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Subject	Human Computer Interaction

Lab-10

Design Decisions, Prototyping & Usability Evaluation

Activity 1: Food Delivery App

1. Design Decisions (with Justification)

Decision 1: Text-based Search vs. Voice Search

- **Chosen:** Text-based search
- **Justification:** Most users are accustomed to typing when using search features. Text input ensures better accuracy, is more universally supported, and avoids issues in noisy environments.

Decision 2: Add-to-Cart Button Placement

- **Chosen:** Place "Add to Cart" beside each food item
- **Justification:** Minimizes the number of taps, improves flow, and supports user efficiency. It aligns with Fitts's Law (ease of access to frequently used controls).

2. Paper Prototype (3+ Screens)

You should create the following paper sketches:

- Screen 1: Login / Signup
- Screen 2: Home (restaurant list with search bar)
- Screen 3: Menu screen with food items and "Add to Cart"
- Screen 4: Checkout screen

You can draw on paper or create digitally using Figma/Balsamiq. Include:

- Buttons
- Navigation icons
- Search bar
- Cart icon

Html Code:

```
<!DOCTYPE html>
```

```
<html lang="en">
```

```
<head>
```

```
<meta charset="UTF-8" />
```

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

```
<title>Food Delivery App</title>
```

```
<style>
```

```
body {
```

```
  font-family: Arial;
```

```
  background: #f2f2f2;
```

```
  margin: 0;
```

```
}
```

```
.container {
```

```
  max-width: 400px;
```

```
  margin: auto;
```

```
padding: 20px;
background: white;
border-radius: 10px;
margin-top: 30px;
}
h2 {
  text-align: center;
}
input, button {
  width: 100%;
  padding: 10px;
  margin-top: 10px;
  margin-bottom: 10px;
  font-size: 16px;
  border-radius: 5px;
  border: 1px solid #ccc;
}
button {
  background: #28a745;
  color: white;
  border: none;
}
button:hover {
  background: #218838;
}
.item {
  display: flex;
  justify-content: space-between;
```

```
    margin: 10px 0;
  }
  .hidden {
    display: none;
  }
</style>
</head>
<body>

<!-- Login Section -->
<div class="container" id="login">
  <h2>Login</h2>
  <input type="text" placeholder="Username" id="user">
  <input type="password" placeholder="Password" id="pass">
  <button onclick="login()">Login</button>
</div>

<!-- Home Section -->
<div class="container hidden" id="home">
  <h2>Restaurants</h2>

  <div class="item"><span>Pizza Point</span><button
onclick="add('Pizza')">Add</button></div>

  <div class="item"><span>Burger Town</span><button
onclick="add('Burger')">Add</button></div>

  <div class="item"><span>Biryani House</span><button
onclick="add('Biryani')">Add</button></div>

  <button onclick="goToCart()">Go to Cart</button>
</div>
```

```
<!-- Cart Section -->
<div class="container hidden" id="cart">
  <h2>Cart</h2>
  <div id="cartList"></div>
  <button onclick="checkout()">Checkout</button>
</div>
```

```
<!-- Confirmation Section -->
<div class="container hidden" id="confirmation">
  <h2>Order Confirmed!</h2>
  <p>Thank you for your order.</p>
</div>
```

```
<script>
  let cart = [];

  // Login function
  function login() {
    const u = document.getElementById("user").value;
    const p = document.getElementById("pass").value;
    if (u && p) {
      show("home");
    } else {
      alert("Enter credentials");
    }
  }

  // Add item to cart
```

```
function add(item) {  
  cart.push(item);  
  alert(item + " added to cart!");  
}
```

```
// Go to Cart page
```

```
function goToCart() {  
  const list = document.getElementById("cartList");  
  list.innerHTML = "";  
  cart.forEach((item, index) => {  
    list.innerHTML += `<div class="item"><span>${item}</span><button  
onclick="remove(${index})">Remove</button></div>`;  
  });  
  show("cart");  
}
```

```
// Remove item from cart
```

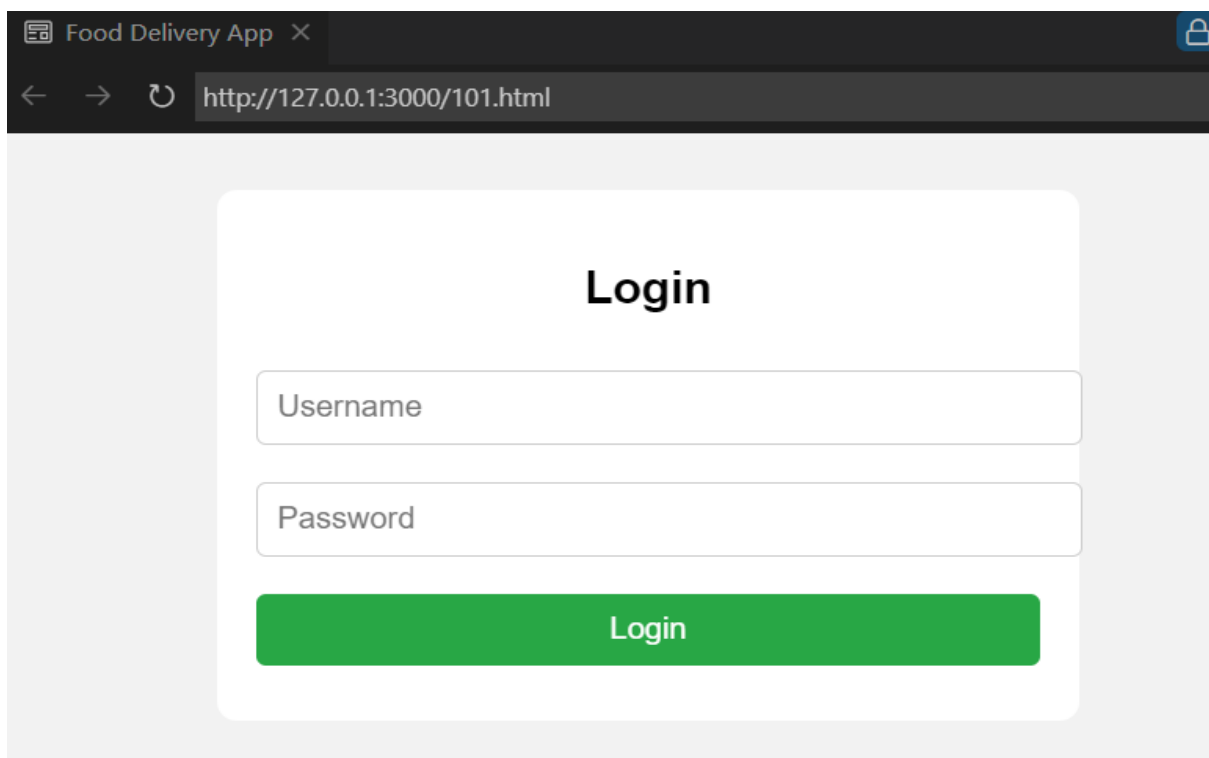
```
function remove(index) {  
  cart.splice(index, 1);  
  goToCart();  
}
```

```
// Checkout function
```

```
function checkout() {  
  if (cart.length === 0) {  
    alert("Cart is empty!");  
    return;  
  }  
}
```

```
    cart = [];  
    show("confirmation");  
  }  
  
  // Show the selected page  
  function show(id) {  
    ["login", "home", "cart", "confirmation"].forEach(sec => {  
      document.getElementById(sec).classList.add("hidden");  
    });  
    document.getElementById(id).classList.remove("hidden");  
  }  
</script>  
</body>  
</html>
```

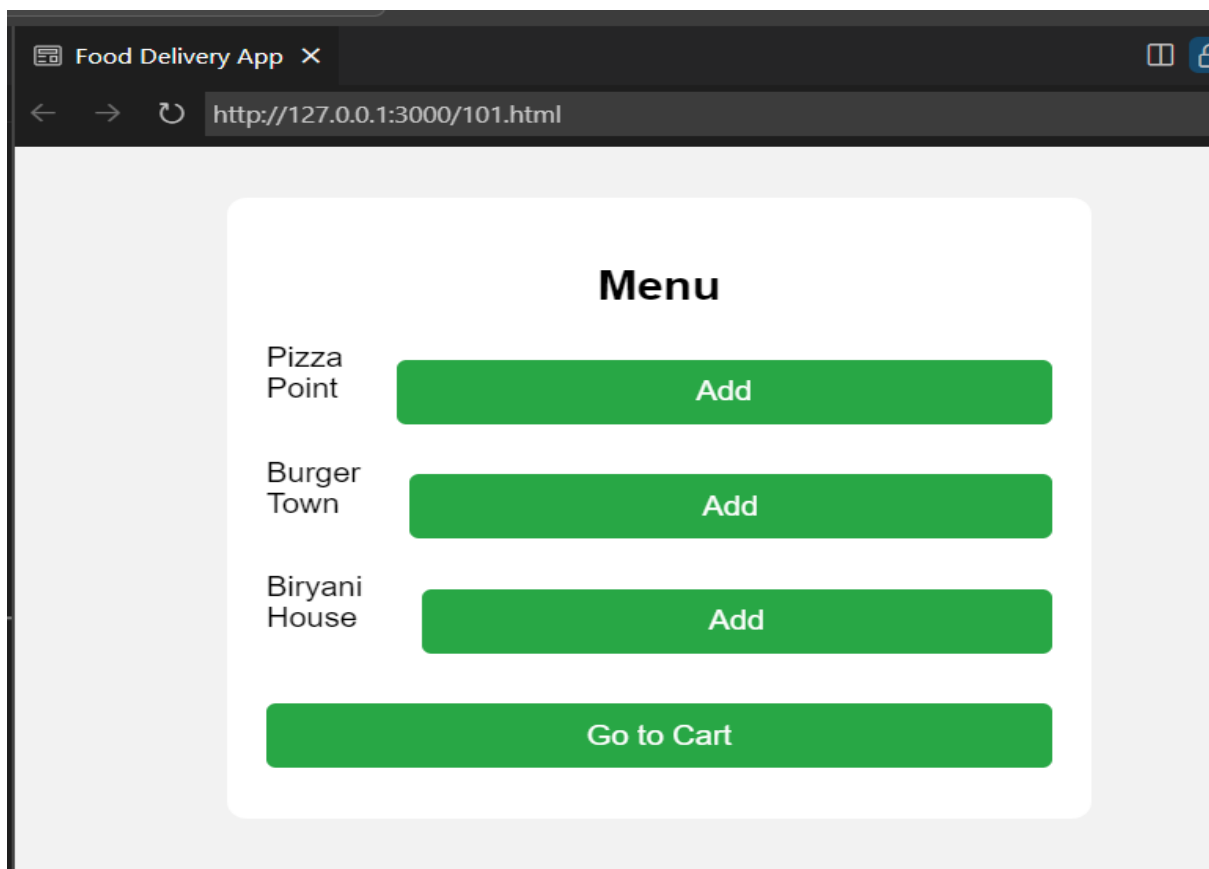
Interface 1:



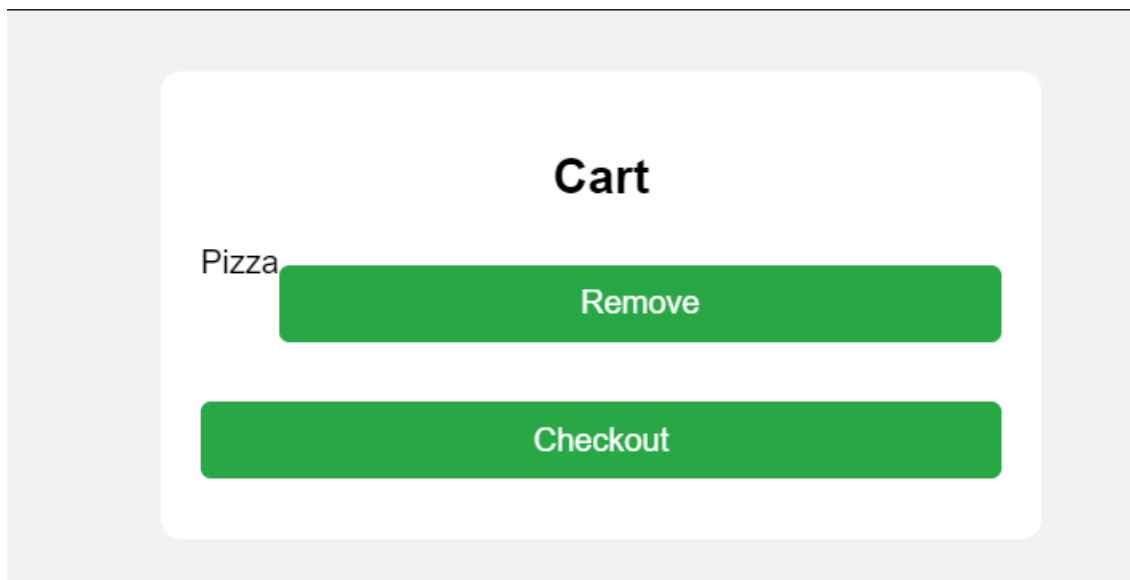
The screenshot shows a web browser window with the title "Food Delivery App". The address bar displays the URL "http://127.0.0.1:3000/101.html". The main content area features a login form with a white background and rounded corners, set against a light gray background. The form contains the following elements:

- A heading "Login" centered at the top of the form.
- A text input field labeled "Username".
- A text input field labeled "Password".
- A green button labeled "Login" at the bottom of the form.

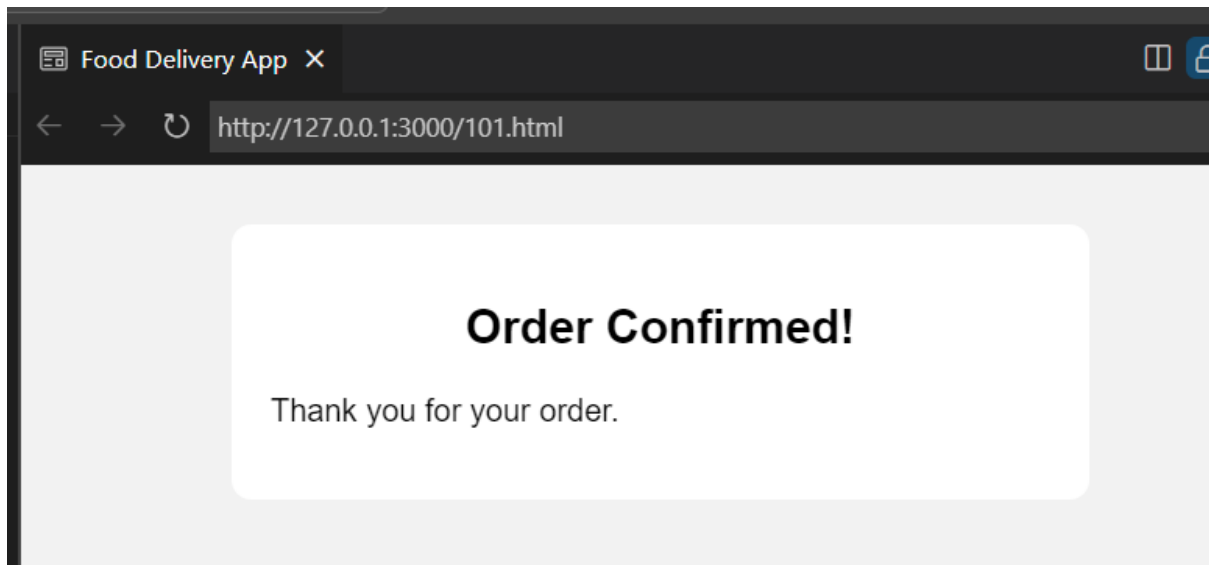
Interface 2:



Interface 3:



Interface 4:



Activity 2: Student Attendance App

1. Design Decisions

Decision 1: Checkbox vs. Dropdown for Marking Attendance

- **Chosen: Checkbox**
- **Justification:** It's faster, requires fewer clicks, and visually confirms the presence status instantly.

Decision 2: Show Date and Time Automatically

- **Chosen:** Yes, display date/time on attendance screen.
- **Justification:** Helps teachers ensure the correct session is being marked. Reduces cognitive effort and errors.

2. HTML Code:

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8" />
  <meta name="viewport" content="width=device-width, initial-scale=1.0"/>
  <title>Student Attendance App</title>
  <style>
    body {
      font-family: Arial, sans-serif;
      background: #f0f0f0;
      padding: 20px;
    }
    .container {
      max-width: 400px;
      margin: auto;
      background: white;
      border-radius: 8px;
      padding: 20px;
      box-shadow: 0 0 10px rgba(0,0,0,0.1);
    }
    h2, h3 {
      text-align: center;
      color: #333;
    }
    input, button {
      width: 100%;
```

```
padding: 10px;
margin: 10px 0;
border: 1px solid #ccc;
border-radius: 4px;
}
button {
background: #007bff;
color: white;
cursor: pointer;
border: none;
}
button:hover {
background: #0056b3;
}
.student {
display: flex;
justify-content: space-between;
margin-bottom: 10px;
}
.hidden {
display: none;
}
.feedback {
color: green;
text-align: center;
margin-top: 10px;
}
.info {
```

```
background: #eef6ff;
padding: 10px;
margin-bottom: 15px;
border-radius: 5px;
}
</style>
</head>
<body>
<div class="container">
  <h2>Attendance App</h2>
  <input type="text" id="username" placeholder="Username" />
  <input type="password" id="password" placeholder="Password" />
  <button onclick="login()">Login</button>

  <div id="attendance" class="hidden">
    <h3>Class: HCI - Batch SP-2025</h3>
    <div class="info">
      <p><strong>Date:</strong> <span id="date"></span></p>
      <p><strong>Time:</strong> <span id="time"></span></p>
    </div>
    <div class="student"><span>Farhan-UI-Haq</span><input
type="checkbox"/></div>
    <div class="student"><span>Ahmed</span><input type="checkbox"/></div>
    <div class="student"><span>Bilal Shah</span><input type="checkbox"/></div>
    <button onclick="submit()">Submit Attendance</button>
    <div class="feedback" id="msg"></div>
  </div>
</div>
```

```
<script>
```

```
function login() {
```

```
    const user = document.getElementById("username").value;
```

```
    const pass = document.getElementById("password").value;
```

```
    if (user && pass) {
```

```
        document.getElementById("attendance").classList.remove("hidden");
```

```
        setDateTime();
```

```
    } else {
```

```
        alert("Please enter both username and password.");
```

```
    }
```

```
}
```

```
function setDateTime() {
```

```
    const now = new Date();
```

```
    document.getElementById("date").innerText = now.toDateString();
```

```
    document.getElementById("time").innerText = now.toLocaleTimeString();
```

```
}
```

```
function submit() {
```

```
    document.getElementById("msg").innerText = "Attendance submitted  
successfully!";
```

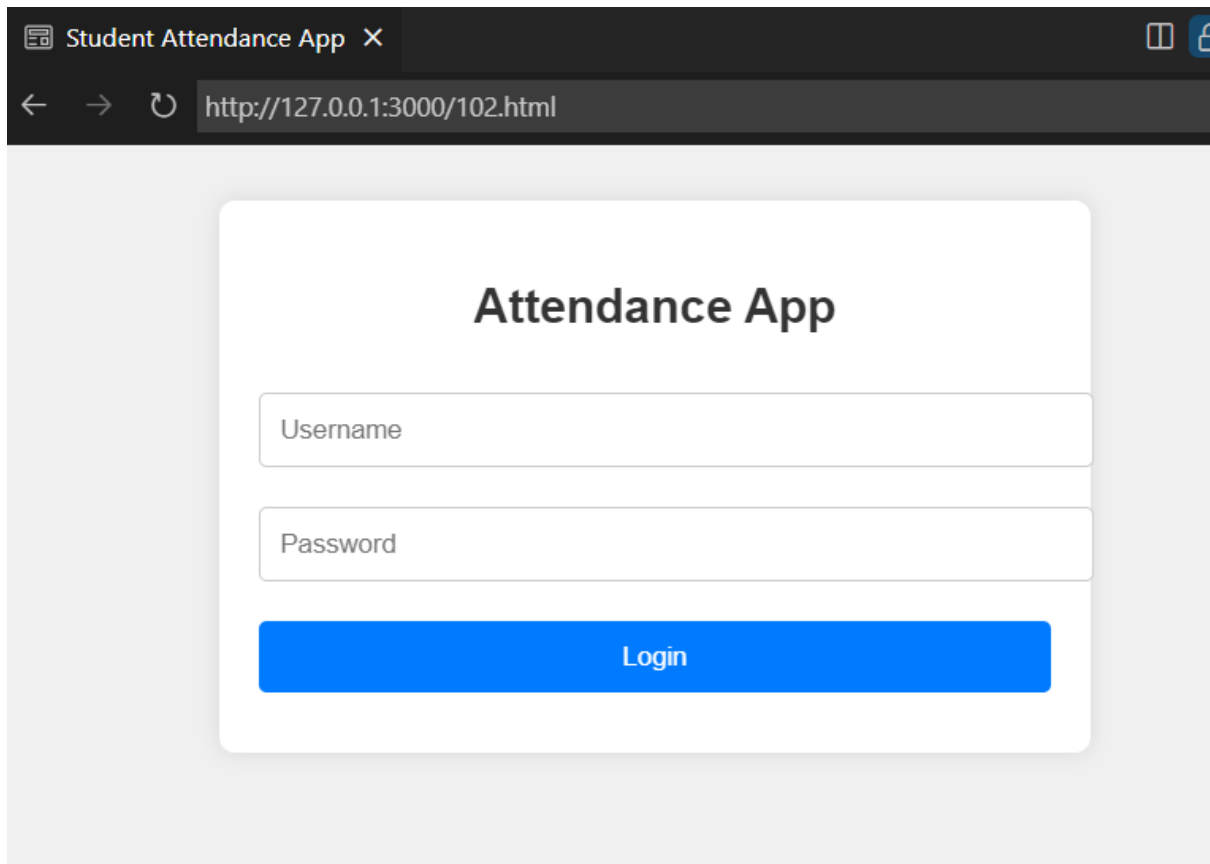
```
}
```

```
</script>
```

```
</body>
```

```
</html>
```

Interface 1:



The screenshot shows a web browser window with the title 'Student Attendance App'. The address bar displays the URL 'http://127.0.0.1:3000/102.html'. The main content area features a white card with the title 'Attendance App' in bold. Below the title are two input fields: 'Username' and 'Password'. A blue 'Login' button is positioned at the bottom of the card.

Student Attendance App X

← → ↺ http://127.0.0.1:3000/102.html

Attendance App

Username

Password

Login

Interface 2:

Student Attendance App

← → ↺ http://127.0.0.1:3000/102.html

Attendance App

Login

Class: HCI - Batch SP-2025

Date: Sun May 04 2025

Time: 9:01:38 PM

Farhan-UI-Haq

☐

Ahmed

☐

Bilal Shah

☐

Submit Attendance

Interface 3:

Class: HCI - Batch SP-2025

Date: Sun May 04 2025
Time: 9:01:38 PM

Farhan-UI-Haq	<input checked="" type="checkbox"/>
Ahmed	<input type="checkbox"/>
Bilal Shah	<input type="checkbox"/>

Submit Attendance

Attendance submitted successfully!

THE END