>3</semester>
   <email>john.doe@example.com</email>
   <phone>1234567890</phone>
   <department>Computer Science</department>
   <apply>Yes</apply>
</student>
```

Output



This XML file does not appear to have any style information associated with it. The document tree is shown below.

```
  <!--  student_profile.xml  -->
▼<student>
    <roll>1</roll>
    <name>John Doe</name>
    <age>20</age>
    <semester>3</semester>
    <email>john.doe@example.com</email>
    <phone>1234567890</phone>
    <department>Computer Science</department>
    <apply>Yes</apply>
  </student>
```

127.0.0.1:5500/q4_studentXML
127.0.0.1:5500/q4_studentXML.xml
Search
ENG
IN
21:53
09-05-2024

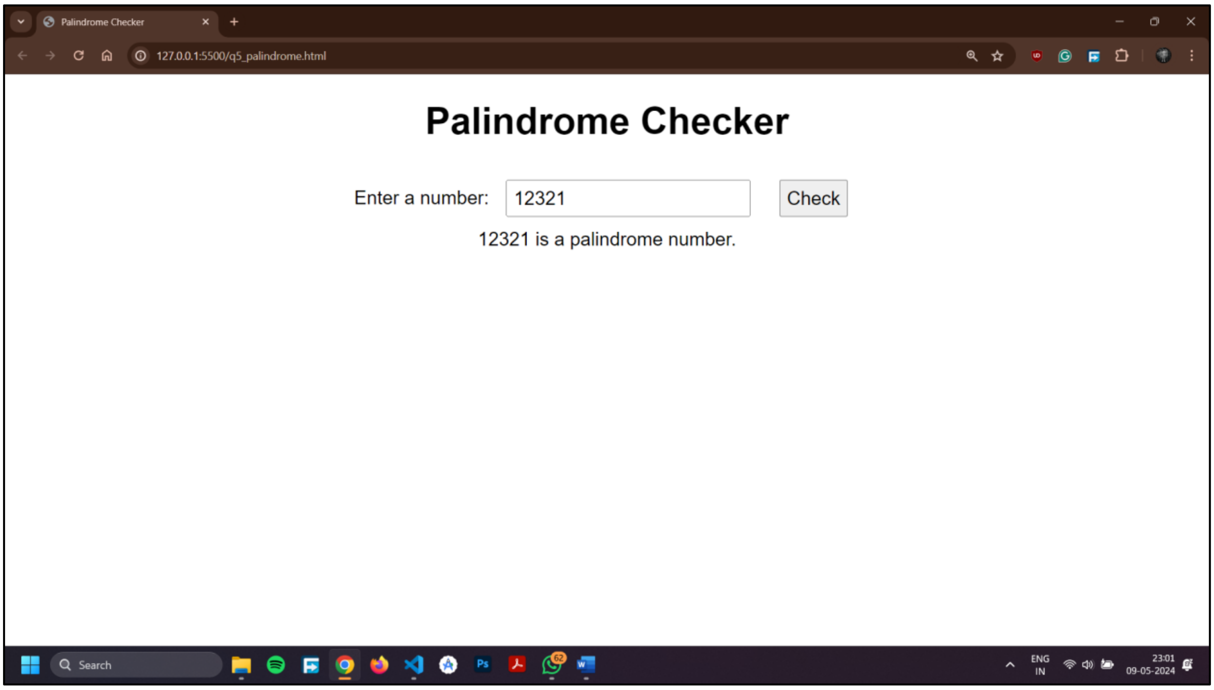
Practical - 05

Aim: Write a JavaScript Program to check whether an input number is palindrome number or not

Program Code

```
<!DOCTYPE html>
<html lang="en">
  <head>
    <meta charset="UTF-8" />
    <meta name="viewport" content="width=device-width, initial-scale=1.0" />
    <title>Palindrome Checker</title>
    <style>
      body {
        font-family: Arial, sans-serif;
        text-align: center;
      }
      input[type="text"],
      input[type="submit"] {
        margin: 10px;
        padding: 5px;
        font-size: 16px;
      }
    </style>
  </head>
  <body>
    <h1>Palindrome Checker</h1>
    <form id="palindromeForm">
      <label for="number">Enter a number:</label>
      <input type="text" id="number" name="number" />
      <input type="submit" value="Check" />
    </form>
    <div id="result"></div>

    <script>
      function isPalindrome(number) {
        const strNumber = String(number);
        const reversedNumber = strNumber.split("").reverse().join("");
        return strNumber === reversedNumber;
      }
      document.getElementById("palindromeForm")
        .addEventListener("submit", function (event) {
          event.preventDefault();
          const number = document.getElementById("number").value;
          if (!isNaN(number) && number !== "") {
            if (isPalindrome(number)) {
              document.getElementById(
                "result"
              ).innerText = `${number} is a palindrome number.`;
            } else {
              document.getElementById(
                "result"
              ).innerText = `${number} is not a palindrome number.`;
            }
          } else {
            document.getElementById("result").innerText =
              "Please enter a valid number.";
          }
        });
    </script>
  </body>
</html>
```

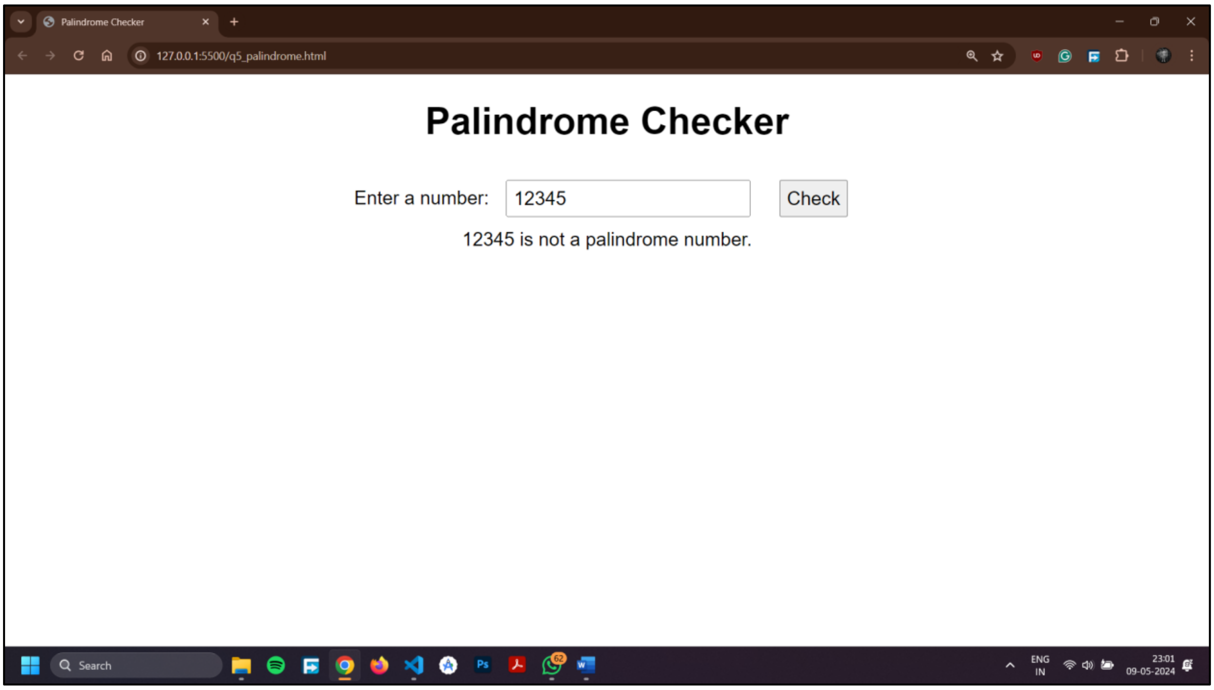
Output



Palindrome Checker

Enter a number: 12321 Check

12321 is a palindrome number.



Palindrome Checker

Enter a number: 12345 Check

12345 is not a palindrome number.

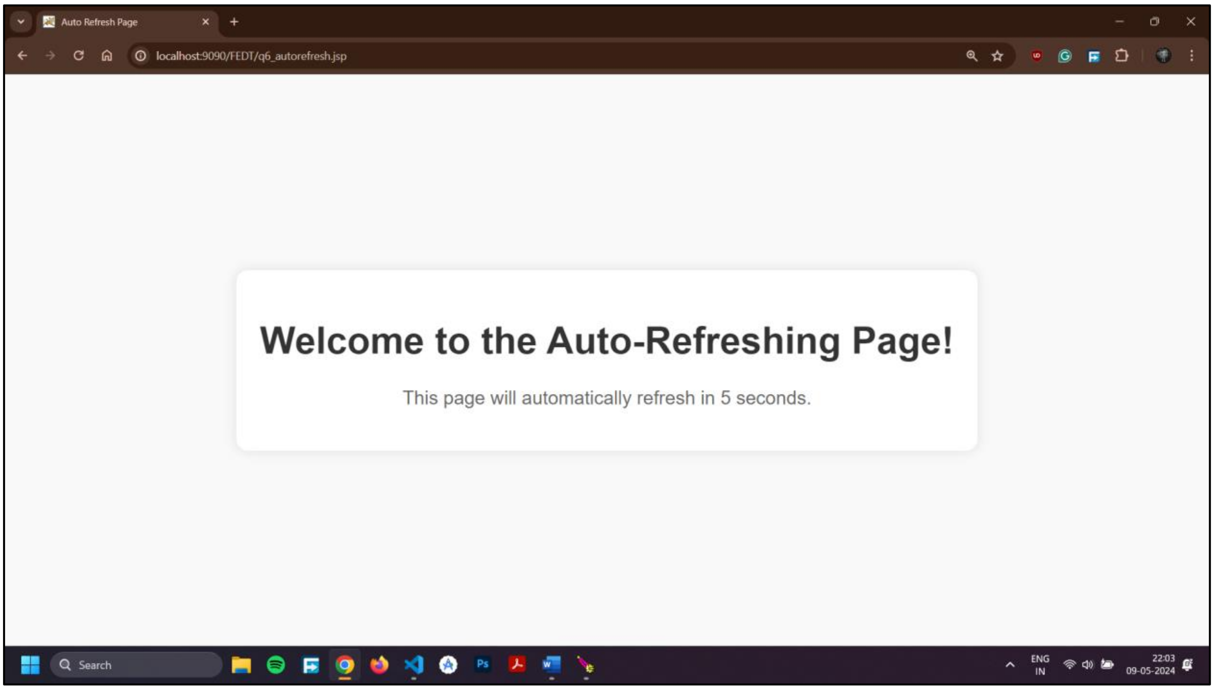
Practical – 06

Aim: Write a JSP Program to auto refresh a page.

Program Code

```
<!DOCTYPE html>
<html>
  <head>
    <meta charset="UTF-8">
    <meta http-equiv="refresh" content="5" />
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Auto Refresh Page</title>
    <style>
      body {
        font-family: Arial, sans-serif;
        background-color: #f9f9f9;
        margin: 0;
        padding: 0;
        display: flex;
        justify-content: center;
        align-items: center;
        height: 100vh;
      }

      .container {
        text-align: center;
        padding: 20px;
        border-radius: 10px;
        background-color: #fff;
        box-shadow: 0 0 10px rgba(0, 0, 0, 0.1);
      }

      h1 {
        color: #333;
      }

      p {
        color: #666;
      }

      .countdown {
        font-size: 2em;
        margin-top: 20px;
        color: #333;
      }
    </style>
    <script>
      let countdown = 5;
      setInterval(() => {
        countdown--;
        document.getElementById("countdown").innerText = countdown;
      }, 1000);
    </script>
  </head>
  <body>
    <div class="container">
      <h1>Welcome to the Auto-Refreshing Page!</h1>
      <p>
        This page will automatically refresh in
        <span id="countdown">5</span> seconds.
      </p>
    </div>
  </body>
</html>
```

Output



Welcome to the Auto-Refreshing Page!

This page will automatically refresh in 5 seconds.

Practical – 07

Aim: Write a JSP Program to upload file into server.

Program Code

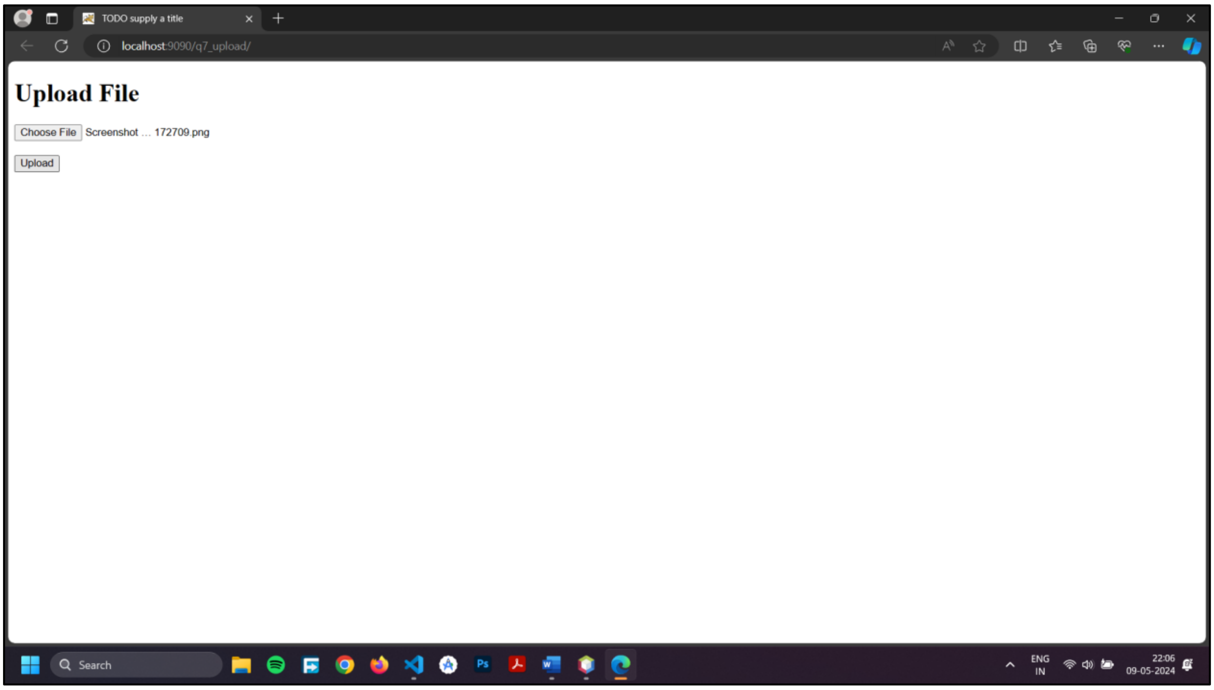
Index.html

```
<!DOCTYPE html>
<html>
    <head>
        <title>Upload File</title>
        <meta charset="UTF-8">
        <meta name="viewport" content="width=device-width, initial-scale=1.0">
    </head>
    <body>
        <h1>Upload File</h1>
        <form action="FileUploadServlet" method="post"
enctype="multipart/form-data">
            <input type="file" name="file" />
            <br/><br/>
            <input type="submit" value="Upload" />
        </form>
    </body>
</html>
```

FileUploadServlet.java

```
import java.io.File;
import java.io.IOException;
import java.io.PrintWriter;
import jakarta.servlet.ServletException;
import jakarta.servlet.annotation.MultipartConfig;
import jakarta.servlet.annotation.WebServlet;
import jakarta.servlet.http.HttpServlet;
import jakarta.servlet.http.HttpServletRequest;
import jakarta.servlet.http.HttpServletResponse;
import jakarta.servlet.http.Part;

@WebServlet("/FileUploadServlet")
@MultipartConfig(fileSizeThreshold = 1024 * 1024 * 2, // 2MB
        maxFileSize = 1024 * 1024 * 10, // 10MB
        maxRequestSize = 1024 * 1024 * 50)   // 50MB
public class FileUploadServlet extends HttpServlet {
    private static final String UPLOAD_DIR = "D:/Documents/USICT-
MCA/Semester-2-USICT-MCA/IT620 - Front End Design Techniques/IT664 -
Front End Design Techniques Lab/q7_upload/upload";

    protected void doPost(HttpServletRequest request, HttpServletResponse
response)
            throws ServletException, IOException {

        File uploadDir = new File(UPLOAD_DIR);
        if (!uploadDir.exists()) {
            uploadDir.mkdirs();
        }

        for (Part part : request.getParts()) {
            String fileName = extractFileName(part);
            part.write(uploadDir + File.separator + fileName);
        }

        PrintWriter out = response.getWriter();
        out.println("Files uploaded successfully!");
    }

    private String extractFileName(Part part) {
        String contentDisp = part.getHeader("content-disposition");
        String[] items = contentDisp.split(";");
        for (String s : items) {
            if (s.trim().startsWith("filename")) {
                return s.substring(s.indexOf("=") + 2, s.length() - 1);
            }
        }
        return "";
    }
}

}
```

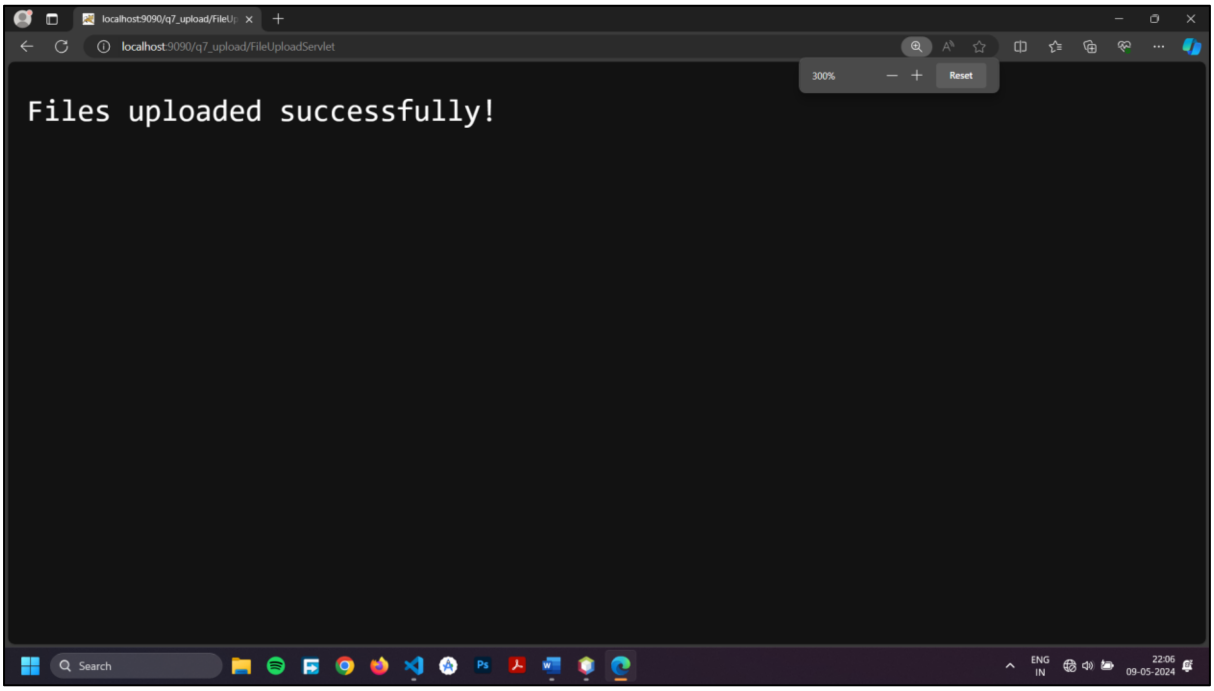
Output



Upload File

Choose File Screenshot ... 172709.png

Upload



localhost:9090/q7_upload/FileUp
localhost:9090/q7_upload/FileUploadServlet
300%
Reset
Search
ENG
IN
22:06
09-05-2024

```
Files uploaded successfully!
```

Practical – 08

Aim: Write a Generic Servlet program to display your own Enrolment number and Name using Apache Tomcat server.

Program Code

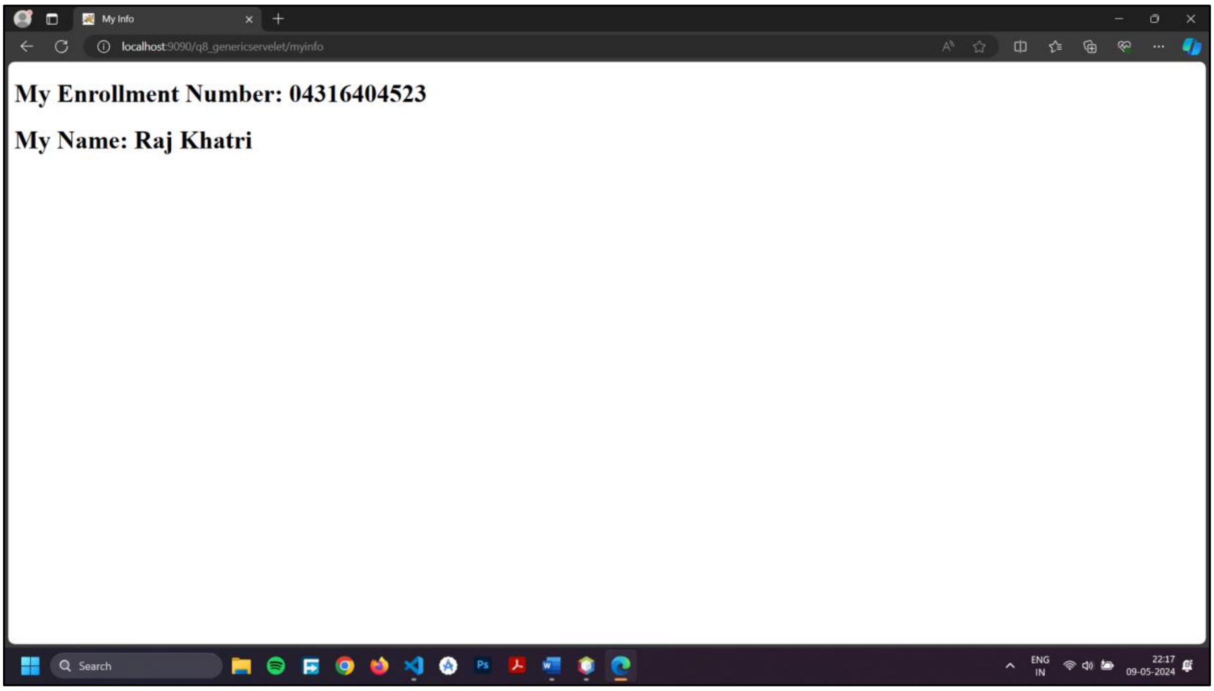
Myinfo.jsp

```
<!DOCTYPE html>
<html>
   <head>
      <title>My Info</title>
      <meta charset="UTF-8">
      <meta name="viewport" content="width=device-width, initial-scale=1.0">
   </head>
   <body>
      <h1>My Enrollment Number: ${enrollmentNumber}</h1>
      <h1>My Name: ${name}</h1>
   </body>
</html>
```

MyInfoServlet.java

```
import java.io.IOException;
import jakarta.servlet.ServletException;
import jakarta.servlet.annotation.WebServlet;
import jakarta.servlet.http.HttpServlet;
import jakarta.servlet.http.HttpServletRequest;
import jakarta.servlet.http.HttpServletResponse;
@WebServlet(name = "MyInfoServlet", urlPatterns = {"/myinfo"})
public class MyInfoServlet extends HttpServlet {
   @Override
   protected void doGet(HttpServletRequest request, HttpServletResponse
response)            throws ServletException, IOException {
      String enrollmentNumber = "04316404523";
      String name = "Raj Khatri";
      System.out.println("Setting attributes - Enrollment Number: " +
enrollmentNumber + ", Name: " + name);
      request.setAttribute("enrollmentNumber", enrollmentNumber);
      request.setAttribute("name", name);
      request.getRequestDispatcher("/myinfo.jsp").forward(request, response);
   }
}
```

Output



My Enrollment Number: 04316404523

My Name: Raj Khatri

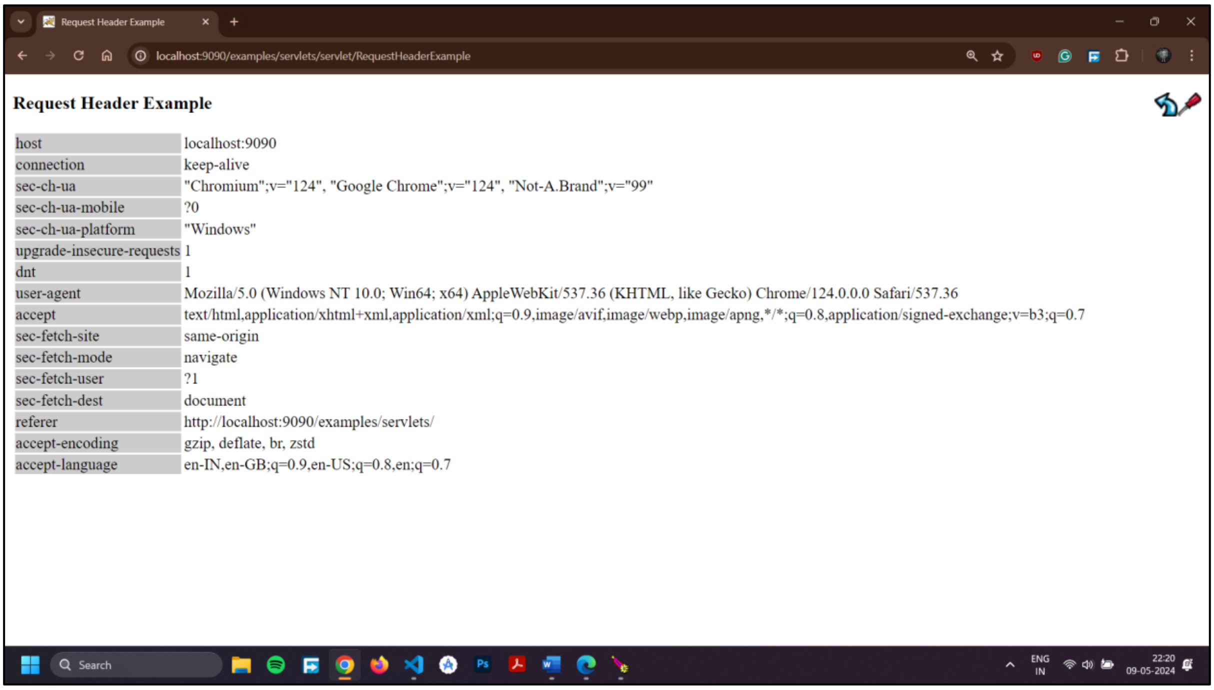
Practical – 09

Aim: Write a HTTP Servlet program to display all the HTTP Request Header parameters.

Program Code

```
import java.io.*;
import java.util.*;
import jakarta.servlet.*;
import jakarta.servlet.http.*;

public class RequestHeader extends HttpServlet {

   public void doGet(HttpServletRequest request, HttpServletResponse
response)
   throws IOException, ServletException
   {
      response.setContentType("text/html");
      PrintWriter out = response.getWriter();
      Enumeration e = request.getHeaderNames();
      while (e.hasMoreElements()) {
         String name = (String)e.nextElement();
         String value = request.getHeader(name);
         out.println(name + " = " + value);
      }
   }
}
```

Output


Request Header Example
localhost:9090/examples/servlets/servlet/RequestHeaderExample
Search
ENG
IN
22:20
09-05-2024

Request Header Example

host	localhost:9090
connection	keep-alive
sec-ch-ua	"Chromium";v="124", "Google Chrome";v="124", "Not-A.Brand";v="99"
sec-ch-ua-mobile	?0
sec-ch-ua-platform	"Windows"
upgrade-insecure-requests	1
dnt	1
user-agent	Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/124.0.0.0 Safari/537.36
accept	text/html,application/xhtml+xml,application/xml;q=0.9,image/avif,image/webp,image/apng,*/*;q=0.8,application/signed-exchange;v=b3;q=0.7
sec-fetch-site	same-origin
sec-fetch-mode	navigate
sec-fetch-user	?1
sec-fetch-dest	document
referer	http://localhost:9090/examples/servlets/
accept-encoding	gzip, deflate, br, zstd
accept-language	en-IN,en-GB;q=0.9,en-US;q=0.8,en;q=0.7

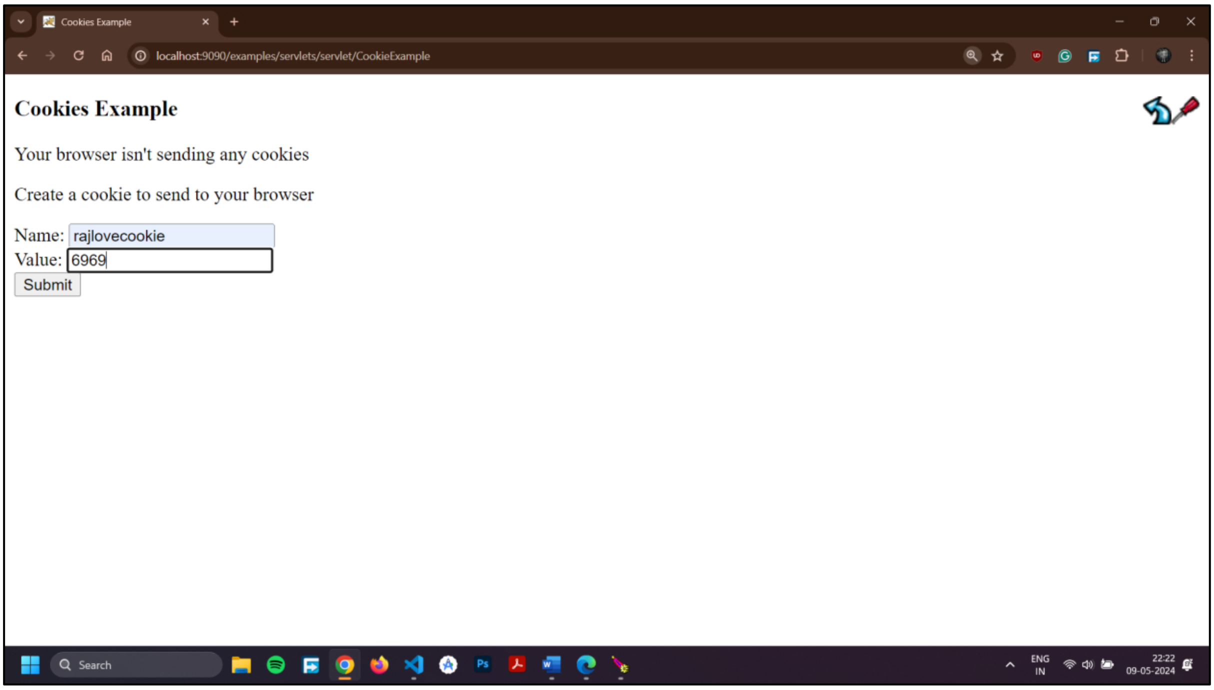
Practical – 10

Aim: Write a HTTP Servlet program to create a Cookie.

Program Code

```
import java.io.*;
import jakarta.servlet.*;
import jakarta.servlet.http.*;

public class CookieExample extends HttpServlet {

   public void doGet(HttpServletRequest request, HttpServletResponse
response)
   throws IOException, ServletException
   {
      response.setContentType("text/html");
      PrintWriter out = response.getWriter();

      // print out cookies

      Cookie[] cookies = request.getCookies();
      for (int i = 0; i < cookies.length; i++) {
         Cookie c = cookies[i];
         String name = c.getName();
         String value = c.getValue();
         out.println(name + " = " + value);
      }

      // set a cookie

      String name = request.getParameter("cookieName");
      if (name != null && name.length() > 0) {
         String value = request.getParameter("cookieValue");
         Cookie c = new Cookie(name, value);
         response.addCookie(c);
      }
   }
}
```

Output

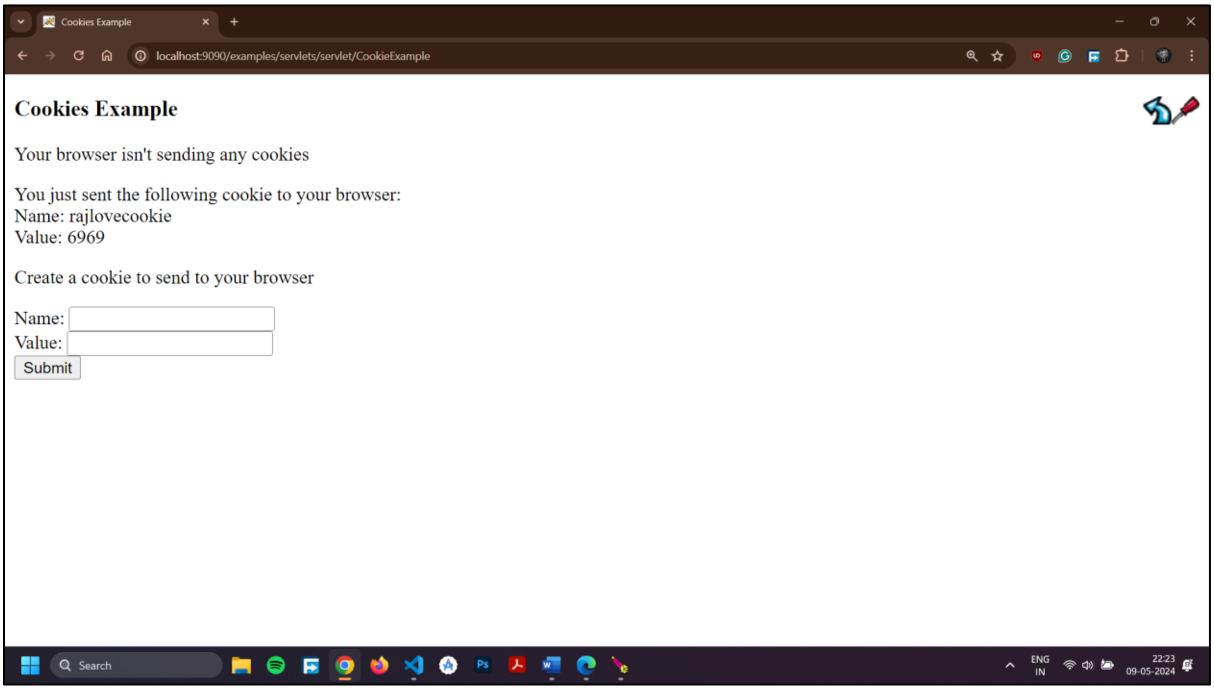


Cookies Example

Your browser isn't sending any cookies

Create a cookie to send to your browser

Name: rajlovecookie
Value: 6969
Submit



Cookies Example

Your browser isn't sending any cookies

You just sent the following cookie to your browser:
Name: rajlovecookie
Value: 6969

Create a cookie to send to your browser

Name:
Value:
Submit

Practical – 11

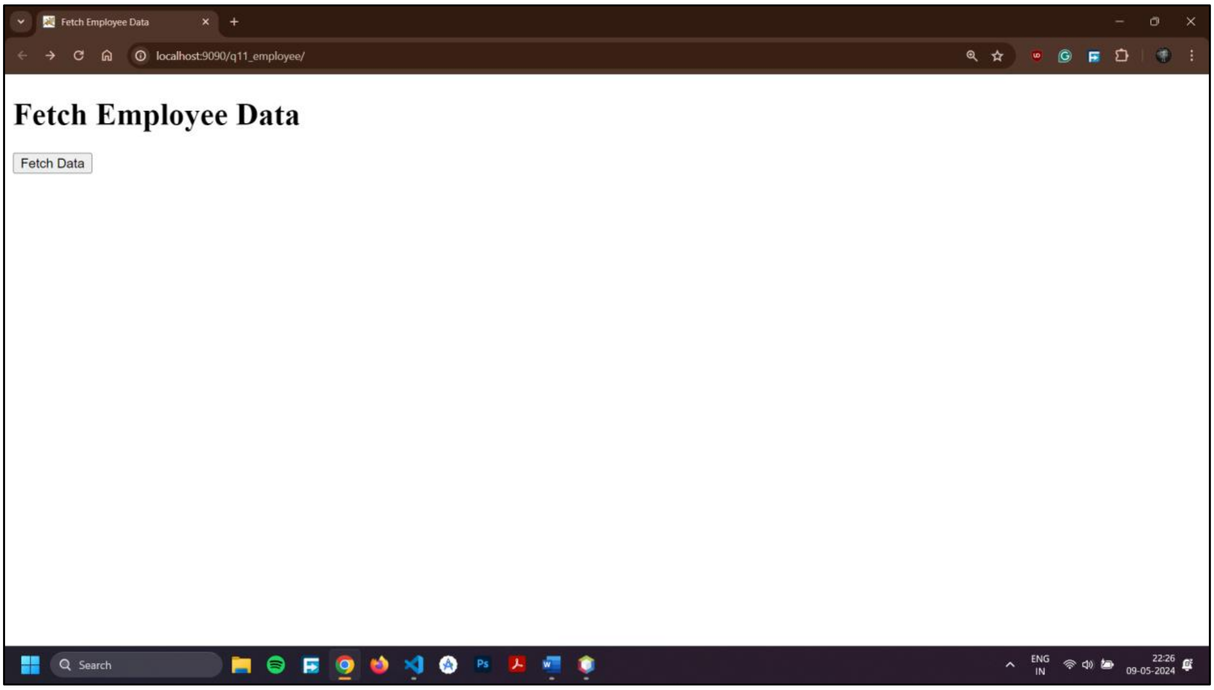
Aim: Write a JDBC Program to fetch the employees records from the Employee table designed in MS Access. The Table should have fields like : Employee ID, Name, DOB, Address, Department, DOJ, Position etc.

Program Code

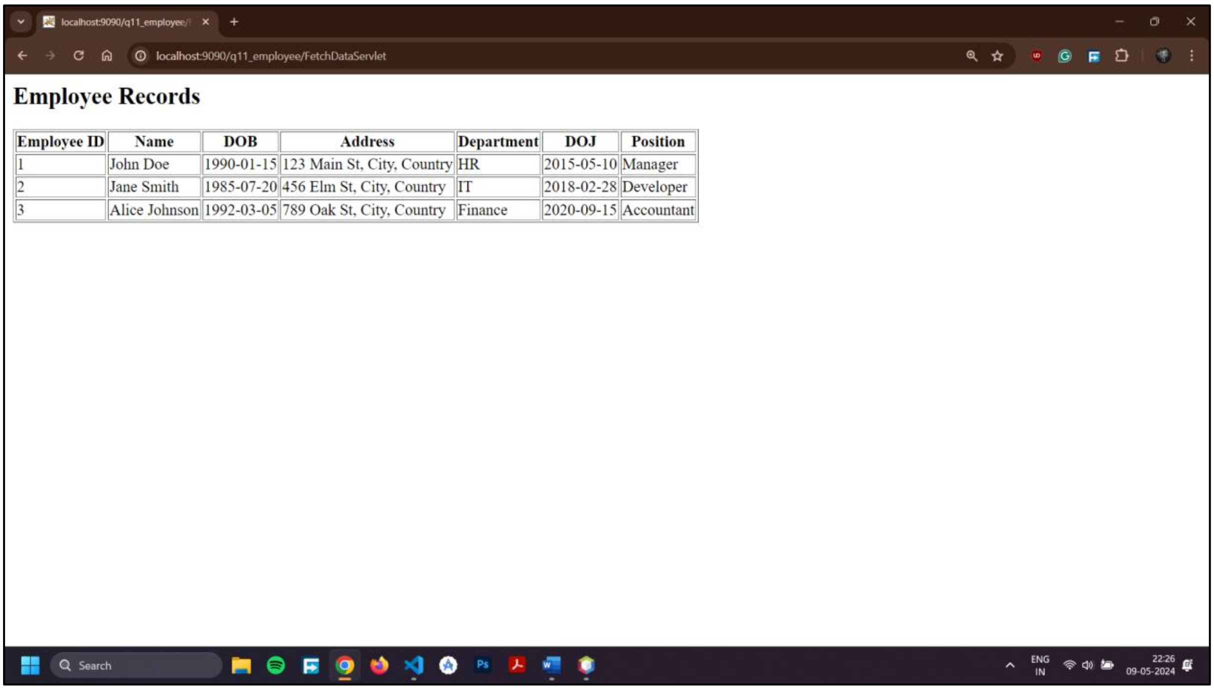
```
import java.io.IOException;
import java.io.PrintWriter;
import java.sql.Connection;
import java.sql.DriverManager;
import java.sql.ResultSet;
import java.sql.SQLException;
import java.sql.Statement;
import jakarta.servlet.ServletException;
import jakarta.servlet.annotation.WebServlet;
import jakarta.servlet.http.HttpServlet;
import jakarta.servlet.http.HttpServletRequest;
import jakarta.servlet.http.HttpServletResponse;

@WebServlet("/FetchDataServlet")
public class FetchDataServlet extends HttpServlet {

    private static final long serialVersionUID = 1L;

    @Override
    protected void doPost(HttpServletRequest request, HttpServletResponse
response)
            throws ServletException, IOException {
        response.setContentType("text/html");
        PrintWriter out = response.getWriter();

        try {
            Class.forName("com.mysql.cj.jdbc.Driver");
            try (Connection con =
DriverManager.getConnection("jdbc:mysql://localhost:3306/employee", "root",
"admin")) {
                Statement stmt = con.createStatement();
                ResultSet rs = stmt.executeQuery("SELECT EmployeeID,
EmployeeName, DOB, Address, Department, DOJ, Position FROM
employees");
```

```
            out.println("<html><body>");
            out.println("<h2>Employee Records</h2>");
            out.println("<table border='1'><tr><th>Employee
ID</th><th>Name</th><th>DOB</th><th>Address</th><th>Department</th>
<th>DOJ</th><th>Position</th></tr>");

            while (rs.next()) {
               out.println("<tr><td>" + rs.getInt("EmployeeID") + "</td><td>" +
rs.getString("EmployeeName") + "</td><td>" + rs.getString("DOB") +
"</td><td>" + rs.getString("Address") + "</td><td>" +
rs.getString("Department") + "</td><td>" + rs.getString("DOJ") + "</td><td>"
+ rs.getString("Position") + "</td></tr>");
            }

            out.println("</table>");
            out.println("</body></html>");
         }
      } catch (ClassNotFoundException | SQLException e) {
         out.println("Error: " + e.getMessage());
      }
   }
}
```

Output



Fetch Employee Data



localhost:9090/q11_employee/
localhost:9090/q11_employee/FetchDataServlet
Search
ENG
IN
22:26
09-05-2024

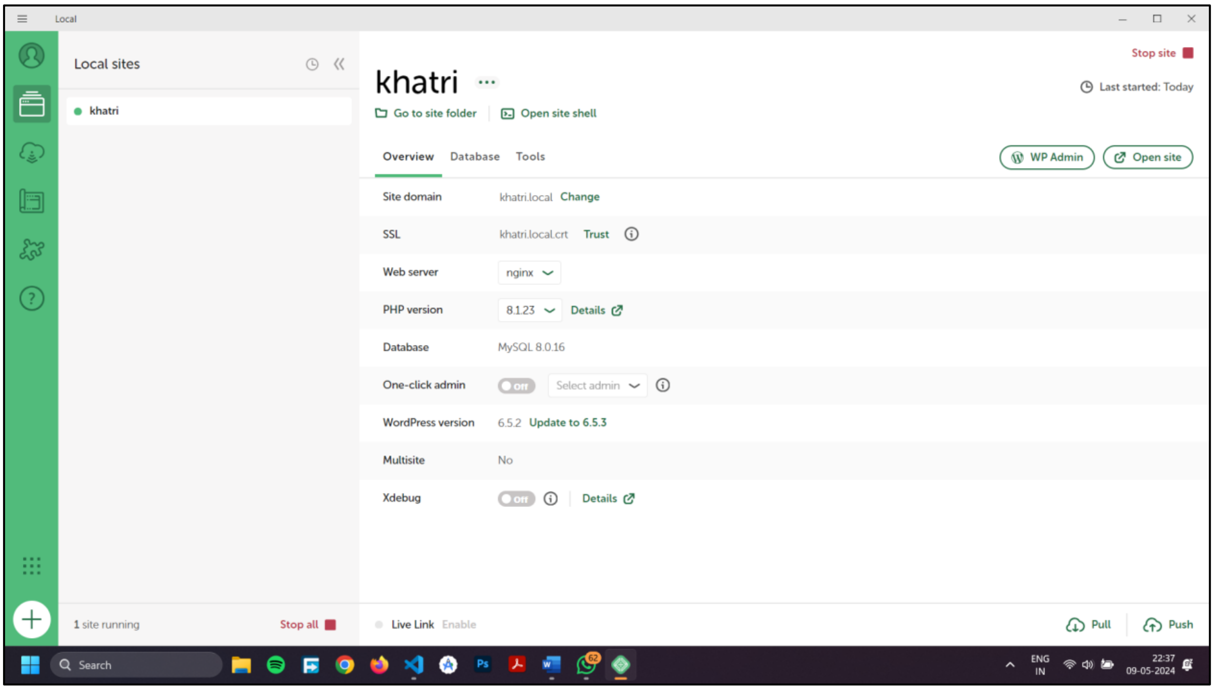
Employee Records

Employee ID	Name	DOB	Address	Department	DOJ	Position
1	John Doe	1990-01-15	123 Main St, City, Country	HR	2015-05-10	Manager
2	Jane Smith	1985-07-20	456 Elm St, City, Country	IT	2018-02-28	Developer
3	Alice Johnson	1992-03-05	789 Oak St, City, Country	Finance	2020-09-15	Accountant

Practical – 12

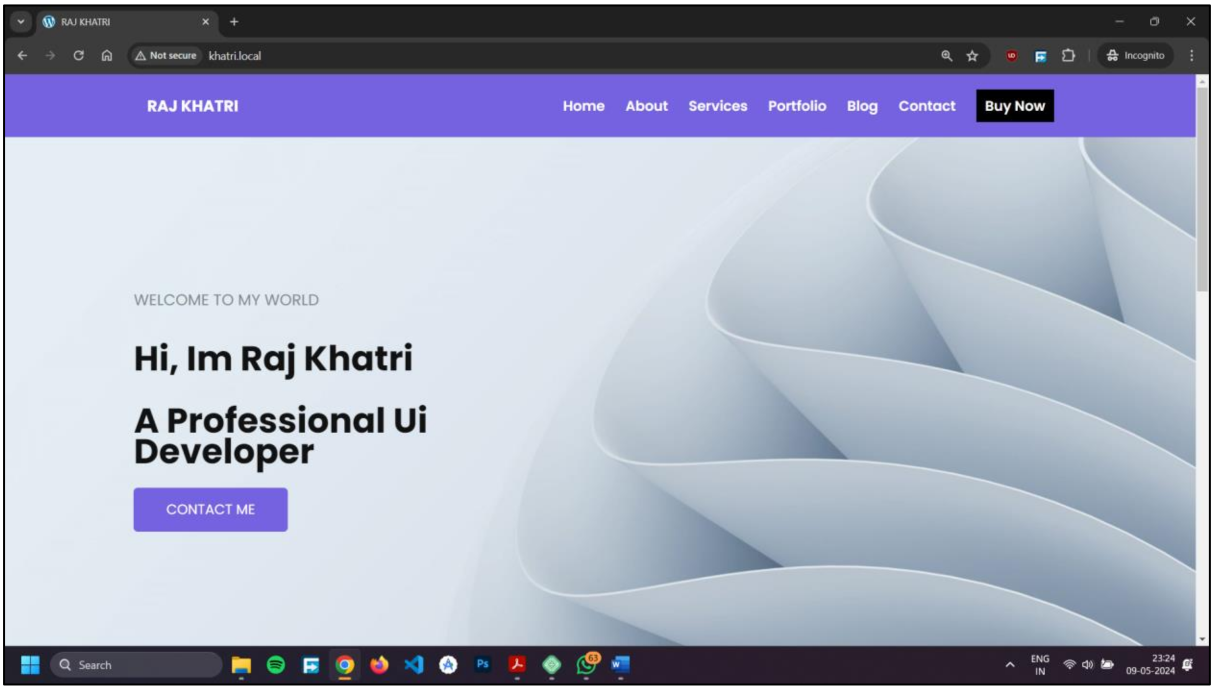
Aim: Create your portfolio website using LocalWP and Wordpress

LocalWP Dashboard



Site domain	khatri.local Change
SSL	khatri.local.crt Trust
Web server	nginx
PHP version	8.1.23 Details
Database	MySQL 8.0.16
One-click admin	Off Select admin
WordPress version	6.5.2 Update to 6.5.3
Multisite	No
Xdebug	Off Details

Output

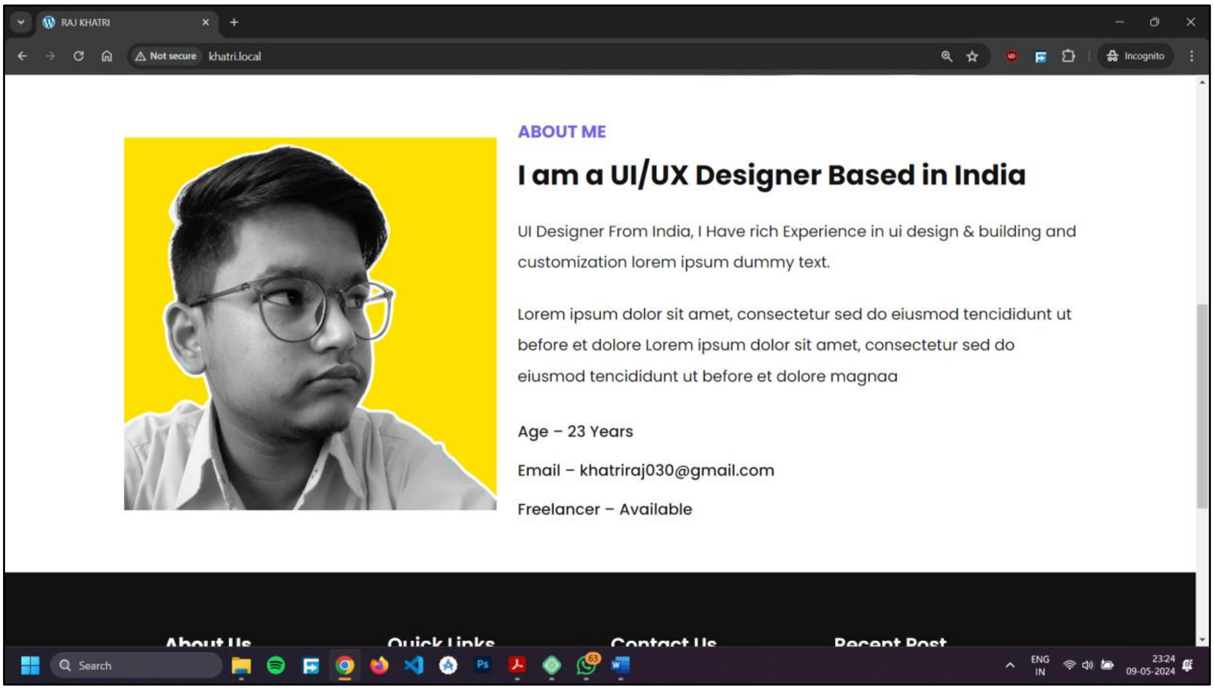


WELCOME TO MY WORLD

Hi, Im Raj Khatri

A Professional Ui Developer

CONTACT ME



ABOUT ME

I am a UI/UX Designer Based in India

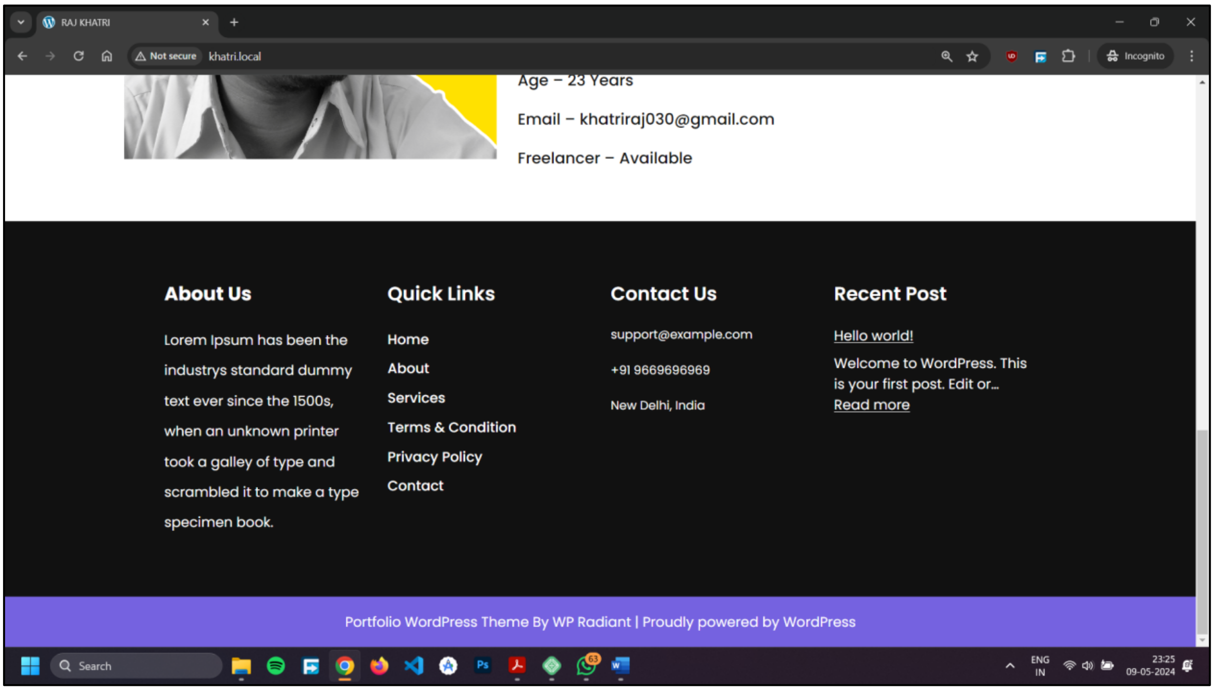
UI Designer From India, I Have rich Experience in ui design & building and customization lorem ipsum dummy text.

Lorem ipsum dolor sit amet, consectetur sed do eiusmod tencididunt ut before et dolore Lorem ipsum dolor sit amet, consectetur sed do eiusmod tencididunt ut before et dolore magnaa

Age – 23 Years

Email – khatriraj030@gmail.com

Freelancer – Available



Age – 23 Years

Email – khatriraj030@gmail.com

Freelancer – Available

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