AR Home Decorator

A

Human Computer Interface Course Project Report

in partial fulfilment of the degree

Bachelor of Technology
in
School of Computer Science & Artificial Intelligence

By

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SCHOOL OF COMPUTER SCIENCE & ARTIFICIAL INTELLIGENCE

CERTIFICATE

This is to certify that the **Object Oriented Programming through Java - Course Project** Report entitled **" AR Home Decorator "** is a record of bonafide work carried out by the student V.Ripunjayani,U. Sai vai kalpika bearing Roll No(s) 2303A51706, 2303A51961 during the academic year 2024-2025 in partial fulfillment of the award of the degree of *Bachelor of Technology* in **School of CS & AI** by the SR University, Ananthasagar, Hanamkonda. [Times New Roman-12] [Line spacing 2.0]

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ABSTRACT

The "AR Home Decorator" project aims to revolutionize the furniture shopping experience by integrating augmented reality (AR) technology. Users can select furniture items, view them in a 3D format, and rotate them 365° to visualize how they would fit in their space. This interactive platform not only enhances user engagement but also allows for personalized color and model selections, streamlining the decision-making process before purchase. By leveraging AR, the project addresses common challenges in interior design, making it easier for users to visualize and customize their home environments effectively.

OBJECTIVE

The "AR Home Decorator" project aims to enhance the furniture shopping experience by leveraging augmented reality (AR) technology, allowing users to visualize furniture in their actual living spaces before making a purchase. The primary objectives include enabling users to customize their selections by choosing colors and models that reflect their personal style, as well as providing an interactive platform where they can engage with 3D models of furniture, rotating and resizing them to better understand how they fit within their environment. Additionally, the project seeks to promote cost efficiency by reducing the need for physical shopping trips and minimizing the risk of purchasing unsuitable items. Ultimately, the goal is to create an intuitive user interface that encourages exploration and experimentation with various design elements, making the process enjoyable and effective.

EXISTING SYSTEM:

The existing system of a AR Home Decorator website typically includes the following components and features:

Website Interface: The platform features a user-friendly interface that allows easy navigation through various functionalities, including a catalog of furniture and decor options.

User Registration and Login: Users can create accounts to save their preferences, designs, and shopping history, ensuring a personalized experience.

Color and Model Selection: The application provides options for users to select different colors and models of furniture, facilitating customization to match their personal style.

Viewing 3D Images: Users can view 3D images of selected furniture items, allowing them to rotate and interact with the models to visualize how they will look in their space before making a purchase.

PROPOSED SYSTEM:

The proposed system for the "AR Home Decorator" project aims to create a comprehensive, cross-platform augmented reality application that enhances the furniture shopping experience. Key features include:

Room Replication: Users can replicate their rooms in AR with accurate dimensions, allowing for precise placement of furniture and decor items.

3D Visualization: The application enables users to view and interact with 3D models of furniture, including rotating and resizing items to visualize how they fit in their space.

Customization Options: Users can select colors and models of furniture, facilitating personalized design choices that reflect their individual tastes.

User-Friendly Interface: The platform will feature an intuitive interface for easy navigation, enabling users to explore various functionalities seamlessly.

User Registration and Profiles: Users can create accounts to save preferences, designs, and shopping history, enhancing personalization.

Integration with E-commerce: The app will provide links to purchase selected items directly, streamlining the buying process.

Collaboration Features: Users can share their designs with friends or family for feedback, fostering a collaborative design experience.

SOFTWARE REQUIREMENTS:

TECHNICAL REQUIREMENTS:

- ➢ HTML
- ➢ CSS
- ➢ JAVASCRIPT

HARDWARE REQUIREMENTS:

Mobile Devices: Android devices compatible with ARCore, typically requiring at least Android 7.0 (Nougat) or higher.

Camera: High-resolution camera for capturing real-world environments.

Storage: Sufficient internal storage to handle application data and 3D models, ideally a minimum of 64GB.

RAM: At least 4GB of RAM for smooth operation and rendering of AR content.

ELEMENTS USED IN PROJECT:

User Interface Design: A visually appealing and intuitive interface that enhances user interaction and navigation throughout the application.

User Registration and Authentication: Secure user registration and login functionalities that allow users to create accounts, save preferences, and access their personalized settings.

Furniture Catalog: A comprehensive database of furniture items, including detailed descriptions, images, and specifications for easy browsing.

Color and Model Selection: Features that enable users to customize their furniture choices by selecting different colors and models according to their preferences.

3D Visualization Engine: A robust engine that renders realistic 3D models of furniture, allowing users to view, rotate, and interact with items in augmented reality.

Room Measurement Tools: Tools that assist users in accurately measuring their spaces to ensure proper fit for selected furniture.

E-commerce Integration: A seamless connection to e-commerce platforms for direct purchasing options, enabling users to buy selected items easily.

Feedback and Review System: A mechanism for users to provide feedback on furniture items and share reviews, enhancing community engagement.

IMPLIMENTATION:

CODE:

Home Page

```html
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>AR Home Decorator</title>
    <link rel="icon" href="favicon.ico" type="image/x-icon"> <!-- Add favicon -->
    <style>
        body {
            font-family: 'Arial', sans-serif;
            margin: 0;
            padding: 0;
            background-color: #f4f4f4;
            display: flex;
            flex-direction: column;
            min-height: 100vh;
        }

        header {
            background-color: #FFB7C5;
            color: white;
            padding: 20px;
            text-align: center;
        }

        .logo {
            max-width: 150px;
        }

        nav {
            margin-top: 10px;
        }

        nav ul {
            list-style-type: none;
            padding: 0;
            display: flex;
            justify-content: center;
            align-items: center;
        }

        nav ul li {
            margin-right: 20px;
        }

        nav ul li a {
            color: white;
            text-decoration: none;
            font-weight: bold;
        }

        .search-container {
            display: flex;
            align-items: center;
            margin-right: 20px;
        }

        .search-container input[type="text"] {
            padding: 10px;
            width: 200px; /* Search bar width */
            border-radius: 20px; /* Rounded corners */
            border: 1px solid #ccc; /* Border style */
        }

        .search-container button {
            padding: 10px 15px;
            background-color: #FFB5C0; /* Light Pink for buttons */
            color: white; /* Button text color */
            border: none;
            border-radius: 5px; /* Rounded corners */
            cursor: pointer; /* Pointer cursor on hover */
        }

        .search-container button:hover {
            background-color: #FF8DA1;
        }

        main {
            padding: 20px;
```

```
        flex-grow: 1;
    }

    footer {
        background-color: #FFB7C5;
        color: white;
        text-align: center;
        padding: 10px 0;
    }

    .footer-text {
        font-size: 14px;
    }

    .header-title {
        font-size: 36px;
        color: black;
    }

    .try-free-button {
        display: inline-block; /* Make it behave like a button */
        margin-top: 20px; /* Space above the button */
        padding: 10px 20px; /* Button padding */
        background-color: #FF9EB3; /* Light Pink for button */
        color: white; /* Button text color */
        border-radius: 5px; /* Rounded corners */
        text-decoration: none; /* Remove underline from link */
        font-size: 16px; /* Font size */
    }

    .try-free-button:hover {
        background-color: #FF8DA1; /* Darker shade of pink for hover effect */
    }

    @media (max-width: 600px) {
     nav ul {
        flex-direction: column; /* Stack items on small screens */
     }
     nav ul li {
        margin-bottom: 10px; /* Space between items */
     }
     .search-container input[type="text"] {
        width:auto ; /* Allow search bar to resize */
     }
    }
    </style>
</head>
<body>
    <header>
        <img src="your-logo-url.png" alt="AR Home Decorator Logo" class="logo">
        <h1 class="header-title">AR Home Decorator</h1>
        <nav>
            <ul>
                <li><a href="C:\Users\ripun\Desktop\hci\project1.html">Home</a></li>
                <li><a href="C:\Users\ripun\Desktop\hci\progectcreatepage.html">Create</a></li>
                <li><a href="C:\Users\ripun\Desktop\hci\projectaboutus.html">About Us</a></li>
                <li><a href="C:\Users\ripun\Desktop\hci\projectcontactuspage.html">Contact Us</a></li>

                <!-- Search Bar -->
                <li class="search-container">
                   <form action="/search" method="GET"> <!-- Add form action -->
                      <input type="text" placeholder="Search designs and furniture..." aria-label="Search designs and furniture">
                      <button type="submit">Search</button>
                   </form>
                </li>

                <li><a href="C:\Users\ripun\Desktop\hci\projectloginpage.html">Login</a></li>
                <!-- Add more links as needed -->
            </ul>
        </nav>
    </header>

    <main>
        <h2>Welcome to AR Home Decorator!</h2>
        <p>Explore our collection of home decor and furniture designs.</p>

        <!-- Try for Free Button as an Anchor Tag -->
        <a href="C:\Users\ripun\Desktop\hci\progectcreatepage.html" class="try-free-button">Try for Free</a>

    </main>

    <footer>
        <p class="footer-text">&copy; 2024 AR Home Decorator. All rights reserved.</p> <!-- Copyright text -->
    </footer>
</body>
</html>
```

Create Page

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Create - AR Home Decorator</title>
    <link rel="icon" href="favicon.ico" type="image/x-icon">
    <style>
        body {
            font-family: 'Arial', sans-serif;
            margin: 0;
            padding: 0;
            background-color: #f4f4f4;
            display: flex;
            flex-direction: column;
            min-height: 100vh;
        }

        header {
            background-color: #FFB7C5; /* Light Cherry Pink */
            color: white;
            padding: 20px;
            text-align: center;
        }

        nav {
            margin-top: 10px;
        }

        nav ul {
            list-style-type: none;
            padding: 0;
            display: flex;
            justify-content: center;
            align-items: center;
        }

        nav ul li {
            margin-right: 20px;
        }

        nav ul li a {
            color: white; /* Link color */
            text-decoration: none; /* Remove underline */
            font-weight: bold; /* Bold links */
        }

        main {
            padding: 20px;
            flex-grow: 1;
            display: flex; /* Flexbox for layout */
            flex-direction: column; /* Stack elements vertically */
            align-items: center; /* Center items */
        }

        .create-section {
            width: 100%;
            max-width: 800px; /* Max width for content */
            background-color: #FFFFFF; /* White background for the create section */
            padding: 20px; /* Padding around content */
            border-radius: 10px; /* Rounded corners */
            box-shadow: 0 2px 10px rgba(0, 0, 0, 0.1); /* Subtle shadow */
        }

        h2 {
            text-align: center; /* Center the heading */
        }

        .form-group {
            margin-bottom: 15px; /* Space between form groups */
        }

        label {
            display: block; /* Block display for labels */
            margin-bottom: 5px; /* Space below labels */
        }

        select,
        input[type="color"],
        button {
            width: 100%; /* Full width inputs */
            padding: 10px; /* Padding inside inputs */
            border-radius: 5px; /* Rounded corners */
            border: 1px solid #ccc; /* Border style */
        }
```

```css
    button {
        background-color: #FF9EB3; /* Light Pink for buttons */
        color: white; /* Button text color */
        cursor: pointer; /* Pointer cursor on hover */
    }

    button:hover {
        background-color: #FF8DA1; /* Darker shade of pink for hover effect */
    }

    .preview-area {
        margin-top: 20px; /* Space above the preview area */
        padding: 20px;
        border-radius: 10px;
        border: 1px dashed #FFB7C5; /* Dashed border for preview area */
        text-align: center; /* Centered text in preview area */
    }

    model-viewer {
        width: 100%;
        height: 400px; /* Height of the model viewer */
        margin-top: 20px;
        border-radius: 10px;
    }

    footer {
        background-color :#FFB7C5 ;
        color:white ;
        text-align:center ;
        padding :10 px ;
    }

    .footer-text{
        font-size :14 px ;
    }

  </style>
</head>
<body>
  <header>
     <h1>AR Home Decorator</h1>
  </header>

  <main>
     <div class="create-section">
        <h2>Create Your Design</h2>

        <!-- Furniture Selection -->
        <div class="form-group">
           <label for="furniture">Select Furniture:</label>
           <select id="furniture" onchange="loadModel()">
              <option value="">Choose an option</option>
              <option value="sofa">Sofa</option>
              <option value="chair">Chair</option>
              <option value="table">Table</option>
           </select>
        </div>

        <!-- Color Selection -->
        <div class="form-group">
           <label for="color">Select Colour:</label>
           <input type="color" id="color" value="#ffb7c5"> <!-- Default color -->
        </div>

        <!-- Style Selection -->
        <div class="form-group">
           <label for="style">Select Style:</label>
           <select id="style">
              <option value="">Choose an option</option>
              <option value="modern">Modern</option>
              <option value="classic">Classic</option>
              <option value="rustic">Rustic</option>
           </select>
        </div>

        <!-- Create Button -->
        <button onclick="createDesign()">Create Design</button>

        <!-- Preview Area -->
        <div class="preview-area" id="previewArea">
           Preview your design here!
        </div>

        <!-- Model Viewer Area -->
        <model-viewer id="modelViewer" alt="3D model of furniture" camera-controls auto-rotate></model-viewer>

     </div>
  </main>
```

```
    <footer>
      <p class="footer-text">&copy; 2024 AR Home Decorator. All rights reserved.</p>
    </footer>

    <!-- Include Model Viewer Library -->
    <script type="module" src="https://unpkg.com/@google/model-viewer/dist/model-viewer.min.js"></script>

    <!-- JavaScript Functionality -->
    <script>
        function loadModel() {
            const furniture = document.getElementById('furniture').value;
            const modelViewer = document.getElementById('modelViewer');

            let modelPath = '';

            if (furniture === "sofa") {
              modelPath = 'path/to/sofa.glb'; // Replace with actual path to your sofa model
            } else if (furniture === "chair") {
              modelPath = 'path/to/chair.glb'; // Replace with actual path to your chair model
            } else if (furniture === "table") {
              modelPath = 'path/to/table.glb'; // Replace with actual path to your table model
            } else {
              return; // Exit if no valid furniture is selected
            }

            // Set the src attribute of the model-viewer to load the selected model
            modelViewer.setAttribute('src', modelPath);
        }

      function createDesign() {
          const furniture = document.getElementById('furniture').value;
          const color = document.getElementById('color').value;
          const style = document.getElementById('style').value;

          const previewArea = document.getElementById('previewArea');

          if (furniture && style) {
            previewArea.innerHTML = `
                You have selected a ${style} ${furniture} with color ${color}.`;

              // Change the color of the model if applicable (you might need to adjust this based on your model)
              const modelViewer = document.getElementById('modelViewer');
              // Note that changing the material color dynamically may require additional handling based on how your GLB is set up.

          } else {
              previewArea.innerHTML = "Please select both furniture and style.";
          }
      }
    </script>

</body>
</html>
```

About us Page

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>About Us - AR Home Decorator</title>
    <link rel="icon" href="favicon.ico" type="image/x-icon"> <!-- Add favicon -->
    <style>
        body {
            font-family:'Arial', sans-serif;
            margin: 0;
            padding: 0;
            background-color: #f4f4f4; /* Light background color */
            display: flex; /* Flexbox layout */
            flex-direction: column; /* Stack elements vertically */
            min-height: 100vh; /* Full height */
        }

        header {
            background-color: #FFB7C5; /* Light Cherry Pink */
            color: white;
            padding: 20px;
            text-align: center;
        }

        nav { margin-top: 10px; }

        nav ul { list-style-type: none; padding: 0; display: flex; justify-content: center; align-items: center; }

        nav ul li {
            margin-right: 20px; /* Space between buttons */
```

```
            margin-left: 10px;  /* Additional space on left */
        }

        nav ul li a { color: white; text-decoration: none; font-weight: bold; }

        main { padding: 20px; flex-grow: 1; display: flex; flex-direction: column; align-items: center; }

        .about-section { width: 100%; max-width: 800px; background-color:#FFFFFF; padding: 20px; border-radius: 10px; box-shadow: 0 2px 10px
rgba(0,0,0,0.1); }

        h2 { text-align:center; }

        p { line-height :1.6 ; }

        footer { background-color:#FFB7C5 ; color:white ; text-align:center ; padding :10 px ; }

        .footer-text { font-size :14 px ; }
    </style>
 </head>

<body>

<header>
    <h1>AR Home Decorator</h1>
    <nav>
        <ul>
            <li><a href="C:\Users\ripun\Desktop\hci\project1.html">Home</a></li>
            <li><a href="C:\Users\ripun\Desktop\hci\progectcreatepage.html">Create</a></li>
            <li><a href="C:\Users\ripun\Desktop\hci\projectaboutus.html">About Us</a></li>
            <li><a href="C:\Users\ripun\Desktop\hci\projectcontactuspage.html">Contact Us</a></li>
            <li><a href="C:\Users\ripun\Desktop\hci\projectloginpage.html">Login</a></li>
        </ul>
    </nav>
 </header>

<main>
    <div class ="about-section">
        <h2>About Us</h2>
        <p>Welcome to AR Home Decorator! We are dedicated to transforming your living space with innovative augmented reality technology.</p>

        <p>Our mission is to empower homeowners and designers alike to visualize their ideas in real-time, making the process of selecting furniture and decor
easier and more enjoyable.</p>

        <p>With our AR Home Decorator app, you can:</p>

        <ul>
            <li>Explore a wide range of furniture options.</li>
            <li>Visualize how different pieces will look in your home.</li>
            <li>Experiment with colors and styles before making a purchase.</li>
            <li>Share your designs with friends and family for feedback.</li>
        </ul>

        <p>At AR Home Decorator, we believe that your home should reflect your unique style. Our team of passionate designers and tech enthusiasts is
committed to providing you with the best tools to create your dream space.</p>

        <p>Thank you for choosing AR Home Decorator. We look forward to helping you bring your vision to life!</p>
    </div>
 </main >

<footer >
    <p class ="footer-text">&copy;2024 AR Home Decorator. All rights reserved.</p >
 </footer >
</body>
</html>
```

Contact us Page

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Contact Us - AR Home Decorator</title>
    <link rel="icon" href="favicon.ico" type="image/x-icon"> <!-- Add favicon -->
    <style>
        body {
            font-family: 'Arial', sans-serif;
            margin: 0;
            padding: 0;
            background-color: #f4f4f4; /* Light background color */
            display: flex;
            flex-direction: column;
            min-height: 100vh; /* Full height */
        }

        header {
            background-color: #FFB7C5; /* Light Cherry Pink */
            color: white;
```

```css
        padding: 20px;
        text-align: center;
    }

    nav {
        margin-top: 10px;
    }

    nav ul {
        list-style-type: none;
        padding: 0;
        display: flex;
        justify-content: center;
        align-items: center;
    }

    nav ul li {
        margin-right: 20px;
    }

    nav ul li a {
        color: white; /* Link color */
        text-decoration: none; /* Remove underline */
        font-weight: bold; /* Bold links */
    }

    main {
        padding: 20px;
        flex-grow: 1;
        display: flex; /* Flexbox for layout */
        flex-direction: column; /* Stack elements vertically */
        align-items: center; /* Center items */
    }

    .contact-section {
        width: 100%;
        max-width: 800px; /* Max width for content */
        background-color: #FFFFFF; /* White background for the contact section */
        padding: 20px; /* Padding around content */
        border-radius: 10px; /* Rounded corners */
        box-shadow: 0 2px 10px rgba(0, 0, 0, 0.1); /* Subtle shadow */
    }

    h2 {
        text-align: center; /* Center the heading */
    }

    .form-group {
        margin-bottom: 15px; /* Space between form groups */
    }

    label {
        display: block; /* Block display for labels */
        margin-bottom: 5px; /* Space below labels */
    }

    input[type="text"],
    input[type="email"],
    textarea {
        width: 100%; /* Full width inputs */
        padding: 10px; /* Padding inside inputs */
        border-radius: 5px; /* Rounded corners */
        border: 1px solid #ccc; /* Border style */
    }

    button {
        background-color: #FF9EB3; /* Light Pink for buttons */
        color: white; /* Button text color */
        cursor: pointer; /* Pointer cursor on hover */
        padding: 10px;
        border-radius: 5px; /* Rounded corners */
        border: none; /* No border */
    }

    button:hover {
        background-color: #FF8DA1; /* Darker shade of pink for hover effect */
    }

    footer {
      background-color :#FFB7C5 ;
      color:white ;
      text-align:center ;
      padding :10 px ;
    }

    .footer-text{
      font-size :14 px ;
    }
```

```
        </style>
    </head>
    <body>

    <header>
        <h1>AR Home Decorator</h1>
        <nav>
            <ul>
                <li><a href="C:\Users\ripun\Desktop\hci\project1.html">Home</a></li>
                <li><a href="C:\Users\ripun\Desktop\hci\progectcreatepage.html">Create</a></li>
                <li><a href="C:\Users\ripun\Desktop\hci\projectaboutus.html">About Us</a></li>
                <li><a href="C:\Users\ripun\Desktop\hci\projectcontactuspage.html">Contact Us</a></li>
                <li><a href="C:\Users\ripun\Desktop\hci\projectloginpage.html">Login</a></li>
            </ul>
        </nav>
    </header>

    <main>
        <div class="contact-section">
            <h2>Contact Us</h2>

            <p>If you have any questions or need assistance, please fill out the form below or reach us at:</p>

            <p><strong>Email:</strong> support@arhomedecorator.com</p>
            <p><strong>Phone:</strong> +1 (555) 123-4567</p>

            <form id="contactForm">
                <!-- Name Input -->
                <div class="form-group">
                    <label for="name">Name:</label>
                    <input type="text" id="name" required placeholder="Your Name">
                </div>

                <!-- Email Input -->
                <div class="form-group">
                    <label for="email">Email:</label>
                    <input type="email" id="email" required placeholder="Your Email">
                </div>

                <!-- Message Textarea -->
                <div class="form-group">
                    <label for="message">Message:</label>
                    <textarea id="message" rows="4" required placeholder="Your Message"></textarea>
                </div>

                <!-- Submit Button -->
                <button type="submit">Send Message</button>
            </form>

            <!-- Success Message -->
            <div id="successMessage" style="display:none;">
                <p>Thank you! Your message has been sent.</p>
            </div>

            <!-- Error Message -->
            <div id="errorMessage" style="display:none;">
                <p>There was an error sending your message. Please try again.</p>
            </div>

        </div>
    </main>

    <footer>
        <p class="footer-text">&copy; 2024 AR Home Decorator. All rights reserved.</p>
    </footer>

    <script>
    // Handle form submission
    document.getElementById('contactForm').addEventListener('submit', function(event) {
        event.preventDefault(); // Prevent default form submission

        // Simulate sending a message (this would be replaced with actual form submission logic)
        const successMessage = document.getElementById('successMessage');
        const errorMessage = document.getElementById('errorMessage');

        // Here you would typically send the data to your server via an AJAX request
        // For demonstration purposes, we'll simulate success
        const isSuccess = true;

        if (isSuccess) {
            successMessage.style.display = 'block';
            errorMessage.style.display = 'none';

            // Clear the form
            this.reset();
        } else {
            successMessage.style.display = 'none';
            errorMessage.style.display = 'block';
```

```
    }
});
</script>

</body>
</html>
```

Login and Registration Page

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Login - AR Home Decorator</title>
    <link rel="icon" href="C:\Users\ripun\Desktop\hci\favicon.ico" type="image/x-icon"> <!-- Path to your favicon -->
    <style>
        body {
            font-family: 'Arial', sans-serif;
            margin: 0;
            padding: 0;
            background-color: #FFB7C5; /* Light Cherry Pink */
            display: flex;
            justify-content: center;
            align-items: center;
            min-height: 100vh;
        }

        .container {
            background-color: #FFFFFF; /* White background for forms */
            padding: 20px;
            border-radius: 10px; /* Rounded corners */
            box-shadow: 0 2px 10px rgba(0, 0, 0, 0.1); /* Subtle shadow */
            width: 300px; /* Fixed width for the form */
        }

        h2 {
            text-align: center;
            color: black; /* Title color */
        }

        form {
            display: flex;
            flex-direction: column; /* Stack form elements vertically */
        }

        input[type="text"],
        input[type="password"],
        input[type="email"] {
            padding: 10px;
            margin-bottom: 15px; /* Space between inputs */
            border-radius: 5px; /* Rounded corners */
            border: 1px solid #ccc; /* Border style */
        }

        button {
            padding: 10px;
            background-color: #FF9EB3; /* Light Pink for buttons */
            color: white; /* Button text color */
            border: none;
            border-radius: 5px; /* Rounded corners */
            cursor: pointer; /* Pointer cursor on hover */
        }

        button:hover {
            background-color: #FF8DA1; /* Darker shade of pink for hover effect */
        }

        .toggle-link {
            text-align: center; /* Center the toggle link */
            margin-top: 10px; /* Space above the link */
        }

        .message {
            color: green; /* Color for success messages */
            text-align: center;
            margin-top: 10px;
        }
    </style>
</head>
<body>
    <div class="container">
        <h2 id="form-header">Login</h2>

        <!-- Login Form -->
        <form id="login-form" onsubmit="return handleLogin(event)">
            <input type="text" placeholder="Username" required>
            <input type="password" placeholder="Password" required>
```

```html
            <button type="submit">Login</button>
        </form>

        <!-- Registration Form -->
        <form id="register-form" style="display:none;" onsubmit="return handleRegister(event)">
            <h2>Register</h2>
            <input type="text" placeholder="Username" required>
            <input type="email" placeholder="Email" required>
            <input type="password" placeholder="Password" required>
            <button type="submit">Register</button>
        </form>

        <div class="toggle-link">
            <p id="toggle-text">Don't have an account? <a href="#" onclick="toggleForms()">Register</a></p>
        </div>

        <!-- Success Message -->
        <div class="message" id="message"></div>

    </div>

    <script>
        function toggleForms() {
          const loginForm = document.getElementById('login-form');
          const registerForm = document.getElementById('register-form');
          const formHeader = document.getElementById('form-header');
          const toggleText = document.getElementById('toggle-text');

          if (loginForm.style.display === "none") {
            loginForm.style.display = "flex";
            registerForm.style.display = "none";
            formHeader.innerText = "Login";
            toggleText.innerHTML = 'Already have an account? <a href="#" onclick="toggleForms()">Login</a>';
            document.getElementById('message').innerText = ''; // Clear message
          } else {
            loginForm.style.display = "none";
            registerForm.style.display = "flex";
            formHeader.innerText = "Register";
            toggleText.innerHTML = 'Already have an account? <a href="#" onclick="toggleForms()">Login</a>';
            document.getElementById('message').innerText = ''; // Clear message
          }
        }

        function handleRegister(event) {
            event.preventDefault(); // Prevent form submission
            const messageDiv = document.getElementById('message');
            messageDiv.innerText = 'Registration successful! You can now log in.';
            toggleForms(); // Switch to login form after registration
            return false; // Prevent default form submission
        }

        function handleLogin(event) {
            event.preventDefault(); // Prevent form submission
            const messageDiv = document.getElementById('message');
            messageDiv.innerText = 'Login successful! Redirecting to home page...';

            // Simulate redirect after a short delay
            setTimeout(() => {
                window.location.href = 'C:\\Users\\ripun\\Desktop\\hci\\project1.html'; // Redirect to home page
            }, 2000); // Redirect after 2 seconds

            return false; // Prevent default form submission
        }
    </script>

</body>
</html>
```
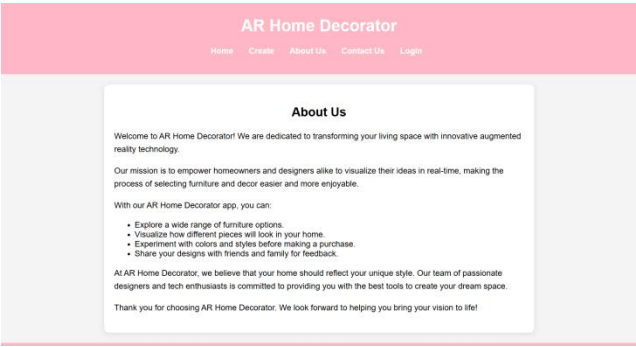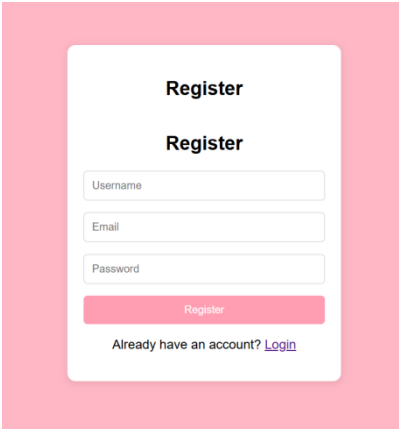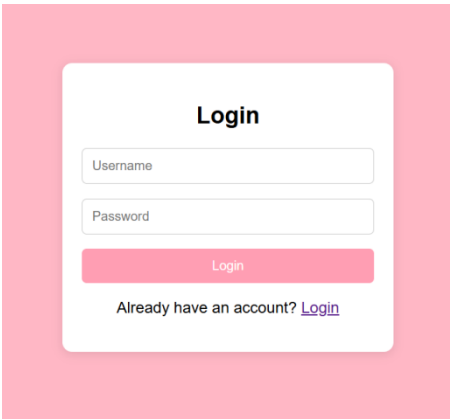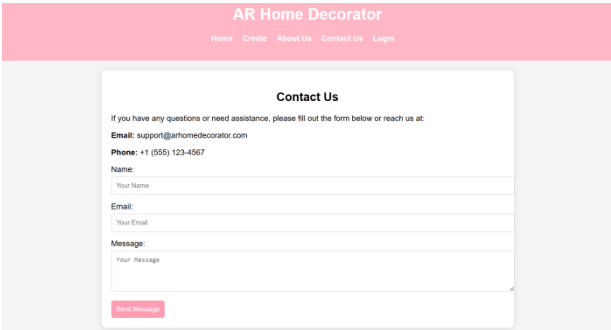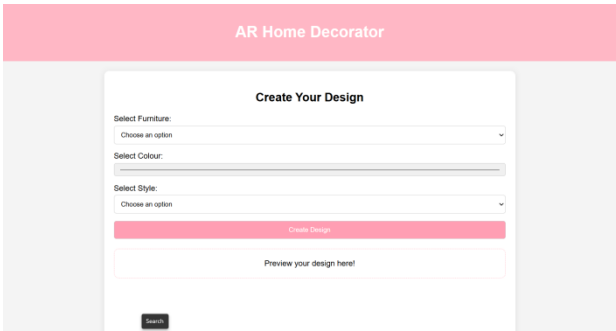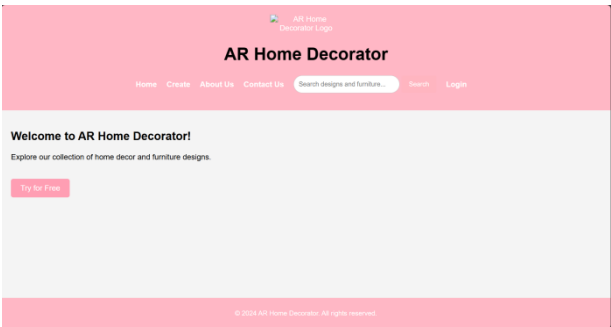
DESIGN:

CONCLUSION:

In conclusion, the "AR Home Decorator" project represents a significant advancement in the furniture shopping experience by harnessing the power of augmented reality technology. By allowing users to visualize furniture in their own spaces through interactive 3D models, the project addresses common challenges faced by consumers, such as uncertainty about fit and style. The incorporation of customization options, user-friendly navigation, and e-commerce integration further enhances the overall experience, making it not only engaging but also efficient. As a result, this innovative platform empowers users to make informed purchasing decisions while fostering creativity in home design. Ultimately, the "AR Home Decorator" stands to transform the way individuals approach interior decorating, making it more accessible and enjoyable for everyone.