



PROJECT REPORT:

COURSE: IT 1030SEF - Introduction to Internet Application Development

GROUP 27:

GROUP MEMBERS:

MOHAMED MAHEEN (13766356)

ALBIN (13872558)

YUNCHHO (13880269)

ROHAN (13511636)

THOMAS (13877806)

JOSHUA (13884730)

GitHub: https://github.com/MaheenHKMU/IT_PROJECT-Vlamour.git

INTRODUCTION

Overview of the Project: https://github.com/MaheenHKMU/IT_PROJECT-Vlamour.git

V'làmour is an online clothing retail platform designed to provide users with a seamless shopping experience for men's and women's apparel. The website offers a wide selection of high-quality clothing while ensuring that users can easily navigate through various categories, manage their accounts, and complete purchases efficiently.

Objectives:

The primary objectives of the V'làmour website are to:

- Provide an intuitive and user-friendly interface for browsing and purchasing clothing.
- Implement effective search and filter functionalities to enhance the shopping experience.
- Create secure user account management features, including login and registration processes.
- Allow users to manage their shopping carts with ease, promoting a hassle-free checkout experience

WEBSITE STRUCTURE:

Menu Page:

The Menu Page serves as the primary navigation hub for the V'làmour online clothing website. It is designed to provide users with easy access to various sections of the site, enhancing their browsing experience:

```
<header>
  <div id="headerContents">
    <div class="headerLeft">
      
    </div>
    <ul style="list-style-type: none;">
      <li id="search-bar">
        <input type="text" id="find" placeholder="Search..." onkeyup="getDisplay()">
        
      </li>
      <li id="cart"><a href="#"></a></li>
      <li><a href="login.html">Log in</a></li>
    </ul>
  </div>
</header>
```



The sidebar menu serves a crucial role in navigation, featuring links to essential pages such as Home, About Us, Male Products, and Female Products. This design enables users to navigate easily and efficiently throughout the website.

Additionally, the menu is built with a responsive design that adapts to various screen sizes, ensuring accessibility for users on mobile devices. It also allows the sidebar to be toggled open and closed, creating a clean and user-friendly interface.

User Interface Elements:

- **Sidebar:** The sidebar is designed to be visually appealing with a clean layout. It includes a close button for user convenience, allowing for easy dismissal of the sidebar when not in use.
- **Brand Logo:** The brand logo is prominently displayed, helping to reinforce brand identity. It also features a hover effect, adding interactivity and engaging the user.
- **Overlay Effect:** Using an overlay when the active sidebar helps focus user attention on the menu, creating a seamless transition between the main content and navigation elements.

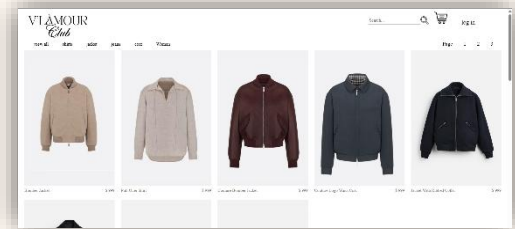
Technical Implementation:

```
sidebarToggle.addEventListener('click', () => {
  sidebar.classList.add('active');
  overlay.classList.add('active');
});
```

The Menu Page is built using HTML for structure, CSS for styling, and JavaScript for interactive functionality. The JavaScript code manages the sidebar toggle and enhances user interactions, such as navigating to different sections of the website.

Men's Clothing Page:

The Men's Clothing Page shows a diverse range of products, including jackets, shirts, coats, and jeans. Each product is displayed with an image, name, and price, providing users with a quick overview. The grid layout allows for easy browsing, and the design promotes a modern aesthetic with clear visuals. The women's clothing page follows the same layout and design principles.



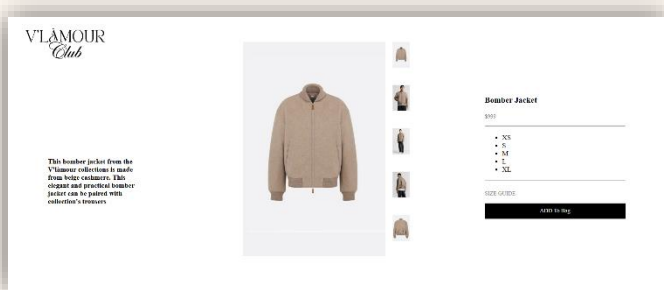
```
var mensData = [
  {
    id: 1,
    class: "Jacket",
    image_url: "/Men's Clothing/Jacket_01/11.jpg",
    name: "Bomber Jacket",
    price: "$999",
  },
  // Additional products...
];

// Function to display products
function displayItems(data) {
  const container = document.getElementById('container');
  container.innerHTML = '';
  data.forEach(function(item) {
    var itemContainer = document.createElement('div');
    var img = document.createElement('img');
    img.src = item.image_url;
    let a = document.createElement('a');
    a.setAttribute('href', '/product_details.html?id=${item.id}');
    a.appendChild(img);
    itemContainer.appendChild(a);
    container.appendChild(itemContainer);
  });
}
```

The MensData array contains information about each product available on the product page. Each product is represented as an object that includes several properties: an id, which serves as a unique identifier for every product; a class that categorizes the product (such as jacket, shirt, or coat) to facilitate filtering; an image_url, which provides the path to the product's image for display on the webpage; a name that indicates the product's title for users; and a price, formatted as a string, which reflects the cost of the product.

```
function displayItem(data) {
  const container = document.getElementById('container');
  container.innerHTML = ''; // Clear existing items
  data.forEach(function(item) {
    var itemContainer = document.createElement('div');
    var img = document.createElement('img');
    img.src = item.image_url;
    let a = document.createElement('a');
    a.setAttribute('href', '/product_details.html?id=${item.id}');
    a.setAttribute('target', '_self');
    a.appendChild(img);
    var box1 = document.createElement('div');
    box1.setAttribute('id', 'box1');
    var name = document.createElement('p');
    name.textContent = item.name;
    var price = document.createElement('p');
    price.textContent = item.price;
    box1.appendChild(name, price);
    itemContainer.appendChild(a, box1);
    container.appendChild(itemContainer);
  });
}
```

The function begins by clearing any existing content in the container div to ensure that only the current items are displayed. It then iterates over the data array using forEach to loop through each product. For every product, a new <div> is created to serve as a container. Within this div, an element is generated to showcase the product image, along with an <a> element that links to the product details page, utilizing the product's id in the URL. Additionally, a nested <div> (referred to as box1) is created to hold the product's name and price. Finally, all the generated elements are appended to the main container, effectively displaying the products on the page.



```
const urlParams = new URLSearchParams(window.location.search);
const productId = urlParams.get('id');

const products = [ /* product data */ ];

const product = products.find(p => p.id == productId);
```

In the detail page of product, it retrieves the product ID from the URL, and it goes to the array containing details about the following id and gets the name, additional images and description of the product.

One of the key elements is dynamic filtering, which allows users to easily filter products by category, such as shirts, jackets, and jeans, using straightforward buttons. This functionality makes it simple for customers to narrow down their choices quickly, streamlining the shopping process.

Another important feature is the search functionality, which enables users to find specific items rapidly. As users type in the search bar, the product display updates in real time, showcasing only the items that match their query. This instant feedback helps users locate the products they want without any hassle (Ivanovic, 2024).

Additionally, our responsive design ensures that the layout adapts seamlessly to different screen sizes. Whether customers are shopping on desktop or mobile devices, they can enjoy a smooth and consistent experience, making it easier for them to browse and shop at their convenience.

User Interface Components:

- **Product Grid:** Products are displayed in a grid format, each with an image, name, and price. This layout allows users to view multiple items immediately (Ayres, 2018).
- **Product Details:** Clicking on a product navigates the user to a dedicated Product Details Page, where they can find more information, including descriptions, available sizes, and additional images.

Technical Implementation:

JavaScript manages dynamic features such as filtering and searching for products. The mensData array contains product details, which are dynamically displayed based on user interaction.

```
function getDisplay() {
  const input = document.getElementById('find').value.toLowerCase();
  const filteredData = mensData.filter(item => {
    const matchesCategory = currentFilter === 'all' || item.class === currentFilter;
    const matchesSearch = item.name.toLowerCase().includes(input);
    return matchesCategory && matchesSearch;
  });
  displayItems(filteredData);
}
```

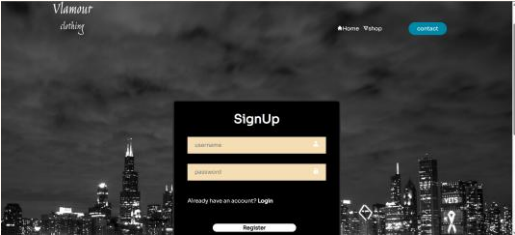
This function showcases how user input is captured and used to filter displayed products, enhancing overall usability.

User Authentication Pages:

Overview

The User Authentication Pages, which encompass both the Sign-up and Login functionalities, are essential components of the V'làmour online clothing website. They facilitate account creation for new users and secure access for existing users, ensuring a personalized and streamlined shopping experience.

```
<form id="form" action="">
  <h1>Login</h1>
  <div class="input-box">
    <input type="text" name="username" id="username" placeholder="username" required>
    <i class="bx bxs-user"></i>
  </div>
  <div class="input-box">
    <input type="password" name="password" id="password" placeholder="password" required>
    <i class="bx bxs-lock"></i>
  </div>
  <a href="goBack.html" class="btn" id="Login">Login</a>
</form>
```



Features:

Both pages feature mandatory fields for entering a username and password, which are essential for registration and authentication. Icons located next to these fields enhance usability by clearly indicating their functions, making it easier for users to understand what information is required.

HTML validation is implemented across both forms, ensuring that users are prompted to correct any errors before submission. When users click the respective buttons, JavaScript checks the validity of the forms, logging user credentials to the console and effectively managing session storage.

In terms of additional options, the Sign-Up page includes only the registration fields necessary for new accounts, while the Login page provides a "Remember Me" checkbox that allows users to save their credentials for future logins. It also features a "Forgot Password" link to assist users in recovering their accounts if they forget their login information (Olanrewaju, 2024).

Layout and Design:

- **Responsive Design:** Both pages employ CSS Flexbox to create flexible layouts that adapt seamlessly to different screen sizes, providing a consistent experience across desktops and mobile devices.
- **Visual Appeal:** Utilizing the Sora font, both pages maintain a modern aesthetic. The background images add depth, while contrasting colors for input fields and buttons enhance readability and user engagement.

User Interface Components:

- **Navigation Links:** Each page includes navigation links- The Sign-Up page directs users to the Login page, while the Login page, while the Login page offers links to the home page and shop, facilitating easy navigation throughout the site.
- **Action Buttons:** The "Register" button on the Sign-Up page and the "Login" button on the Login page are designed to be visually distinct, encouraging users' interaction and submission of their information.

Technical Implementation

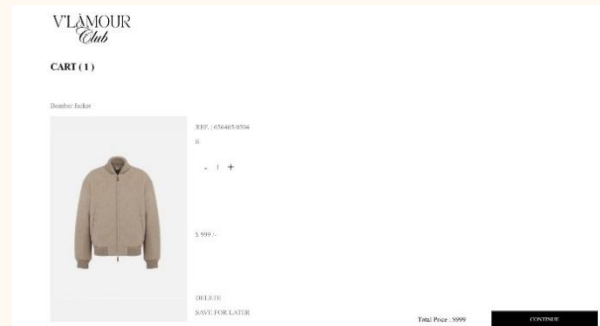
```
registerBtn.addEventListener('click', function() {
  e.preventDefault(); // Prevent the default link behavior
  const username = document.getElementById('username').value;
  const password = document.getElementById('password').value;

  if (form.checkValidity()) {
    console.log('Username:', username);
    sessionStorage.setItem('username', username);
    window.location.href = 'goBack.html';
  } else {
    form.reportValidity();
  }
});
```

Both pages are structured using HTML for layout, styled with CSS for visual consistency, and powered by JavaScript for functionality. The JavaScript code manages form submissions and session storage, ensuring a smooth user experience.

Add to Cart Page:

```
<div id="product-details">
  <p id="productName">Bomber Jacket</p>
  <div id="product-container">
    <div id="left-side">
      
    </div>
    <div id="right-side">
      <p class="total-price"> $999 /-</p>
      <div id="inc-dec-btn">
        <button id="dec-btn"></button>
        <p id="count">1</p>
        <button id="inc-btn"></button>
      </div>
    </div>
  </div>
</div>
```



Overview

The Add to Cart page is a crucial component of the V'làmour online clothing website, allowing users to review their selected products before proceeding to checkout. This page enhances the shopping experience by providing clear details about the items purchased.

Features

- **Product Details:** The page displays essential information about the product, including the name, reference number, size, and price. This transparency helps users confirm their selections.
- **Quantity Adjustment:** Users can easily modify the quantity of the item they wish to purchase using "+" and "-" buttons. This feature allows for a flexible shopping experience.
- **Action Options:** The page includes options to delete an item from the cart or save it for later, giving users control over their shopping decisions.

Layout and Design

- **Two-Column Layout:** The product information is arranged in a two-column format, with an image on one side and details on the other. This layout is visually appealing and easy to navigate.

User Interface Components

- **Cart Navigation Bar:** A prominent navigation bar at the top shows the number of items in the cart, keeping users informed of their selections.
- **Continue Button:** A clear and accessible "Continue" button directs users to the payment page, facilitating the transition from shopping to checkout.

Technical Implementation

- The page is structured using HTML for content and CSS for styling. The layout is organized using flexboxes to ensure a responsive design that adjusts to different screen sizes.

```
#product-container {
  display: flex;
  gap: 20px;
  color: gray;
  width: 100%;
  margin: auto;
  margin-bottom: 300px;
}
#inc-btn,
#dec-btn {
  background-color: transparent;
  border: 0px;
  padding: 20px;
  font-size: 25px;
}
```

The following CSS snippet illustrates the styling for the product container and buttons:

This implementation allows for intuitive user interactions while maintaining a clean and organized layout.

Conclusion:

Summary of Achievements:

The V'làmour online clothing website successfully meets its objectives by providing an intuitive, engaging, and user-friendly shopping experience. Key features such as the Menu Page, product categorization, account management, and cart functionality were implemented effectively.

Future Improvements:

- Enhanced Filtering Options: Implementing more advanced filtering options, such as size and color filtering, to improve product searching.
- User reviews and Ratings: Adding a review system for products to enable users to share their experiences and feedback.
- Personalized Recommendations: Implementing algorithms to suggest products based on user behavior and preferences.

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- Olanrewaju, P. M. (2024, July 3). *Designing the Perfect UI for Registration and Login*. Retrieved from Medium: [https://medium.com/design-bootcamp/designing-the-perfect-ui-for-registration-and-login-69f8180dc0c8#:~:text=Designing%20user%20interfaces%20\(UI\)%20for,the%20registration%20and%20login%20processes](https://medium.com/design-bootcamp/designing-the-perfect-ui-for-registration-and-login-69f8180dc0c8#:~:text=Designing%20user%20interfaces%20(UI)%20for,the%20registration%20and%20login%20processes)

Work Allocation:

- **Main Page:** (Rohan) was asked to work on this part.
- **Men's Product Page:** (Maheen) is responsible for this part, which will include a product detail page. When a product on the men's product page is clicked, it will redirect to this detail page, showcasing specific product details, sizes, prices, and material information.
- **Women's Product Page:** (Thomas) was assigned to this page, which will follow the same structure and functionality as the men's product detail page.
- **Sign Up / Log in Page:** (Yunchho) was responsible for this part.
- **Add to Cart Page:** (Joshua) was tasked with this section.
- **Search and Filter Function:** (Albin) connected the search and filter functionality within both the men's and women's clothing sections.