

Introduction to ICT - FALL 2025 PROJECT REPORT

Glitz Galleria: A Jewellery E-Commerce Website

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1. GitHub Repository

Link to the repository: <https://github.com/Amani24i-2137/Glitz-Galleria>

2. Explanation of Design and Feature

Page 1: Login / Sign-up

The login page contains a login panel for existing users (Username, Password). It contains a link for users to create an account if they are new customers. The sign up page is for that purpose. It has a sign-up form for new users (Name, Email, Password, Phone).

After the successful login/Signup, an **alert message** appears for **Successful login**. Then the page redirects to the Home page after successful login/sign-up.

It has a consistent header and footer design.

Page 2: Home

In the beginning we introduced our online store “Glitz Galleria” and the products we offer. It has a header with a navigation bar and our site logo. It contains featured banners and promotional sections using Bootstrap components. The product highlights and featured collections(**Golden Collection**) are also present. A **discount pop up message** also appears with a counter which is added through JS.

Page 3: Categories

Many different product categories are displayed using Bootstrap cards and grid layouts.

Example : Rings, Earrings, Bracelets, Necklace, etc. Each category contains: Product image, Product name and description which includes product price ,and a Static “**Add to Cart**” button.Lastly it also includes a “**Go to Cart**” button to navigate to the Cart page.

Page 4: Top Sellers

This page displays top-rated or best-selling products.

Each product card includes: Product name, Price, Short description, “Add to Cart” button which is static and a “**Go to Cart**” button to navigate to the Cart page.

Page 5: Cart

The cart page includes items (3 products) with: Product image, Quantity, Price per item, total bill calculation at the end, and a trash icon to remove the item from the cart.

It also includes a “**Proceed to Payment**” button that navigates to the Payment page.

Bootstrap cards are used for a clean cart layout.

Page 6: Payment

The payment page contains a payment form for collecting customer details: Full Name, Contact Number, Email, Shipping Address, Payment Method (Cash on Delivery / Card / etc.).

It also has a “**Place Order**” button that redirects to the Home page in which there is no real processing. An alert message appears “**payment successful**” when the place order button is pressed.

Overall our Navigation Flow is as under:

The header contains links to: Home, Categories, Top Sellers, Cart.

From Categories and Top Sellers, users can navigate to the Cart page.

From Cart, navigate to the Payment page.

After placing an order, redirect back to Home.

3. Our Niche

Our chosen niche for the e-commerce project is Jewelry, a focused and visually appealing category within the fashion and accessories industry. This niche includes a wide variety of items such as necklaces, rings, earrings, bracelets,etc designed to suit different styles, occasions, and age groups.

Jewelry is a strong niche for online selling because customers are always looking for pieces that reflect their personality, style, and cultural background. It is also a niche where presentation, product images, and aesthetic design play a very important role. This allows us to create a highly creative, elegant, and visually pleasing website that matches the theme.

By choosing jewelry, we are able to focus on: attractive product display, clean layouts with high-quality images, highlighting details like shine, color,etc. And offering different collections such as casual wear and minimal everyday pieces.

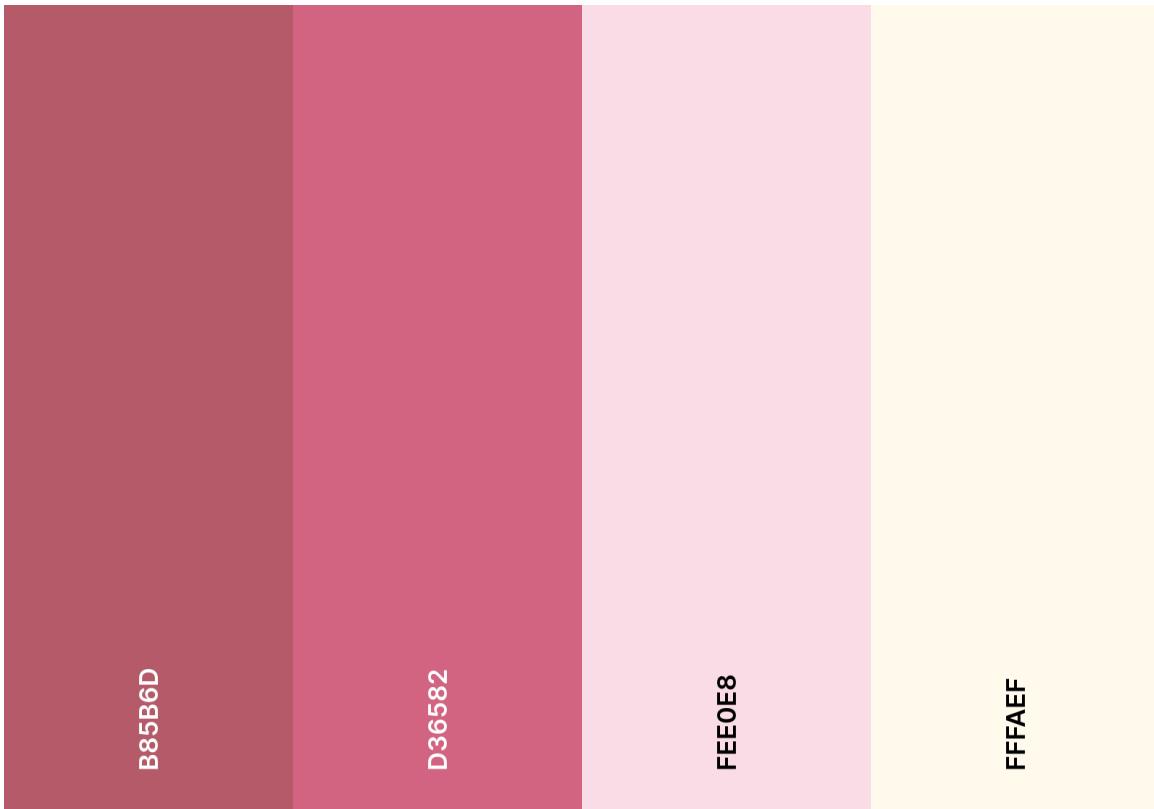
Our website “Glitz Galleria” will offer beautifully arranged product cards, top-selling items, and category sections that allow customers to easily browse and select their favorite jewelry items. The aesthetic theme of our site will focus on elegance, simplicity, and visual appeal, qualities that match jewelry shopping expectations.

Overall, the jewelry niche is ideal for an e-commerce project because it is visually strong, easy to organize into categories, and allows us to apply creativity in both design and presentation while still fulfilling all functional requirements of an online store.

4. Stylistic Theme

4.1 Color Palette

The color palette chosen reflected our website's logo to normalize embracing your girlhood, hence we used various shades of pink complemented with cream.



4.2 Font Choices

For headings: Playfair Display

For small text: serif/Times New Roman

These fonts add a stylistic flair that reflect the fashion statement our brand aims to endorse, while enhancing the UI/UX of our website by providing viewers with a balanced and easy-to-read experience.

5. Work Division

| Member | Work |
|-----------------|-------------------------------------------|
| Yousma Tahir | Login/Signup, Cart page, Report |
| Amani Jumaloona | Categories, Payment page, Navigation Flow |
| Maliha Asif | Home, Topsellers page, Inner Categories |

6. Page Layouts

1. Login/Signup Page:

So the left half features a product photograph showing elegant gold jewelry (necklaces and a ring). The right half has a soft pink background containing the Glitz Galleria logo at top, followed by a login form with "Username/Email" and "Password" input fields, a "Forgot your password?" link, a pink "Sign In" button, and a "New customer? Create your account" link at the bottom. The signup page appears when someone clicks "New customer?". It contains a form with Full name, email address, password, phone number. And a button "Create Account".

2. Home Page:

The home page features a section with a full-width banner showcasing luxury jewelry packaging with the "**Glitz Galleria**" branding on elegant pink gift boxes. The top navigation bar includes the logo on the left and menu items (Home, Categories, Top Sellers, Cart, Payment) on the right. Below the banner, the page displays two main product collection sections: "**Our Collection**" and "**Gold Collection.**" Each section features a horizontal slider with 4 product images showing jewelry pieces in pink heart-shaped and square boxes. Left and right navigation arrows allow users to browse through more items, and each section has a "**View All**" button on the right. Further down, there's a detailed product grid showing individual items with product cards containing images, **product names** (Product 1, 2, 3), **prices** (Rs 980, Rs 740, Rs 520), brief descriptions, and pink "**Add to Cart**" buttons. A **promotional popup** modal appears over the content featuring a "**Limited Time Offer! 20% OFF**" with a celebration emoji, countdown timer, and a black "**Shop Now**" button. Overall the page which includes some inner pages as well, has elegant design with soft pink tones, clean typography, and luxury jewelry photography.

3. Categories Page:

The main area features a centered heading "**Shop by Category**" with a subtitle "**Find Your Perfect Piece**" below it. Below this are four equal-sized square category cards arranged in a horizontal grid, each displaying a product photograph of pink jewelry boxes with different items inside. Each card is labeled underneath with its category name: **Earrings, Bracelets, Rings, and Necklaces.** The category page also includes some inner pages for different products.

4. Top Sellers Page:

The page features a centered heading "Top Sellers" in large serif font, followed by a subtitle "**Our most loved and best-selling products.**" Below that is a "**Go to Cart**" button link. The main content displays a grid of product cards arranged horizontally, each showing jewelry items in elegant pink presentation boxes. Each product card has a soft rounded border.

5. Cart Page:

This page has a clean, list-based layout with a large shopping cart icon and "**SHOPPING CART**" heading at the top left. The page displays three cart items in a vertical list format, each contained in a white card with rounded corners. Each cart item includes image on the left showing the jewelry, product name and individual price (Rs.550, Rs.850, Rs.1200) in the center, a quantity selector box in the middle-right, total price for that item on the far right, a trash icon button on the far right for removing items. The three products shown are: "Bow Flower Basket Earrings," "Pearl Bracelet with flower charm," and "Swan Necklace." At the bottom right, there's a bold "**Total: Rs. 2600**" displayed prominently, followed by a pink "**Proceed To Payment**" button.

6. Payment Page:

This page includes a Glitz Galleria logo in the top left and navigation menu (Home, Categories, Top Sellers, Cart) in the top right. Centered at the top are two headings: "**Secure Checkout**" and "**Thank you for shopping with Glitz Galleria!**" The page is divided into two main sections: Left Section - **Customer information** form containing input fields for: Customer Name, Contact Number (with +92-XXX-XXXXXXX placeholder), Email Address, Shipping Address (larger text area) and then the Right Section - **Payment method selection** and details: Three **tab buttons** at top: "**Credit/Debit Card**", "**Digital Payment**", and "**Cash on Delivery**". Payment form below with fields for: Cardholder Name, Card Number (XXXX-XXXX-XXXX-XXXX format), Expiry Date (MM/YY) and CVV fields side by side. Lastly, the footer - Light pink bar with **contact information** including **phone, email, Instagram, and physical address in Islamabad.**

7. Complex Computing Problem (CCP) Analysis

Our website, Glitz Galleria, qualifies as a Complex Computing Problem, as it aims to meet the technical requirements and analysis indicated by the Outcome-Based Education (OBE) framework, and NCEAC accreditation guidelines. Below is a detailed analysis and technical breakdown of Glitz Galleria and the process behind its creation.

7.1. Problem Complexity Analysis

7.1(a) How does your e-commerce theme introduce specific design and technical challenges?

In terms of design, we wanted our theme to reflect womanhood and the more glamorous end of the spectrum of feminine representation. This posed issues in designing a colour palette as since we wanted our theme to be prominent, we needed to find complementary colours that would integrate seamlessly with our base pastel pink colour, while still being easy on the eyes and readable.

In terms of technical challenges, initially, we chose a font called “Inter” for our body text. However, this font was not built into CSS, so we had to find other fonts that would complement our main stylistic font Playfair Display. We could have imported the font manually, but decided it may cause compatibility issues on each team member’s workstation and decided to prioritize efficiency.

7.1(b) What unique aspects of your theme required creative problem-solving?

We chose a limited range of colours for our theme as we mutually agreed that limiting the palette would strengthen the theme’s impact, and make it more memorable to site visitors. This required us to contemplate how each component would implement the theme without being boring or overcrowded. We need to think creatively about special hover effects, and colours of accents such as buttons in order to stand out while still being relevant and complementary to the theme.

7. 2. Multiple Solution Approaches Considered

7. 2(a) What alternative designs or implementations did you consider before finalizing?

We considered alternative colour inclusions such as mint green but decided it would reduce the cohesiveness of the website's design. We also debated between the number of pages that each category would have before finalizing it at 4. Finally, we considered various formatting grids and cards for the product layouts of the home page, top sellers, collections, and category pages as we had to prioritize consistency and cohesion, while still looking professional and pretty.

7. 2(b) How did you decide between Bootstrap and pure CSS?

We used Bootstrap for features that would have been implemented multiple times such as for all product layouts. However, due to Bootstrap having its own formatting and overriding our CSS settings, we had to identify and fix these issues to maintain consistency between the pages that used Bootstrap and those that did not. For the other pages, where the grids would not be reused, and were highly niche to that page, such as login, cart, and checkout, we decided to implement pure CSS for greater flexibility and control, as well as to spend less time debugging potential integration conflicts with Bootstrap.

7. 2(c) How did you approach the unique technical feature implementation?

I created a popup on the homepage that shows a special 20% discount offer as soon as the page loads. I used Bootstrap's modal for the popup because it works well on all devices and is easy to style. I added a banner image, promotional text, and a "Shop Now" button to make it attractive. To make it unique, I added a live countdown timer in hours, minutes, and seconds, so users can see how long the offer lasts. I also added gradient colors and a zoom animation to make the popup look modern and eye-catching. This feature helps grab the user's attention immediately and encourages them to check out the products.

7. 3. Technical Challenges Encountered

7.3(a) What unexpected difficulties arose during HTML/CSS implementation?

As mentioned in Section 7.2(b), one significant issue was the conflict between Bootstrap formatting and our CSS formatting. We had already set our headers and footers but when

we implemented Bootstrap grids, we discovered that Bootstrap would override the padding, margins and font style of the page.

In the beginning of the project, we also faced issues with making the CSS structure responsive to the page dimensions. However, we were able to unify this through Bootstrap grids and cards, as well as a CSS feature called Flexbox which adjusts and aligns the components neatly as required.

7.3(b) How did you resolve Git conflicts or version control issues?

We decided that the team would send screenshots and videos of their updates on a messaging platform so that the other team members can view all changes visually, and provide instant feedback on potentially conflicting changes. Once all changes were approved verbally, we would push the changes using Git. This method allowed us to avoid conflicts as the code had already been visually reviewed by all members. We did not face any specific version control issues.

7.3(c) What challenges did you face in achieving design fidelity from Figma to code?

Because Figma had a drag-and-drop functionality, it was easier to prototype our design on it as we had direct visual control over our components. Using code meant that we had to test out various values, especially for padding and margins, several times in order to achieve the perfect alignment and arrangement that we had visualized on Figma.

7. 4. Integration of Multiple Technologies

7. 4(a) How do HTML/CSS, JavaScript, Git, and your technical features work together?

HTML was used to implement the structural skeleton of the website, while CSS brought our theme to life. We used JavaScript minimally to insert console log statements and window alerts during successful signup/login, payment, and add to cart. Git allowed us to track all of the changes made by our members and ensure that everyone was updated with the latest changes.

7. 4(b) How did you ensure consistency across all integrated components?

We used Bootstrap across multiple pages to ensure that all members would implement a consistent arrangement of page components. If a member made a layout that had to be followed by another, we would swiftly share the code and ensure that each member directly copied and pasted the same layout and formatting code for consistency.

7. 5. Performance & Trade-Off Analysis

7. 5(a) What compromises did you make between design perfection and development efficiency?

There were many compromises we needed to make to optimize development efficiency. Our initial plans were a lot more ambitious but we decided to compromise some details in order to maintain cohesion and reusability of code in order to reduce the time spent on fine-tuning details that did not significantly contribute to the website design. Our goal was to prioritize development time to meet the deadline requirements while toggling multiple projects, so we gave a 20% trade-off to design perfection and 80% was given to development efficiency.

We also prioritized minimal code complexity, as we wanted to avoid significant usage of JavaScript due to unfamiliarity with it. Hence, our features were largely static and we decided to implement feature richness through mainly CSS and HTML as opposed to rich functionality through JavaScript.

In the trade-off between responsive breakpoints and CSS maintenance, we assigned 90% to CSS maintenance as our main objective was to make a desktop-viewable website. We did not prioritize the implementation of responsive breakpoints.

7. 5(b) How did image optimization affect your website's performance?

Our images were small in size, hence, optimization did not significantly affect website performance. Both of them were equally prioritized, as our website had to perform well and also provide customers with clear images. Because we did not deploy the website locally, and mainly ran it on our local host to meet the scope of the project guidelines, we did not face any performance or load time issues, and were able to run all pages and navigate between them seamlessly.

8. Conclusion

Overall, this project allowed us to implement a website through HTML, CSS, JavaScript and Bootstrap, giving us firsthand experience on UI/UX design. This was a valuable experience and we enjoyed watching our ideas come to life through intentional choices and coding. Through Git version control, we learned how to work collaboratively in a professional environment and familiarize ourselves with a tool that is used dominantly within the industry