

DBMS Project-Retail Website Using Django and SQLite

Emporium is an innovative e-commerce platform dedicated to providing a diverse range of stylish handbags. Seamlessly blending fashion and functionality, the website enables users to effortlessly explore and purchase trendy handbags. With intuitive navigation through different sections, customers can browse products, add items to their cart, and conveniently place orders. Additionally, the system encourages user engagement by providing avenues for contacting the offline store, ensuring a comprehensive and customer-centric online shopping experience. Emporium also has a dashboard that offers insightful business analytics, providing a comprehensive overview of the website's performance. Moreover, the system includes a dedicated staff login, empowering salespersons with access to critical information. Through this login, staff can conveniently view and manage orders, customer details, product listings, and shipping addresses, streamlining operational efficiency.

User Types

The retail platform facilitates diverse user engagements with its system, catering to customers and staff alike. Customers access the website through registration and login, engaging in a seamless browsing experience across products and categories, ensuring a personalized shopping journey. Staff within the Retail Website project possess comprehensive access rights, allowing them to manage product catalogs, oversee inventory, and process orders. This dual-tiered approach offers customers a streamlined and personalized experience while empowering staff with robust control and management functionalities.

Customer Privileges

Emporium ensures a user-centric approach, requiring customers to register and create accounts for accessing platform features. However, during checkout, customers provide minimal details like name, email, address, city, state, and zip code, simplifying the transaction process. This approach maintains data privacy while allowing limited access to personal information. The system prioritizes a seamless and secure shopping experience. Customers enjoy browsing diverse products, adding items to carts, securely placing orders, and managing account details via a user-friendly interface. These privileges aim to offer a personalized and convenient shopping journey, focusing on customer satisfaction within the platform.

Staff Privileges

Emporium empowers its staff, especially salespersons, with a secure login process to authenticate their access. Staff members, including administrators, benefit from elevated privileges necessary for managing and maintaining the platform. Through the dedicated staff login, they gain access to critical information and backend operations. This ensures staff empowerment through a secure login process, granting elevated privileges vital for platform management. This includes overseeing product listings, inventory management, order handling, and customer details. The dedicated staff login ensures a controlled and secure environment, enabling administrators to perform crucial tasks for platform operation. This strategic separation of privileges enhances operational efficiency, security, and maintains data integrity within the project.

Assumptions about the system

The website's landing page serves as the entry point, featuring distinct sections for streamlined user navigation.

Home Page:

Emporium's home page is a captivating entrance to the world of designer bags. The layout features visually striking images of the latest collections, creating an immersive experience for visitors. A dynamic carousel highlights special promotions, limited-time offers, and new arrivals. The navigation menu provides quick access to key sections of the website, including Services, Popular Products, About, and Login.


Services Page:

The Services page outlines the unique offerings that distinguish Emporium. It highlights free shipping, hassle-free returns, personalized shopping assistance, and a loyalty program. Details on additional services such as gift wrapping, virtual personal shopping, and exclusive previews of upcoming collections underscore Emporium's commitment to exceptional customer service.

Popular Products Page:

Emporium's Popular Products page is a curated showcase of the most sought-after designer bags. Each product listing includes high-resolution images, detailed descriptions, and customer reviews. Users can easily filter products based on brand, bag type, and price range. The page serves as a dynamic collection, reflecting customer preferences and the latest trends.

About Page:

 The About page provides insight into Emporium's story, mission, and values. It introduces the founders, sharing the brand's journey in curating a unique collection of designer handbags. Behind-the-scenes glimpses of the team and the meticulous process of selecting and sourcing exclusive designs enhance the connection between Emporium and its customers.

Employee Page (Accessed through Employee Login):

- **Dashboard:** Upon successful login, employees are greeted with a comprehensive dashboard that offers real-time insights into website performance. The dashboard includes analytics on sales trends, customer demographics, and popular products. Managers can make informed decisions based on these insights.
- **Order Management:** The Employee page allows managers to efficiently manage orders. This includes processing new orders, tracking order statuses, and addressing customer inquiries related to purchases. The interface provides a streamlined approach to handling the entire order fulfillment process.
- **Product Management:** Emporium's staff can easily manage the product catalog through the Employee page. This includes adding new products, updating existing listings, and removing items from inventory. The intuitive interface ensures efficient product management.
- **Warehouse Management:** The website's logistics are seamlessly handled through the Employee page's warehouse management capabilities. Managers can oversee inventory levels, track shipments, and optimize warehouse operations for a smooth and efficient supply chain.

Customer Management:

Emporium empowers its staff to manage customer information effectively. This includes tracking buying patterns, providing personalized assistance, and maintaining a database of customer preferences. The customer management features contribute to enhanced customer engagement.

Customer Page:

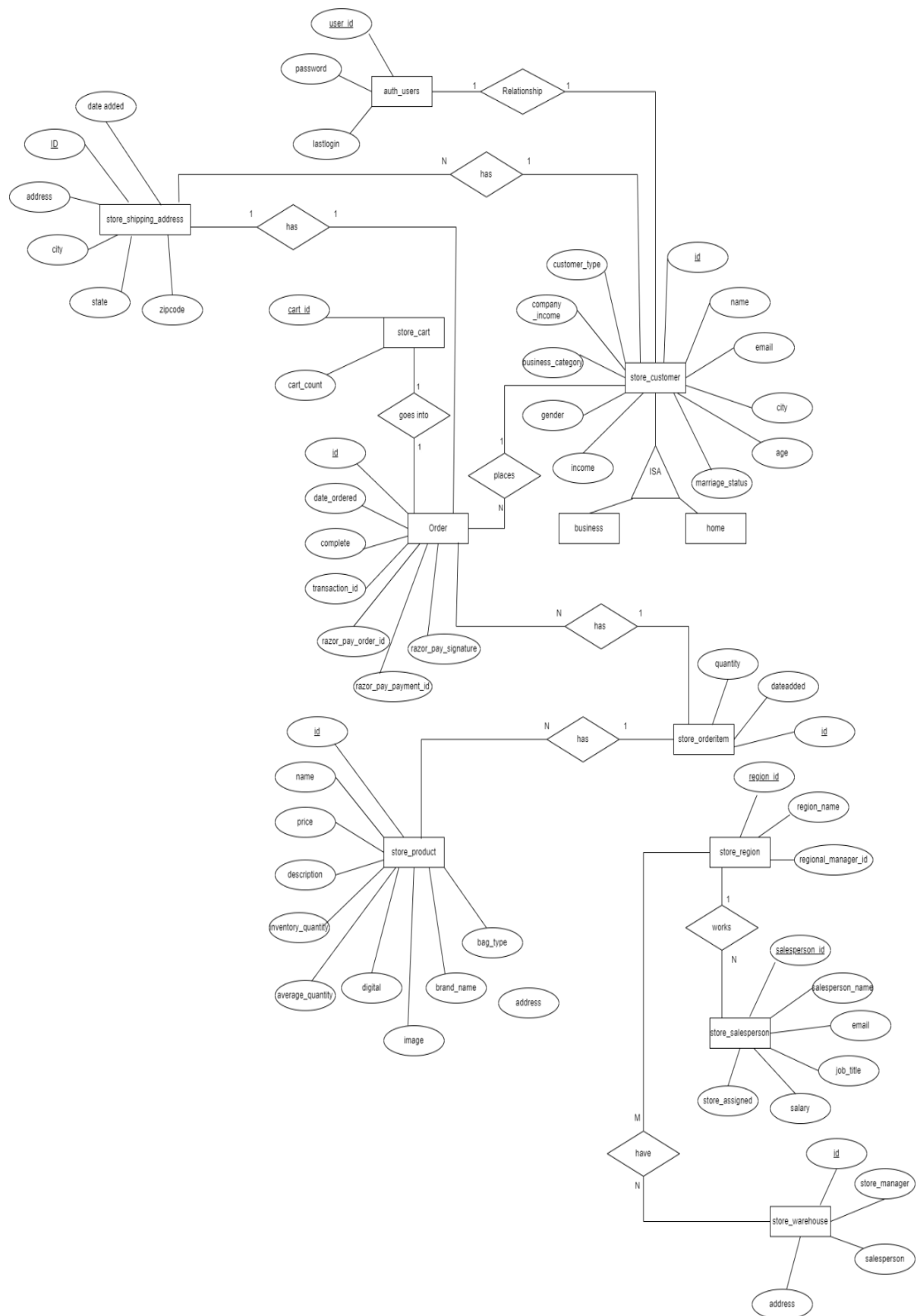
Customers experience a seamless journey through Emporium's website, starting with the personalized Customer Page. This page allows customers to:

- **Browse Products:** Customers can explore the extensive collection of designer bags, filtering products based on brand, bag type, and price range. The intuitive search functionality enables quick and specific product discovery.
- **Add to Cart:** The website provides a user-friendly shopping cart feature where customers can easily add products, view their selections, and proceed to checkout.
- **Add Shipping Address:** During the checkout process, customers can securely add and manage shipping addresses. The interface ensures a smooth and secure transaction experience.
- **Payment:** Emporium integrates a secure payment gateway, allowing customers to choose from various payment options. The checkout process is streamlined for convenience and security.
- **Search and Filter:** Customers can search for specific products using keywords, and the website provides advanced filtering options. Products can be filtered based on brand, bag type, and price range, enhancing the overall shopping experience.

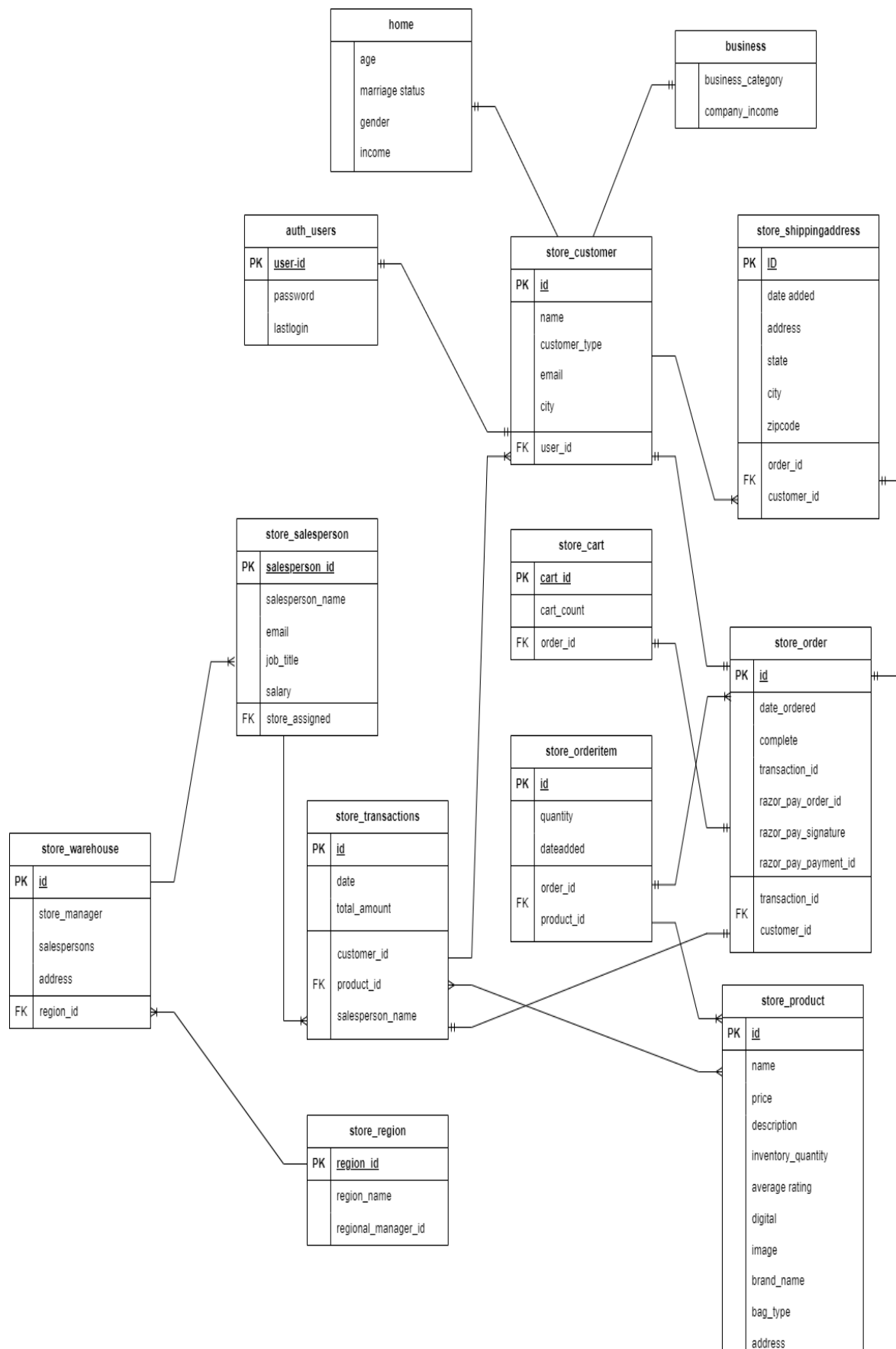
The system categorizes customers into two distinct types: "Home" customers and "Business" customers. Each customer type has predefined limitations regarding the quantity of products they can order within a specific timeframe. Home customers are limited to a set maximum order quantity, while business customers have a higher or unrestricted limit on the number of products they can order. These distinctions in order quantity limitations are integral to the design and functionality of the e-commerce platform, ensuring tailored experiences based on customer type.

User interactions with products are facilitated through a seamless process. Every interaction and transaction detail are meticulously logged and overseen within the database, underscoring the commitment to precise data management. This focus guarantees both the accuracy and integrity of information, enabling effortless retrieval for future transactions or inquiries. At its foundation, this technical configuration is centered on enhancing user convenience, optimizing data processing, and fostering a unified and gratifying online shopping experience for all users involved.

ER Diagram



Relational Schema



DDL Statements for Relational Schema

The following DDL (Data Definition Language) statements create a relational schema with considerations for an appropriate Normal Form:

```
CREATE TABLE IF NOT EXISTS "auth_user" (  
    "id"      integer NOT NULL,  
    "password"  varchar(128) NOT NULL,  
    "last_login"  datetime,  
    "is_superuser" bool NOT NULL,  
    "username" varchar(150) NOT NULL UNIQUE,  
    "last_name" varchar(150) NOT NULL,  
    "email" varchar(254) NOT NULL,  
    "is_staff"    bool NOT NULL,  
    "is_active"  bool NOT NULL,  
    "date_joined" datetime NOT NULL,  
    "first_name"  varchar(150) NOT NULL,  
    PRIMARY KEY("id" AUTOINCREMENT)  
);
```

Identifying Dependencies and Normal Form:

id is the primary key.

Functional dependencies:

id -> password, last_login, is_superuser, username, last_name, email, is_staff, is_active, date_joined, first_name

This schema adheres to BCNF since all attributes are functionally dependent on the primary key.

```
CREATE TABLE IF NOT EXISTS "store_shippingaddress" (  
    "id"      integer NOT NULL,  
    "address"  varchar(200),  
    "city"    varchar(200),  
    "state"   varchar(200),  
    "zipcode"  varchar(200),  
    "date_added" datetime NOT NULL,  
    "customer_id" bigint,  
    "order_id"  bigint,  
    FOREIGN KEY("order_id") REFERENCES "store_order"("id") DEFERRABLE INITIALLY DEFERRED,  
    FOREIGN KEY("customer_id") REFERENCES "store_customer"("id") DEFERRABLE INITIALLY  
    DEFERRED,  
    PRIMARY KEY("id" AUTOINCREMENT)  
);
```

Identifying Dependencies and Normal Form:

id is the primary key.

Functional dependencies:

id -> address, city, state, zipcode, date_added, customer_id, order_id

This schema adheres to BCNF since all attributes are functionally dependent on the primary key or on candidate keys (customer_id, order_id).

```
CREATE TABLE IF NOT EXISTS "store_orderitem" (  
    "id"      integer NOT NULL,  
    "quantity" integer,  
    "date_added" datetime NOT NULL,  
    "order_id" bigint,  
    "product_id" bigint,  
    FOREIGN KEY("product_id") REFERENCES "store_product"("id") DEFERRABLE INITIALLY  
DEFERRED,  
    FOREIGN KEY("order_id") REFERENCES "store_order"("id") DEFERRABLE INITIALLY DEFERRED,  
    PRIMARY KEY("id" AUTOINCREMENT)  
);
```

Identifying Dependencies and Normal Form:

id is the primary key.

Functional dependencies:

id -> quantity, date_added, order_id, product_id

This schema adheres to BCNF since all attributes are functionally dependent on the primary key or on candidate keys (order_id, product_id).

```
CREATE TABLE IF NOT EXISTS "store_sproduct" (  
    "id"      integer NOT NULL,  
    "name" varchar(200),  
    "image1"   varchar(100),  
    "image2"   varchar(100),  
    "image3"   varchar(100),  
    PRIMARY KEY("id" AUTOINCREMENT)  
);
```

Identifying Dependencies and Normal Form:

id is the primary key.

Functional dependencies:

id -> name, image1, image2, image3

This schema adheres to BCNF since all attributes are functionally dependent on the primary key.

```
CREATE TABLE IF NOT EXISTS "store_customer" (  
    "id"      INTEGER NOT NULL,  
    "name" varchar(200),  
    "email" varchar(200),  
    "user_id" integer UNIQUE,  
    "City" varchar(200),  
    "Age" INTEGER,  
    "Marriage_status" TEXT,  
    "Gender" TEXT,  
    "Income" NUMERIC,
```

```

        "Customer_type"      TEXT,
        "Business_category"  TEXT,
        "Company_income"     INTEGER,
        FOREIGN KEY("user_id") REFERENCES "auth_user"("id") DEFERRABLE INITIALLY DEFERRED,
        PRIMARY KEY("id" AUTOINCREMENT)
    );

```

Identifying Dependencies and Normal Form:

id is the primary key.

Functional dependencies:

id -> name, email, user_id, City, Age, Marriage_status, Gender, Income, Customer_type, Business_category, Company_income

user_id -> (referencing "auth_user" table)

This schema adheres to BCNF since all attributes seem to be functionally dependent on the primary key or on candidate keys (user_id).

```

CREATE TABLE IF NOT EXISTS "store_product" (
    "id"      integer NOT NULL,
    "name"    varchar(200),
    "price"   real NOT NULL,
    "digital" bool,
    "image"   varchar(100),
    "description" TEXT,
    "InventoryQuantity" NUMERIC,
    "AverageRating"     REAL,
    "NumberOfReviews"   INTEGER,
    "StoreAvailability"  INTEGER,
    "BrandName" TEXT,
    "BagType" TEXT,
    "imageURL" varchar(200),
    PRIMARY KEY("id" AUTOINCREMENT)
);

```

Identifying Dependencies and Normal Form:

id is the primary key.

Functional dependencies:

id -> name, price, digital, image, description, InventoryQuantity, AverageRating, NumberOfReviews, StoreAvailability, BrandName, BagType, imageURL

This schema adheres to BCNF since all attributes seem to be functionally dependent on the primary key.

```

CREATE TABLE IF NOT EXISTS "store_salesperson" (
    "salesperson_ID"      INTEGER NOT NULL UNIQUE,
    "salesperson_name"    TEXT,
    "address"              varchar(20),
    "email"                varchar(20),
    "job_title"            TEXT,

```



```
    "salary"INTEGER,  
    "store_assigned"    INTEGER,  
    PRIMARY KEY("salesperson_ID" AUTOINCREMENT)  
);
```

Identifying Dependencies and Normal Form:

salesperson_ID is the primary key.

Functional dependencies:

salesperson_ID -> salesperson_name, address, email, job_title, salary, store_assigned

This schema adheres to BCNF since all attributes seem to be functionally dependent on the primary key.

```
CREATE TABLE IF NOT EXISTS "store_warehouse" (  
    "id"    INTEGER NOT NULL,  
    "address"    varchar(20),  
    "Store_Manager"    TEXT,  
    "Salespersons" INTEGER,  
    "Region_ID"    INTEGER,  
    PRIMARY KEY("id")  
);
```

Identifying Dependencies and Normal Form:

id is the primary key.

Functional dependencies:

id -> address, Store_Manager, Salespersons, Region_ID

This schema adheres to BCNF since all attributes appear to be functionally dependent on the primary key.

```
CREATE TABLE IF NOT EXISTS "store_cart" (  
    "cart_id"    INTEGER NOT NULL UNIQUE,  
    "cart_count"    INTEGER,  
    "order_id"    INTEGER,  
    FOREIGN KEY("order_id") REFERENCES "store_order"("id"),  
    PRIMARY KEY("cart_id")  
);
```

Identifying Dependencies and Normal Form:

cart_id is the primary key.

Functional dependencies:

cart_id -> cart_count, order_id

order_id -> (referencing "store_order" table)

This schema adheres to BCNF since all attributes seem to be functionally dependent on the primary key or on candidate keys (order_id).

```
CREATE TABLE IF NOT EXISTS "store_region" (  
    "id"    INTEGER NOT NULL,  
    "region"    TEXT,  
    PRIMARY KEY("id")  
);
```

```

        "Region_ID"    INTEGER NOT NULL,
        "Region_name" TEXT,
        "RegionalManagerID"  INTEGER,
        "TotalSales"    INTEGER,
        PRIMARY KEY("Region_ID")
    );

```

Identifying Dependencies and Normal Form:

Region_ID is the primary key.

Functional dependencies:

Region_ID -> Region_name, RegionalManagerID, TotalSales

This schema adheres to BCNF since all attributes seem to be functionally dependent on the primary key.

```

CREATE TABLE IF NOT EXISTS "store_order" (
    "id" integer NOT NULL UNIQUE,
    "date_ordered" datetime NOT NULL,
    "complete" bool,
    "transaction_id" varchar(200),
    "customer_id" bigint,
    "razor_pay_order_id" varchar(100),
    "razor_pay_payment_id" varchar(100),
    "razor_pay_payment_signature" varchar(100),
    FOREIGN KEY("customer_id") REFERENCES "store_customer"("id") DEFERRABLE INITIALLY
    DEFERRED,
    FOREIGN KEY("transaction_id") REFERENCES "store_transactions"("id"),
    PRIMARY KEY("id" AUTOINCREMENT)
);

```

Identifying Dependencies and Normal Form:

id is the primary key.

Functional dependencies:

id -> date_ordered, complete, transaction_id, customer_id, razor_pay_order_id,
razor_pay_payment_id, razor_pay_payment_signature

customer_id -> (referencing "store_customer" table)

transaction_id -> (referencing "store_transactions" table)

This schema adheres to BCNF since all attributes seem to be functionally dependent on the primary key or on candidate keys (customer_id, transaction_id).

```

CREATE TABLE IF NOT EXISTS "store_transactions" (
    "id" varchar(200) NOT NULL,
    "date" datetime,
    "salesperson_name" TEXT,
    "total_amount" REAL,
    "customer_id" INTEGER,
    "product_id" INTEGER,
    FOREIGN KEY("product_id") REFERENCES "store_product"("id"),

```

```
FOREIGN KEY("salesperson_name") REFERENCES "store_salesperson"("salesperson_name"),
FOREIGN KEY("customer_id") REFERENCES "store_customer"("id"),
PRIMARY KEY("id")
);
```

Identifying Dependencies and Normal Form:

id is the primary key.

Functional dependencies:

id -> date, salesperson_name, total_amount, customer_id, product_id

product_id -> (referencing "store_product" table)

salesperson_name -> (referencing "store_salesperson" table)

customer_id -> (referencing "store_customer" table)

This schema adheres to BCNF since all attributes seem to be functionally dependent on the primary key or on candidate keys (product_id, salesperson_name, customer_id).

1. Entity Set: auth_user

Attributes:

- ✓ id (Primary Key)
- ✓ password
- ✓ last_login
- ✓ is_superuser
- ✓ username
- ✓ last_name
- ✓ email
- ✓ is_staff
- ✓ is_active
- ✓ date_joined
- ✓ first_name

-

2. Entity Set: store_shippingaddress

Attributes:

- ✓ id (Primary Key)
- ✓ address
- ✓ city
- ✓ state
- ✓ zipcode
- ✓ date_added
- ✓ customer_id (Foreign Key referencing store_customer)
- ✓ order_id (Foreign Key referencing store_order)

3. Entity Set: store_orderitem

Attributes:

- ✓ id (Primary Key)
- ✓ quantity
- ✓ date_added
- ✓ order_id (Foreign Key referencing store_order)
- ✓ product_id (Foreign Key referencing store_product)

4. Entity Set: store_product

Attributes:

- ✓ id (Primary Key)
- ✓ name
- ✓ image1
- ✓ image2
- ✓ image3

5. Entity Set: store_customer

Attributes:

- ✓ id (Primary Key)
- ✓ name
- ✓ email
- ✓ user_id (Unique, Foreign Key referencing auth_user)
- ✓ City
- ✓ Age
- ✓ Marriage_status
- ✓ Gender
- ✓ Income
- ✓ Customer_type
- ✓ Business_category
- ✓ Company_income

6. Entity Set: store_product

Attributes:

- ✓ id (Primary Key)
- ✓ name
- ✓ price
- ✓ digital
- ✓ image
- ✓ description
- ✓ InventoryQuantity
- ✓ AverageRating
- ✓ NumberOfReviews
- ✓ StoreAvailability
- ✓ BrandName

- ✓ BagType
- ✓ imageURL

7. Entity Set: store_salesperson

Attributes:

- ✓ salesperson_ID (Primary Key)
- ✓ salesperson_name
- ✓ address
- ✓ email
- ✓ job_title
- ✓ salary
- ✓ store_assigned

8. Entity Set: store_warehouse

Attributes:

- ✓ id (Primary Key)
- ✓ address
- ✓ Store_Manager
- ✓ Salespersons
- ✓ Region_ID

9. Entity Set: store_cart

- Attributes:

- ✓ cart_id (Primary Key)
- ✓ cart_count
- ✓ order_id (Foreign Key referencing store_order)

10. Entity Set: store_region

- Attributes:

- ✓ Region_ID (Primary Key)
- ✓ Region_name
- ✓ RegionalManagerID
- ✓ TotalSales

11. Entity Set: store_order

Attributes:

- ✓ id (Primary Key)
- ✓ date_ordered
- ✓ complete
- ✓ transaction_id
- ✓ customer_id (Foreign Key referencing store_customer)
- ✓ razor_pay_order_id
- ✓ razor_pay_payment_id
- ✓ razor_pay_payment_signature

12. Entity Set: store_transactions

Attributes:

- ✓ id (Primary Key)
- ✓ Date
- ✓ salesperson_name (Foreign Key referencing store_salesperson)
- ✓ total_amount
- ✓ customer_id (Foreign Key referencing store_customer)
- ✓ product_id (Foreign Key referencing store_product)

Here are the relationship sets corresponding to the entity sets in the provided database schema:

1. Relationship Set: auth_user: This entity set represents user authentication details and doesn't explicitly have a relationship with other entities. It serves as a foundational table storing user credentials.

2. Relationship Set: store_shippingaddress: This entity set establishes a relationship between shipping addresses and orders. Each shipping address is associated with an order, connecting customers to their delivery locations.

3. Relationship Set: store_orderitem: Represents the items within an order. It links specific products to individual orders, indicating the quantity and date of addition to an order.

4. Relationship Set: store_sproduct: Represents standalone product details. It does not explicitly hold relationships with other entities but serves as a repository for product-specific attributes.

5. Relationship Set: store_customer: Associates customer-related details with user authentication data. It establishes a link between customers and their user IDs, providing demographic and categorization information.

6. Relationship Set: store_product: Defines relationships between products and their details. It encapsulates various attributes related to products available in the store.

7. Relationship Set: store_salesperson: Connects salespersons to their specific roles and assigned store details, linking employees to their job titles, salary, and assigned store.

8. Relationship Set: store_warehouse: Associates warehouse information with specific identifiers. It establishes links between warehouses and their managerial, location, and staffing details.

9. Relationship Set: store_cart: Represents the contents of a shopping cart in relation to orders. It connects shopping cart items to specific orders placed by customers.

10. Relationship Set: store_region: Links regions to their corresponding managerial and sales-related details. It connects regions with their managers and tracks sales within those areas.

11. Relationship Set: store_order: Represents the details of orders placed by customers. It links orders to transaction IDs, customer IDs, and associated payment information.

12. Relationship Set: store_transactions: Establishes connections between transactions, customers, salespersons, and products. It links specific transactions to customers, salespersons, and purchased products, capturing details of sales transactions.

Front-end Interface Design and Database Connectivity

In the DBMS Project for the Retail Website using Django and SQLite, the front-end interface design and database connectivity play pivotal roles in creating a seamless user experience. The front-end interface is meticulously crafted with a user-centric approach, focusing on intuitive navigation, visually appealing layouts, and responsive design across diverse devices. It incorporates user-friendly forms with stringent input validation, ensuring data accuracy before submission. Elements such as menus, navigation bars, and interactive components are thoughtfully designed to enhance usability and align with industry standards, fostering a positive user interaction environment.

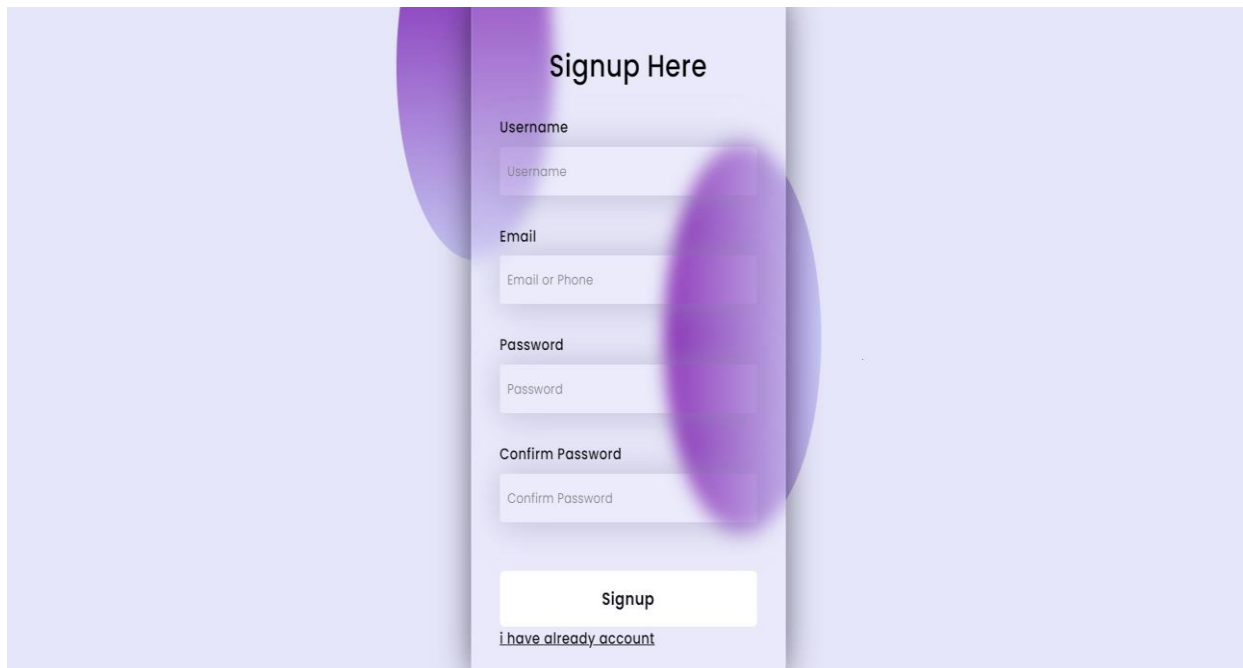
Complementing this interface, the database connectivity is facilitated through Django's robust Object-Relational Mapping (ORM) framework. This connectivity streamlines interactions between the front-end and the SQLite database, simplifying complex queries and operations by utilizing Python objects. The system seamlessly executes CRUD operations, enabling effortless data retrieval, modification, and storage. Data integrity and security take precedence, with encryption protocols and validation measures in place to protect data during transmission and storage. Moreover, query optimization strategies ensure efficient database performance, facilitating swift data retrieval and responses to user queries.

The integration aspect further enhances the system's capabilities. Integration with external APIs, such as payment gateways, demands smooth connectivity to facilitate uninterrupted services. Additionally, synchronization between the back-end logic and the front-end interface ensures real-time updates and seamless interactions, guaranteeing a cohesive and reliable retail website experience. Altogether, the meticulous design of the front-end interface, coupled with robust database connectivity and integration, forms the backbone of an efficient, secure, and user-friendly retail

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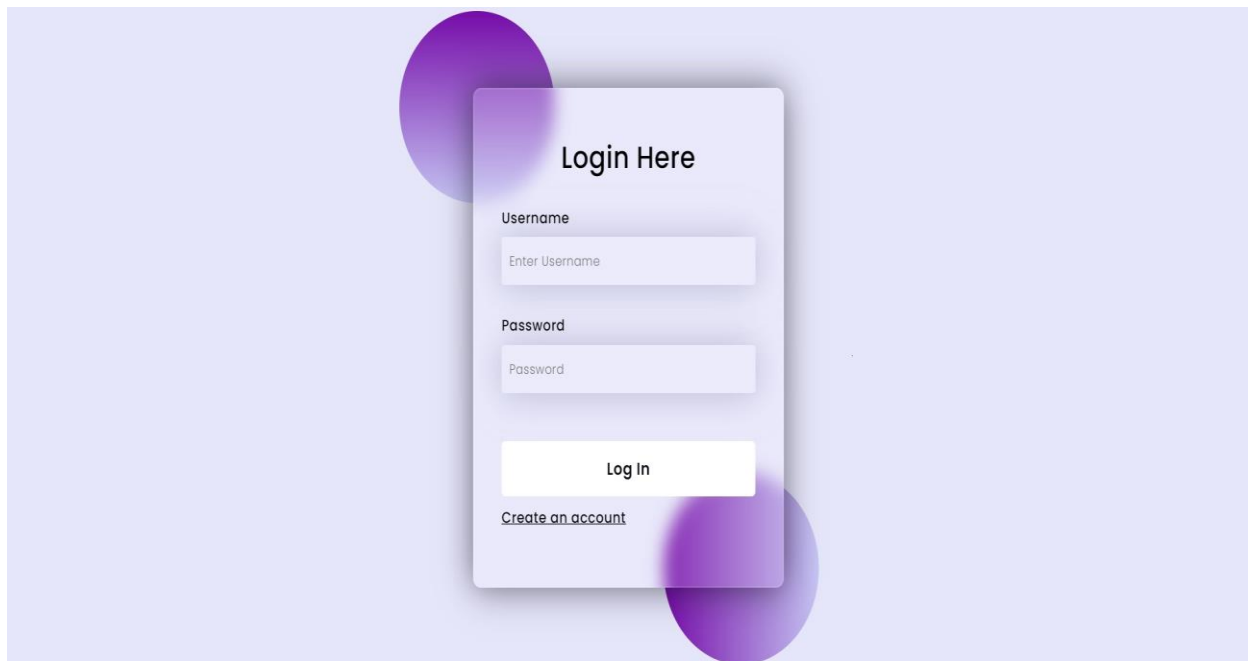
System Implementation

The emporium's system implementation prioritizes a seamless and secure user experience for both customers and employees. For customer interactions, the signup process is designed to be user-friendly, requiring essential details for account creation. The login process for customers is quick and secure, ensuring access to personalized features and order history.



A vertical form titled "Signup Here" on a light purple background with large, faint purple circles. The form contains the following fields and elements:

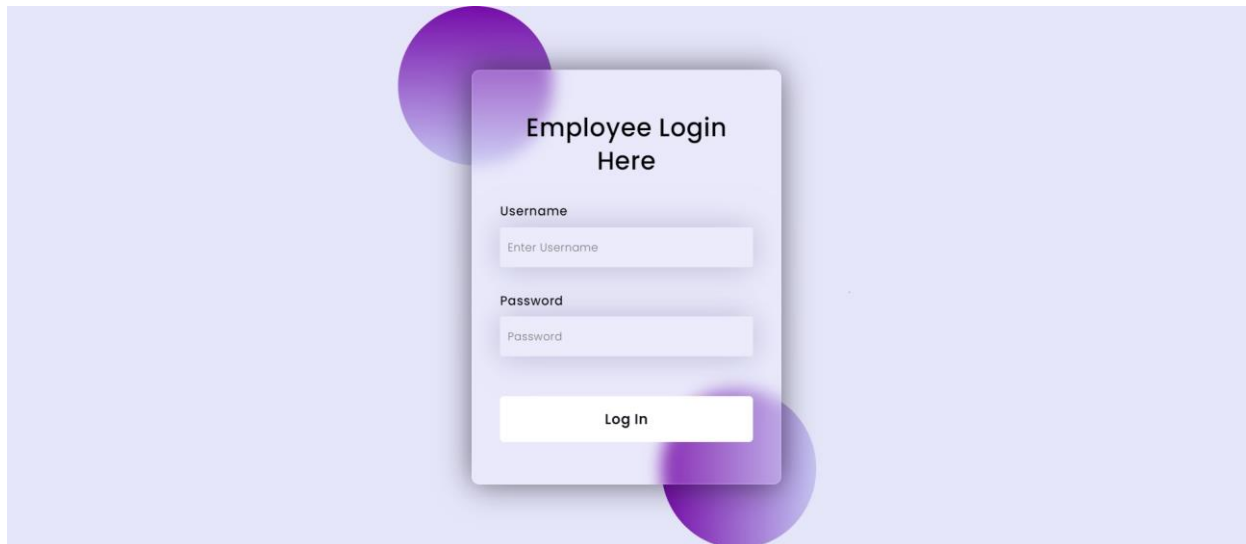
- Username**: A text input field with the placeholder "Username".
- Email**: A text input field with the placeholder "Email or Phone".
- Password**: A text input field with the placeholder "Password".
- Confirm Password**: A text input field with the placeholder "Confirm Password".
- Signup**: A yellow button with the text "Signup".
- [i have already account](#): A link at the bottom of the form.



A vertical form titled "Login Here" on a light purple background with large, faint purple circles. The form contains the following fields and elements:

- Username**: A text input field with the placeholder "Enter Username".
- Password**: A text input field with the placeholder "Password".
- Log In**: A yellow button with the text "Log In".
- [Create an account](#): A link at the bottom of the form.

Simultaneously, employees have a dedicated login portal with stringent security measures, allowing them to efficiently manage inventory, process orders, and provide exceptional customer service. The implementation emphasizes simplicity, security, and efficiency to enhance both customer satisfaction and operational effectiveness.

A mockup of an employee login portal. It features a light purple background with two large, semi-transparent purple circles. In the center is a white rectangular login form with a subtle drop shadow. The form has the title "Employee Login Here" at the top. Below the title are two input fields: "Username" with a placeholder "Enter Username" and "Password" with a placeholder "Password". At the bottom of the form is a white "Log In" button.

Employee Login Here

Username

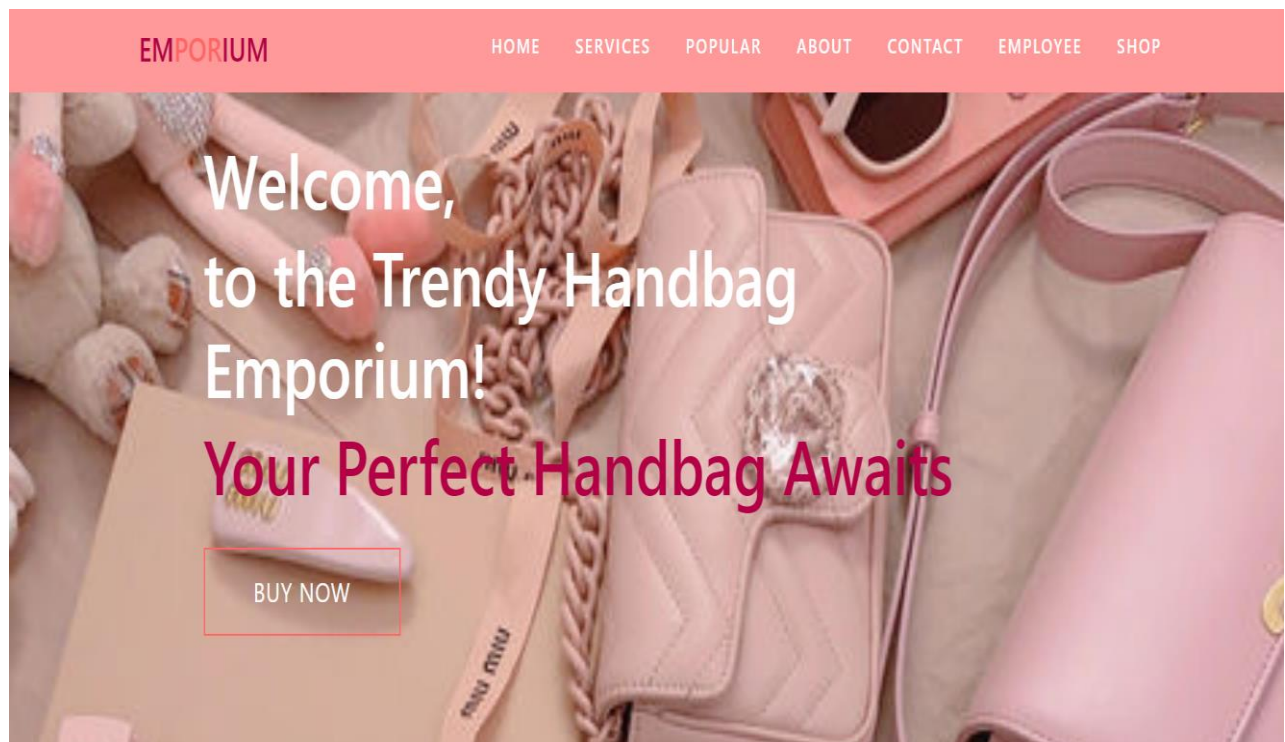
Enter Username

Password

Password

Log In

The **Home** section prominently displays the brand name and an illustrative image, effectively conveying the brand's identity.




The **Services** section articulates the array of services offered by the brand, providing users with insights into the brand's offerings.

EMPORIUM

HOME SERVICES POPULAR ABOUT CONTACT EMPLOYEE SHOP


SERVICES

We promise the best service to you!




SUPPORT FOR YOUR HANDBAG NEEDS

Our dedicated support team is available 24 hours a day, 7 days a week to assist you with any questions or concerns you may have about our exquisite handbags. Whether you want to know more about the unique features of our bags or need guidance on how to care for them, we're here for you at any time.




EXPRESS DELIVERY FOR YOUR HANDBAG

We understand the excitement of receiving your new handbag, and that's why we offer express delivery services to get your items to you as fast as possible. With delivery times ranging from 24 to 72 hours, you can enjoy your stylish handbag without any unnecessary delays. Say goodbye to worries about product



PRODUCT SERVICE FOR YOUR HANDBAG

If your handbag requires repair, our dedicated team is here to assist you. Simply contact us, and our experts will guide you through the process. For your convenience, we can even send skilled professionals directly to your location for product repair. Best of all, if your product is still under warranty, the repair service is



SECURE PAYMENTS FOR YOUR HANDBAGS

Shop with confidence! We prioritize the security of your online payments. There's no need to worry when making a purchase on our platform. We've partnered with trusted Visa payment transfer gateways, and now you can also make secure payments through net banking. Your payment details and

The **Popular** section is dedicated to showcasing the brand's popular products, offering users a curated selection.


EMPORIUM


HOME SERVICES POPULAR ABOUT CONTACT EMPLOYEE SHOP

Tote Bag

Tote bags are known for their spacious, open-top design with sturdy straps. They are ideal for everyday use, offering ample room for essentials like a laptop, books, and more.

Style Tip: Perfect for the woman on the go, tote bags effortlessly blend functionality with fashion, making them a versatile choice for work or casual outings.






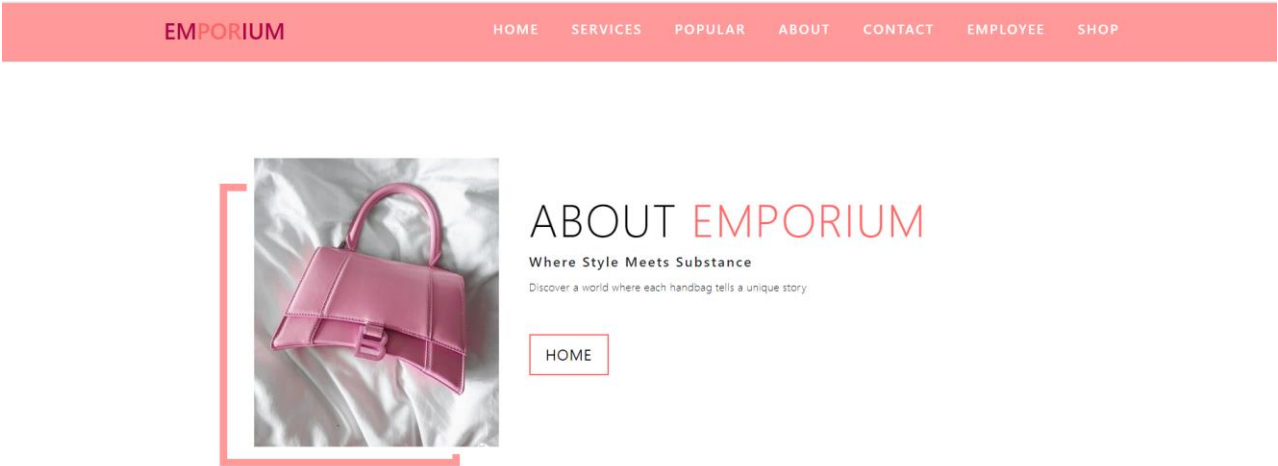
Clutch Bag

Clutches are small, handheld bags designed for elegant evenings or formal events. They are typically compact and may not have a strap. Clutches come in various shapes and materials, adding a touch of sophistication to any outfit.

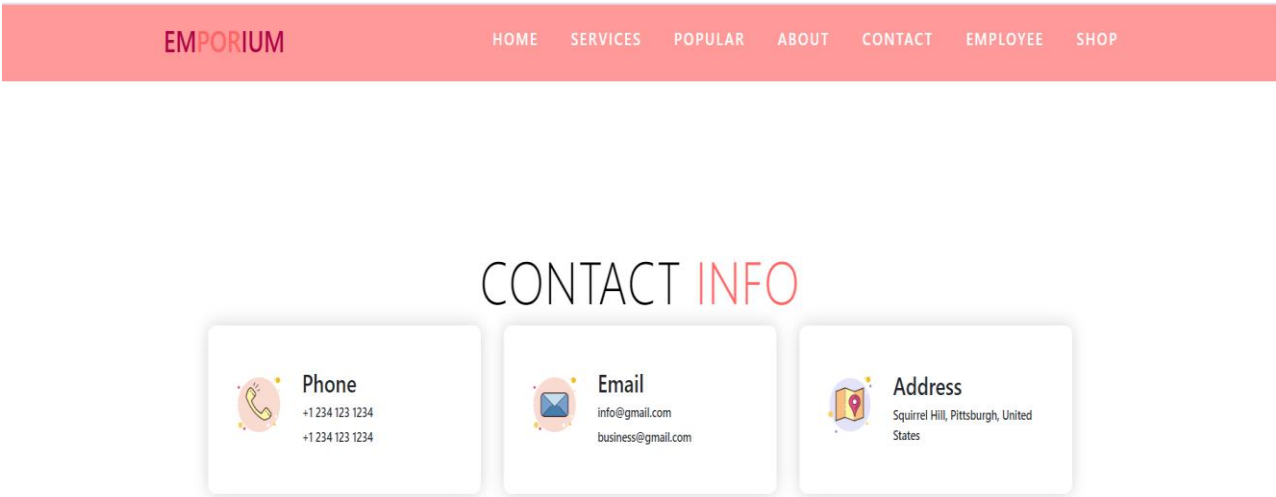
Style Tip: Pair a sleek clutch with your evening gown or cocktail dress for a refined and polished look.



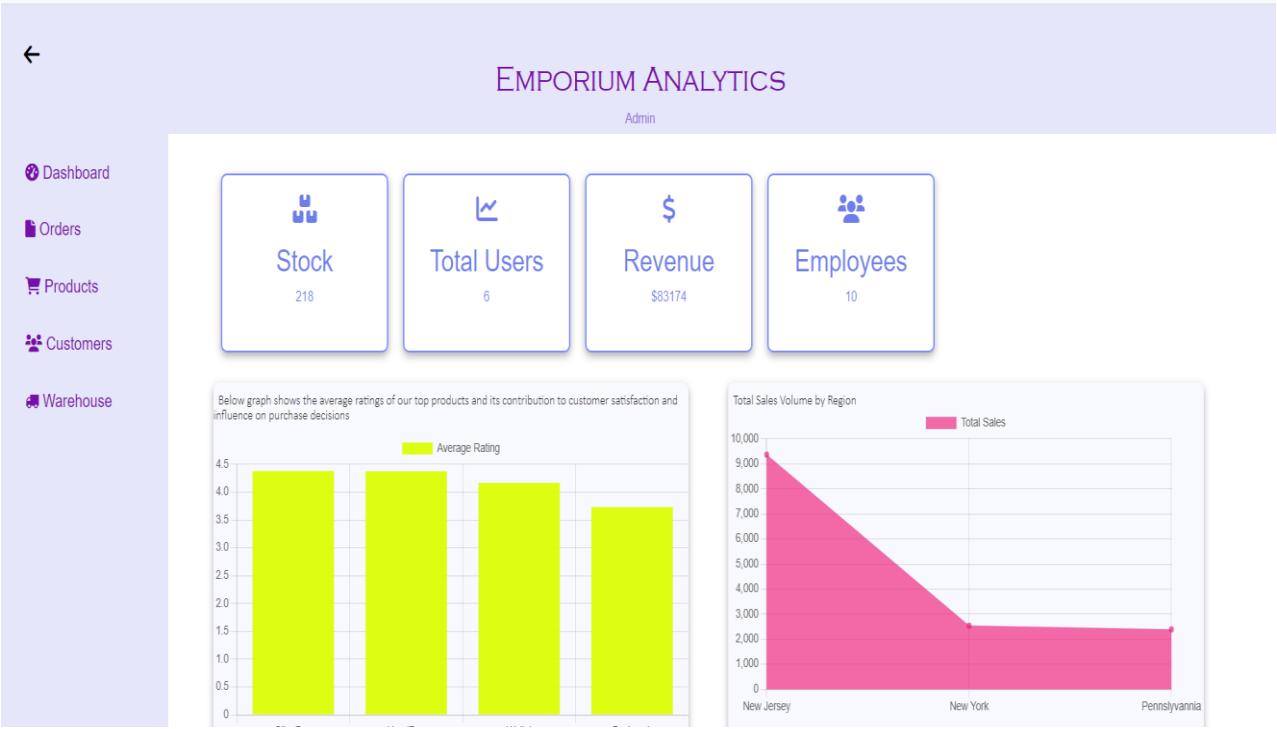
The **About** page provides insight into Emporium's story, mission, and values. It introduces the founders, sharing the brand's journey in curating a unique collection of designer handbags. Behind-the-scenes glimpses of the team and the meticulous process of selecting and sourcing exclusive designs enhance the connection between Emporium and its customers.



The **Contact** section facilitates user engagement by providing essential contact details, including email, phone, and address.



The **Dashboard** section is meticulously crafted to deliver a profound understanding of business analytics, employing an array of widgets and graphs that visually present a comprehensive overview. These widgets and graphs serve as dynamic tools, offering real-time insights into various aspects of the business, enabling users to grasp key metrics, trends, and performance indicators briefly.



Order Management:

The Employee page allows managers to efficiently manage orders. The interface provides a streamlined approach to handling the entire order fulfillment process.

←

EMPORIUM ANALYTICS

Admin

Dashboard

Orders

Products

Customers

Warehouse

Order Details			
Product	Order ID	Quantity	Actions
Michael Kors Charlotte Large 3-in-1 Tote Crossbody Handbag Leather	11	13	✎ ✖
ALDO Women's Jenilini Top Handle Bag	5	1	✎ ✖
Michael Kors Charlotte Large 3-in-1 Tote Crossbody Handbag Leather	12	3	✎ ✖
Kate Spade New York Madison Medium Satchel Saffiano Leather Handbag	12	2	✎ ✖
Calvin Klein Nickel Organizational Wallet on a String Crossbody	12	7	✎ ✖
Michael Kors Jet Set Glam Small Oval Crossbody Bag	12	2	✎ ✖
Calvin Klein Charlie Top Zip Organizational Shoulder Bag	12	1	✎ ✖
Calvin Klein Elaine Bubble Lamb Novelty Key Item Flap Backpack	12	1	✎ ✖
Michael Kors Jet Set Travel Continental Wallet Wristlet	12	1	✎ ✖

Update Order Item

Product:

Michael Kors Charlotte Large 3-in-1 Tote Crossbody Handbag Leather

Order:

11

Quantity:

13

Save Changes

Back to List

Delete Order Item

Are you sure you want to delete this order item?

Yes, delete

Cancel

Product Management:

Emporium's staff can easily manage the product catalog through the Employee page. This includes adding new products, updating existing listings, and removing items from inventory. The intuitive interface ensures efficient product management.

←

EMPORIUM ANALYTICS

Admin

Dashboard












































Orders

Products

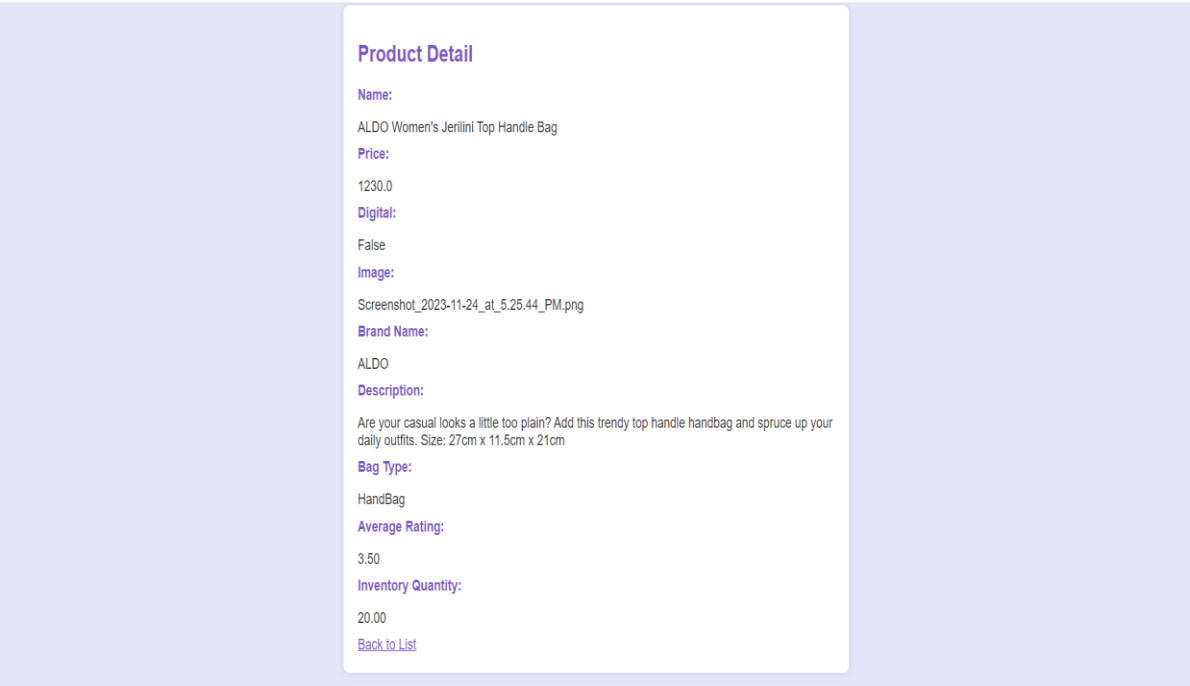
Customers

Warehouse

Product Details

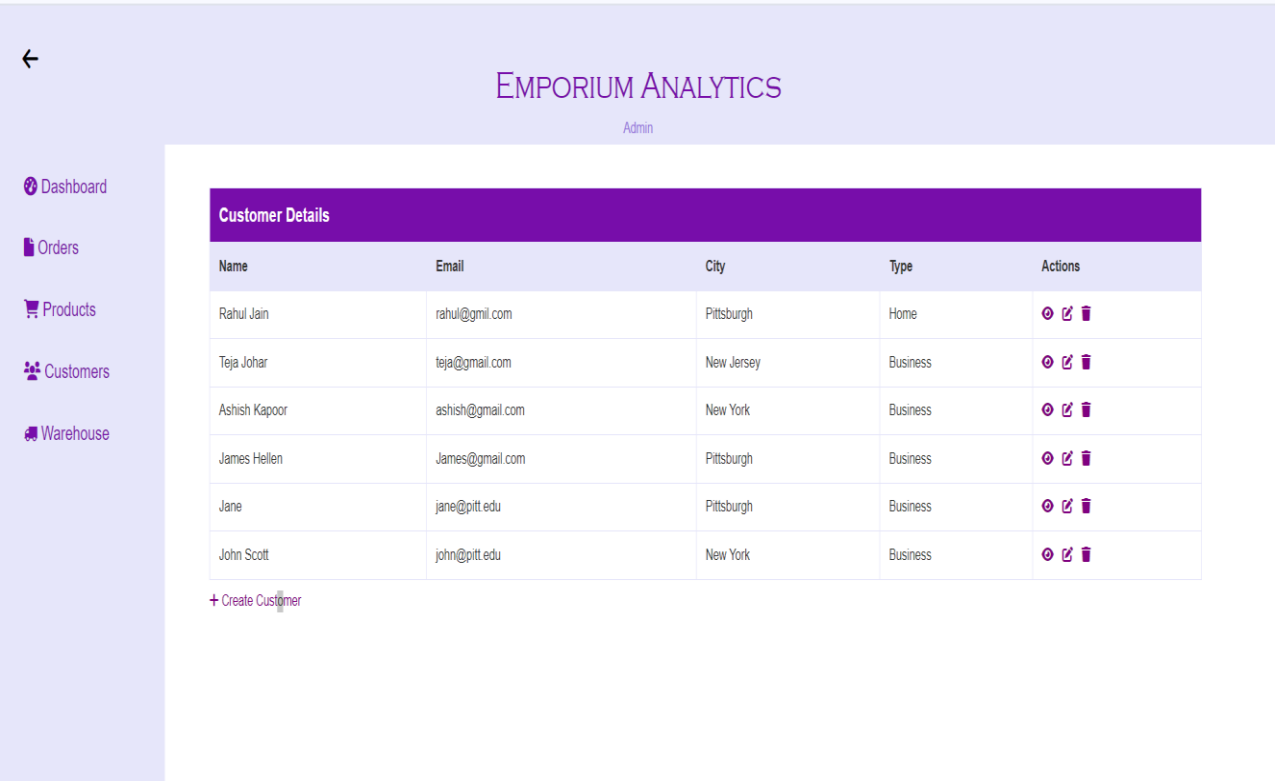
Name	Price	Actions
ALDO Women's Jetline Top Handle Bag	1230.0	  
ALDO Women's Gemaar Crossbody Bag	2000.0	  
ALDO Women's Liguisto Wallet, Black	412.0	  
ALDO Women's Gallinia Backpack	1300.0	  
Michael Kors Charlotte Large 3-in-1 Tote Crossbody Handbag Leather	1439.0	  
Michael Kors Jet Set Glam Small Oval Crossbody Bag	340.0	  
Michael Kors Jet Set Travel Continental Wallet Wristlet	600.0	  
Michael Kors East West Chain	765.0	  
Michael Kors Phoebe Medium Zip Pocket Backpack Brown MK Signature	180.0	  
Celine Klein Charlie Top Zip Organizational Shoulder Bag	690.0	  
Celine Klein Estelle Novelty Crossbody	950.0	  
Celine Klein Key Item Saffiano Continental Zip Around Wallet with Wristlet Strap	394.0	  
Celine Klein Nickel Organizational Wallet on a String Crossbody	1500.0	  
Celine Klein Elaine Bubble Lamb Novelty Key Item Flap Backpack	700.0	  
Kate Spade New York Madison Medium Satchel Saffiano Leather Handbag	2000.0	  

+ Add Product



Customer Management:

Emporium empowers its staff to manage customer information effectively. This includes tracking buying patterns, providing personalized assistance, and maintaining a database of customer preferences. The customer management features contribute to enhanced customer engagement.



Create Product

Name:

Price:

BrandName:

BagType:

AverageRating:

InventoryQuantity:

Warehouse Management:

The website's logistics are seamlessly handled through the Employee page's warehouse management capabilities. Managers can oversee inventory levels, track shipments, and optimize warehouse operations for a smooth and efficient supply chain.

←

EMPORIUM ANALYTICS

Admin

Dashboard

Orders

Products

Customers

Warehouse

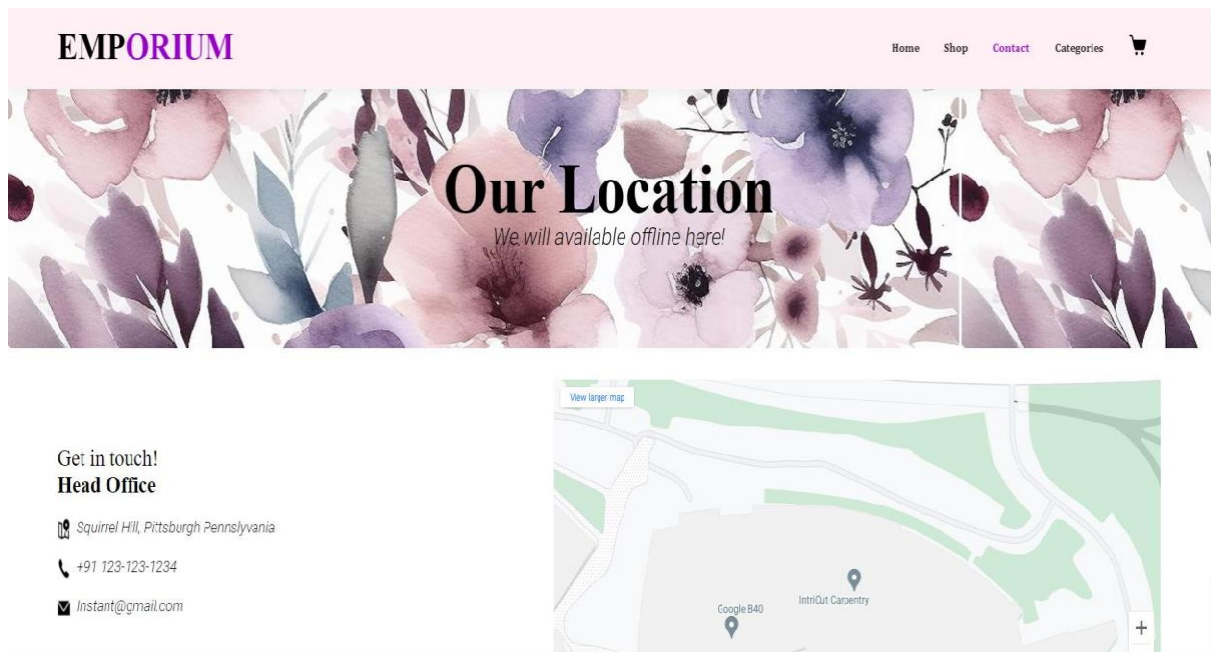
Warehouse Details

Address	Manager	Salesperson Count	Actions
2345 Forbes	Mary John	11	<div><div></div><div></div><div></div></div>
2114 Craft	Kate Williams	2	<div><div></div><div></div><div></div></div>
4572 Centre	Nate Cullen	3	<div><div></div><div></div><div></div></div>
5671 DT	Edward McDonnell	1	<div><div></div><div></div><div></div></div>
2345 Murray	Scott Adams	10	<div><div></div><div></div><div></div></div>

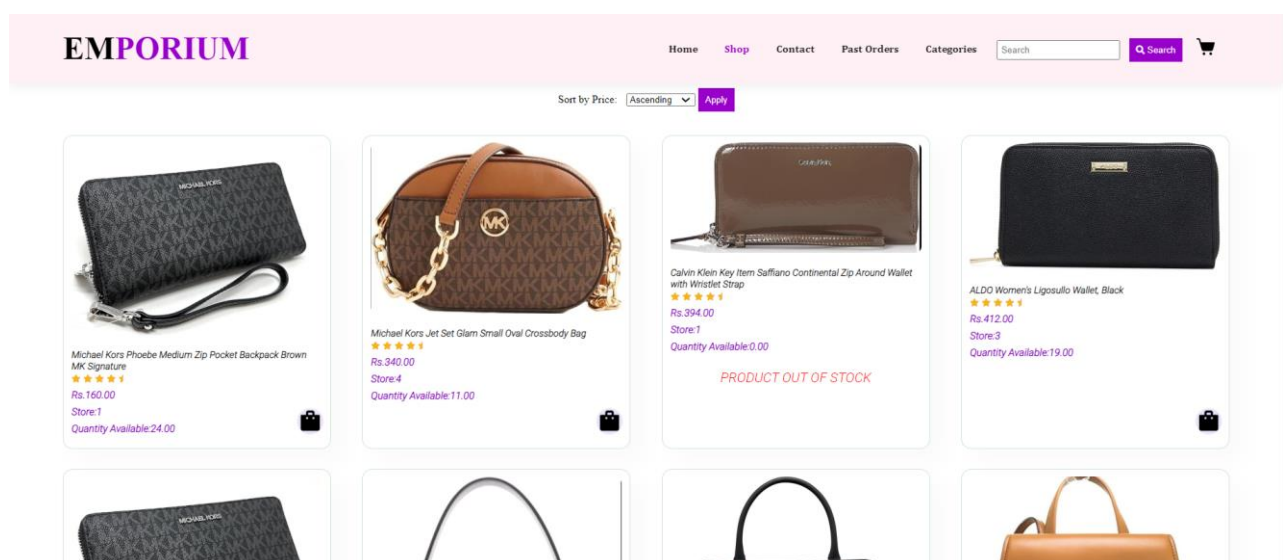
+ Create Warehouse

Overall, the dashboard combines user-centric interfaces with robust backend operations, ensuring secure and efficient handling of consumer accounts, store details, and product management, streamlining administrative tasks for employees while maintaining data integrity and security.

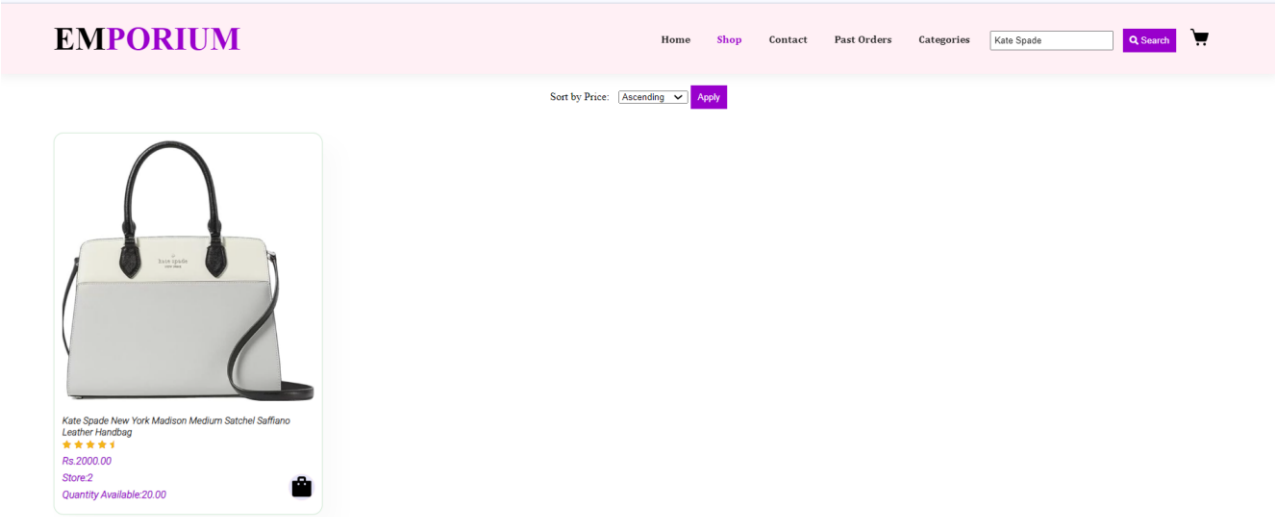
The **Contact** option triggers redirection to a page housing offline shopping information. This page features a header offering options for online shopping, product category searches, and exploration of available categories.



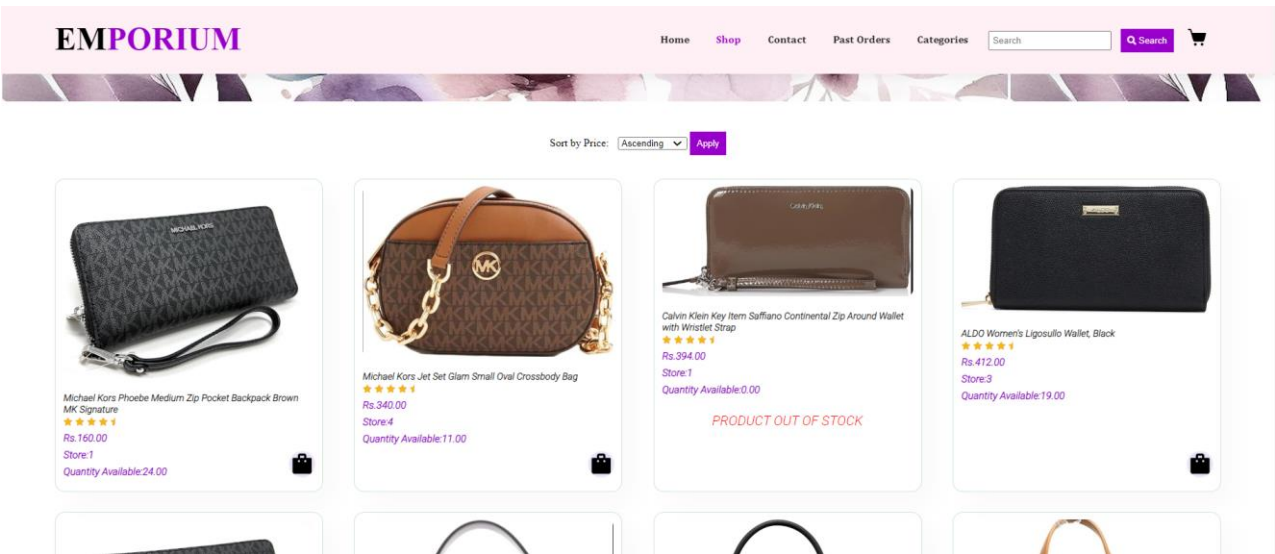
The **Product Browsing** page on our emporium is thoughtfully designed to enhance user experience. With a user-friendly **search option**, customers can effortlessly explore our extensive collection by entering specific brand names or bag types. This intuitive feature streamlines the shopping process, ensuring that users can quickly find products that align with their preferences. The combination of a visually appealing layout and a robust search function creates a seamless and enjoyable browsing experience for our valued customers.



The **Search bar** provided by the system is a robust search functionality allowing users to efficiently find products by entering keywords or product categories. This feature enhances user experience by swiftly narrowing down choices from a diverse product inventory based on user-defined criteria or search queries.



Additionally, we have incorporated convenient **sorting options** to further enhance your shopping experience. You can now arrange the displayed products in ascending or descending order based on their prices. This allows you to easily identify the best deals or the most premium items within our collection. Whether you're seeking budget-friendly options or luxury pieces, our ascending and descending sorting options provide you with the flexibility to tailor your browsing experience to your specific needs.





Sort by Price: Descending Apply



ALDO Women's Qiemar Crossbody Bag

★★★★★

Rs.2000.00

Store:3

Quantity Available:15.00



Kate Spade New York Madison Medium Satchel Saffiano Leather Handbag

★★★★★

Rs.2000.00

Store:2

Quantity Available:20.00



Calvin Klein Nickel Organizational Wallet on a String Crossbody

★★★★★

Rs.1500.00

Store:1



Michael Kors Charlotte Large 3-in-1 Tote Crossbody Handbag

★★★★★

Rs.1439.00

An **Add to Cart** button or similar functionality allows for quick inclusion of desired products without navigating away from the dashboard. Users can directly add products to their shopping cart from the product dashboard upon selecting items.



Sort by Price: Ascending Apply



Michael Kors Phoebe Medium Zip Pocket Backpack Brown MK Signature

★★★★★

Rs.160.00

Store:7

Quantity Available:24.00



Michael Kors Jet Set Glam Small Oval Crossbody Bag

★★★★★

Rs.340.00

Store:4

Quantity Available:11.00



Calvin Klein Key Item Saffiano Continental Zip Around Wallet with Wristlet Strap

★★★★★

Rs.394.00

Store:1

Quantity Available:0.00

PRODUCT OUT OF STOCK



ALDO Women's Ligosullo Wallet, Black

★★★★★

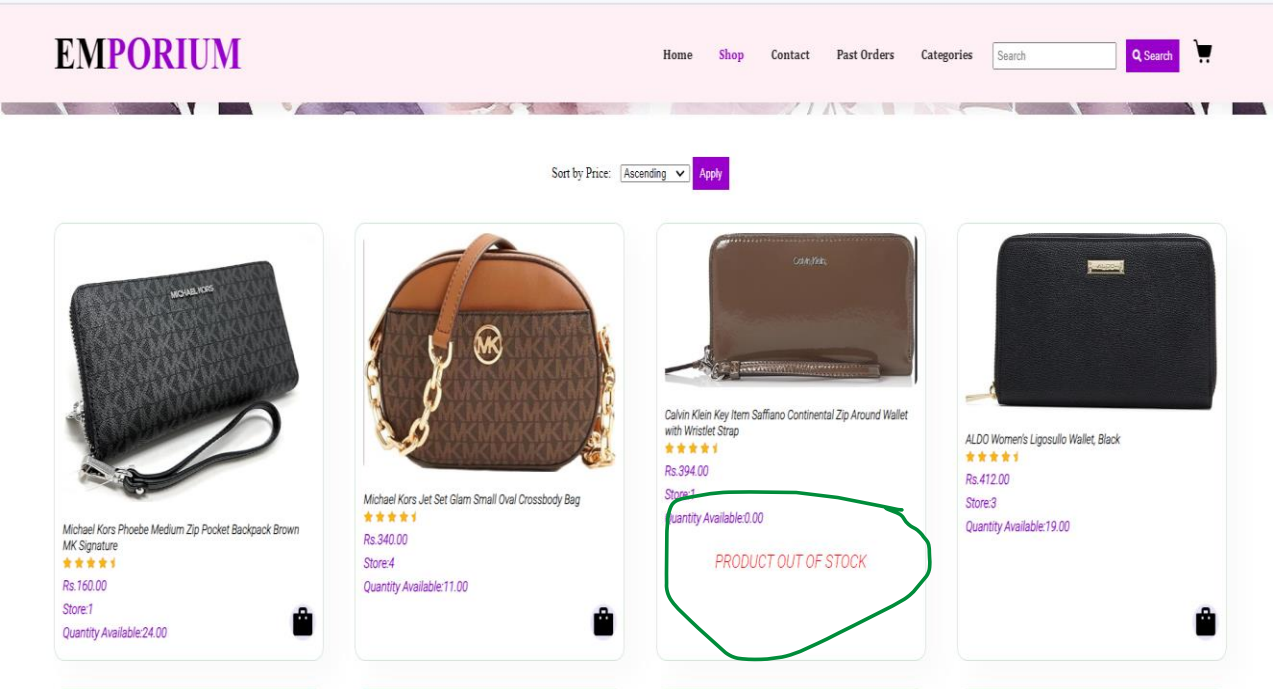
Rs.412.00

Store:3

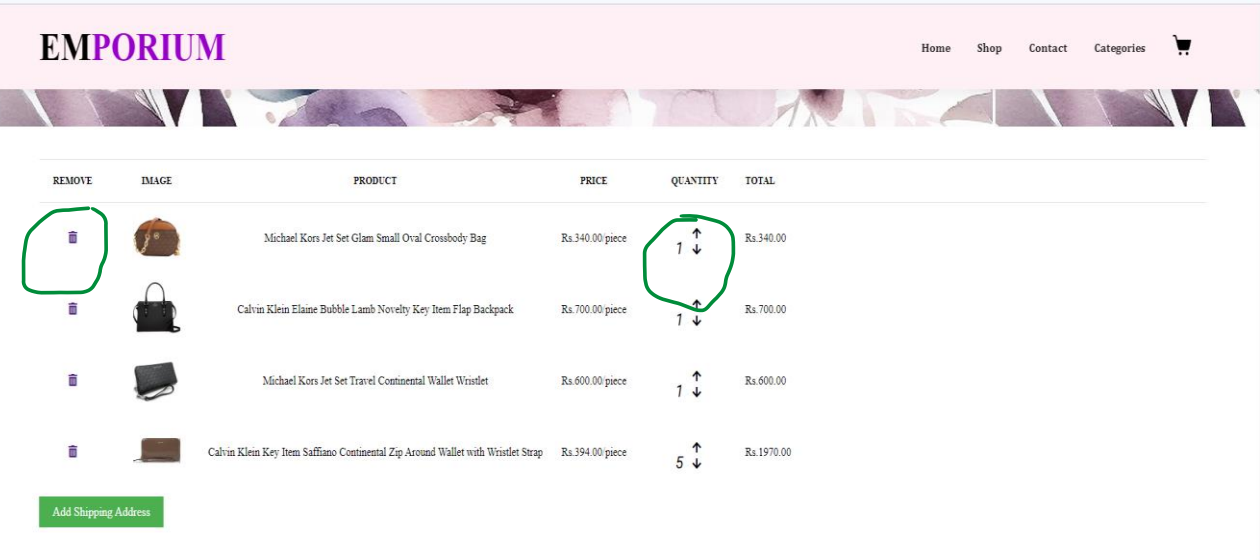
Quantity Available:19.00



To enhance user experience and transparency, our website employs a smart inventory management system. The **"Add to Cart" button is automatically disabled when a product is out of stock**, ensuring customers are aware of the availability status. This feature helps streamline the shopping process, preventing users from attempting to add unavailable items and promoting a seamless and frustration-free online shopping experience.



Our platform offers the convenience of managing your **shopping cart** with ease. Customers can effortlessly increase, decrease, or remove items from their cart, providing flexibility and control over their selections. This user-friendly feature enhances the overall shopping experience, allowing for convenient adjustments to suit individual preferences.



Note: CSS has been updated here after demo and this is an updated version

The implementation of **shipping address** functionality includes attributes such as name, address, city, and contact information. User interfaces are designed to enable users to manage addresses, employing Django's views and templates for a smooth user experience. Backend functionalities handle adding, editing, and deleting addresses, validating inputs, and ensuring data security through encryption and secure transmission protocols. Integration with checkout processes and order modules guarantees accurate shipping details for seamless transactions.

SHIPPING

Address:

City:

State:


Zipcode:

Submit

[Back to Cart](#)

Our website provides a range of **payment options** including credit/debit cards, UPI, and bank transfers, ensuring flexibility for our users. Upon successful payment, a confirmation message will be displayed, affirming the completion of the transaction, and ensuring a smooth and secure shopping experience.

EMPORIUM

[Home](#)[Shop](#)[Contact](#)[Categories](#)

Add Shipping Address

Apply coupon

Enter Your coupon

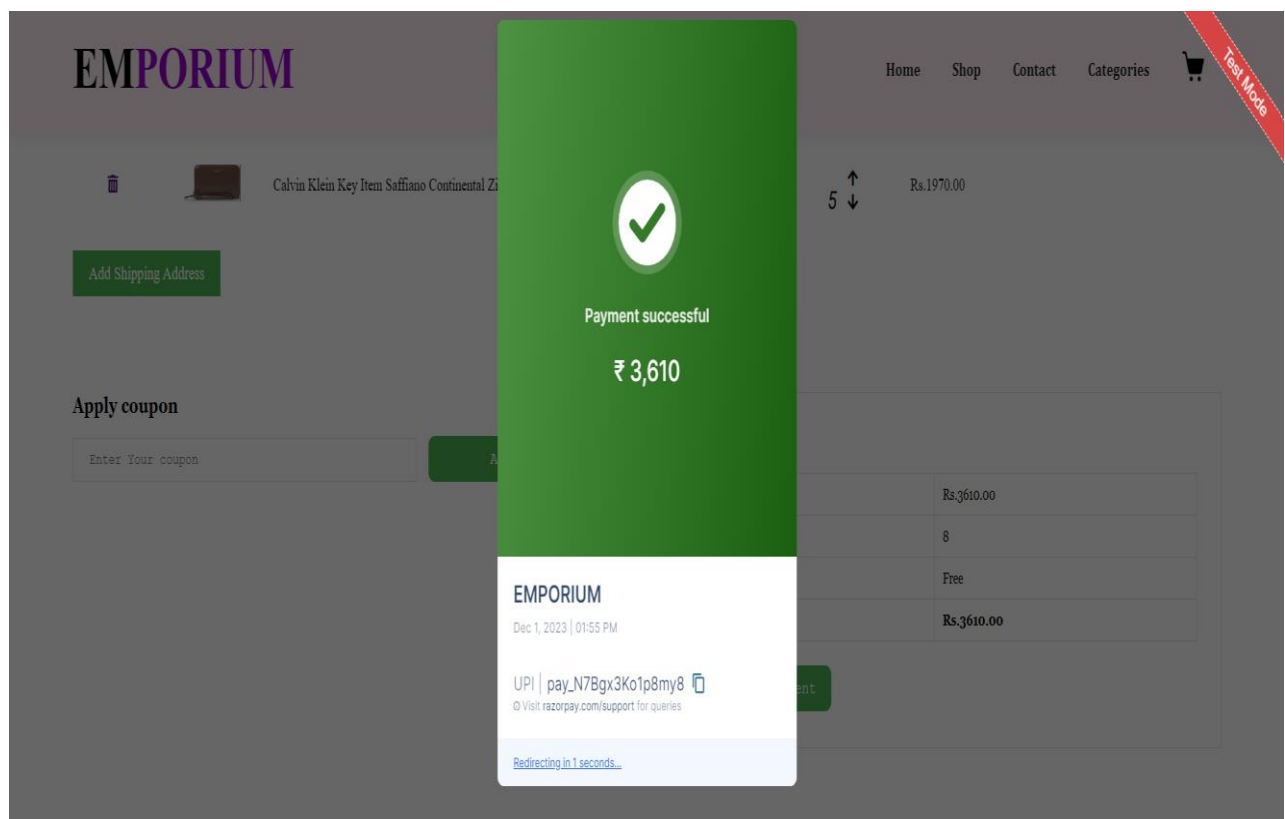
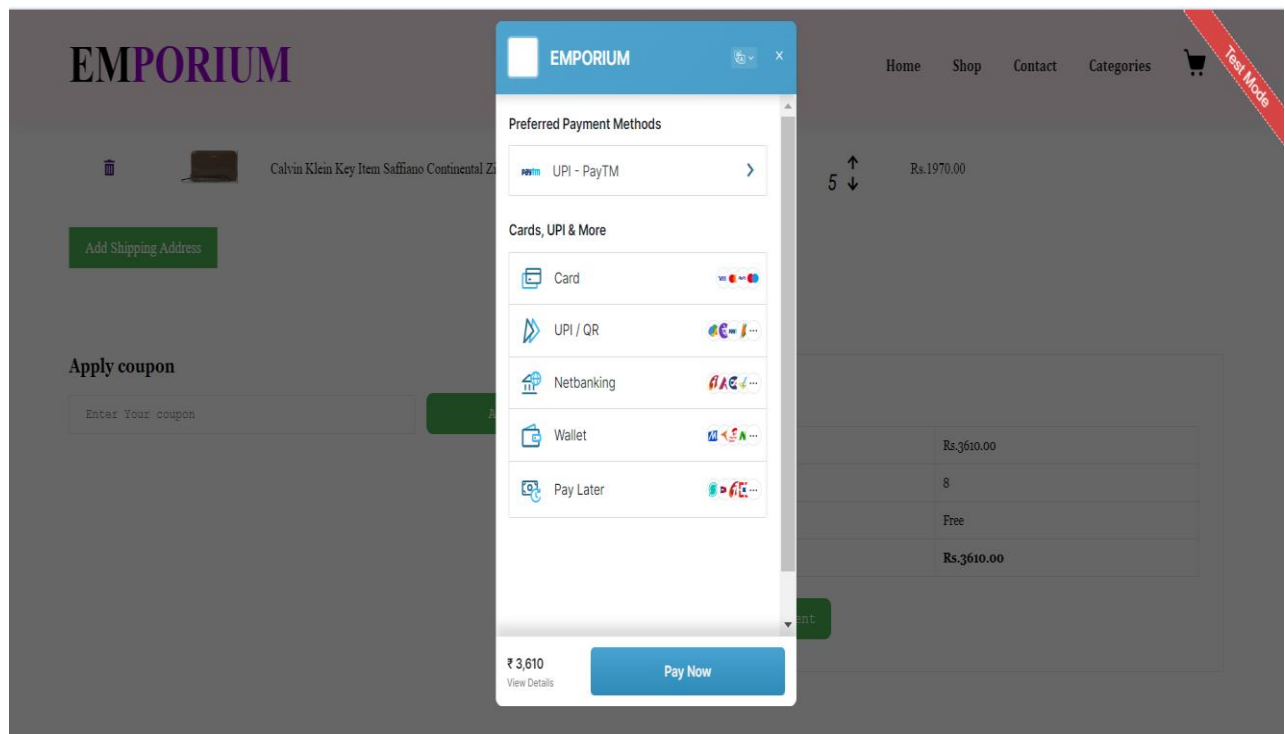
Apply

Cart Total

Cart Subtotal	Rs.3610.00
Total Items	8
Shipping	Free
Total	Rs.3610.00

Proceed to Payment

Success or Failure of transactions



Testing efforts and erroneous cases that your system can detect and handle.

Out-of-Stock Products: The system efficiently detects and handles out-of-stock scenarios by disabling the "Add to Cart" functionality for products that are unavailable. Users are promptly informed about the stock status through visual cues within the Products dashboard, preventing them from attempting to add these items to their carts. This approach streamlines user interactions and minimizes potential frustration caused by attempting to purchase products not currently in stock.

Invalid Inputs: The system's testing efforts include validation checks on login inputs by admin and salespersons to manage invalid data entry. In case of incorrect login credentials, the system promptly notifies the user, preventing unauthorized access. This functionality ensures secure login procedures and guards against potential breaches due to incorrect login information.

Duplicate Entries: The system's capability ensures to prevent duplicate entries in user accounts, product listings, and other system entities. Scenarios involving attempts to create duplicates were tested, and the system effectively detected and prevented such duplications. By incorporating validation mechanisms, the system maintains data consistency and accuracy, safeguarding against duplicate records and ensuring reliable and coherent system operations.

User permissions and authentication methods: This includes scrutinizing different user roles to ensure authorized access, preventing unauthorized modifications or access to sensitive data. Additionally, the system rigorously tests username and password authentication methods, addressing scenarios such as preventing duplicate usernames, enforcing password strength and length criteria, and securely handling instances of incorrect login credentials. By thoroughly testing these aspects, the system ensures stringent data security measures, maintains data integrity, and fortifies against unauthorized access or misuse.

Incorrect search bar entries: The testing procedures involved assessing the system's handling of incorrect spellings or non-existent products entered the search bar. In instances of such inputs, the system effectively refrained from displaying any product data on the page, indicating to users that the searched product may be misspelled or unavailable. This feature ensures users receive precise and relevant search results, elevating the overall user experience by avoiding misleading information or irrelevant product listings.

Invalid card number: Additional testing focused on evaluating the system's response to invalid card number entries during the payment process. In cases of incorrect or invalid card numbers, the system promptly generated error messages, notifying users of the input error and halting the transaction to prevent further processing. This functionality establishes a secure and reliable payment process by swiftly identifying and addressing invalid card number entries, thereby minimizing the risk of erroneous transactions or data discrepancies.

Furthermore, testing efforts extended to validating the system's functionalities within both the admin and products dashboards. Admin-initiated actions to add or delete data were accurately reflected in the database, confirming the system's responsiveness to administrative modifications. User interactions within the products dashboard, such as adding or deleting products from the cart, underwent thorough testing to ensure seamless synchronization with the database. This comprehensive testing guarantees that both admin and user actions result in updated database records, contributing to a dependable and efficient system operation.

Limitations

Limited User Engagement: While the platform encourages offline store contact, the engagement potential might be further explored through enhanced online interactions like live chat or forums.

Single Currency Support: The system's capability to process transactions might be confined to a single currency, potentially restricting its ability to cater to a global audience or diverse currency requirements.

Limited Analytics and Reporting: The available reporting tools offer limited depth in analyzing sales trends, customer behavior, and inventory analysis, constraining the depth of insights that can be gleaned from the data.

Opportunities for Improvement:

Interactive User Interface: Implementing live chat or community forums can elevate user engagement, fostering a vibrant user community and providing real-time assistance.

Expanded Business Analytics: Enhancing our business analytics to include in-depth analysis of user behavior, evaluating marketing effectiveness, and forecasting trends can significantly refine and optimize our decision-making processes.

Multicurrency support: To enhance accessibility for international shoppers, our system will display prices in their local currency. This feature eliminates the need for manual currency conversions as it dynamically adjusts to the viewer's country, ensuring a seamless shopping experience across different regions.

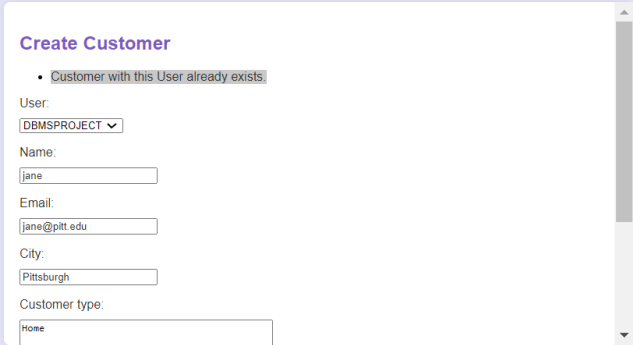
Customer Registration Benefits: Elevating user engagement by enabling order tracking, personalized recommendations, and fostering customer loyalty.

Scalability concerns: These could be tackled by utilizing flexible cloud services capable of accommodating increased website traffic and data influx. This approach will ensure the website's capability to manage high volumes of users and information. Additionally, specialized systems need to be employed to efficiently handle spikes in site traffic, providing additional support during periods of high online activity.

Email Notification system: Improving the email notification system involves personalizing content, refining design, segmenting users, automating delivery, ensuring compliance, collecting feedback, and optimizing communication. These enhancements aim to create a more engaging, compliant, and user-friendly system, ultimately boosting user satisfaction and engagement.

Update after demo

Customer Validation added in Employee Dashboard



Create Customer

- Customer with this User already exists.

User:
DBMSPROJECT ▼

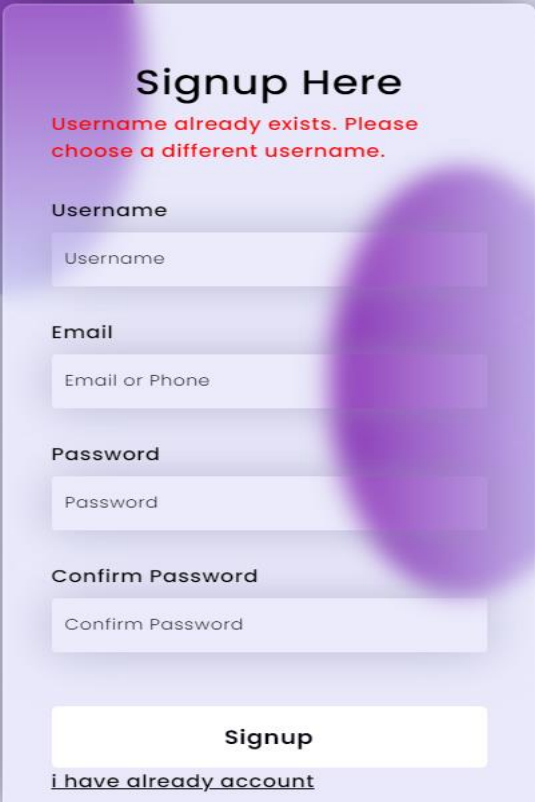
Name:
jane

Email:
jane@pitt.edu

City:
Pittsburgh

Customer type:
Home

Added validations inside the UI instead of Json server responses.



Signup Here

Username already exists. Please choose a different username.

Username
Username

Email
Email or Phone

Password
Password

Confirm Password
Confirm Password

Signup

[i have already account](#)

Signup Here

Your password and confirm password are not the same!

Username

Email

















Password

Confirm Password

Signup

[i have already account](#)

CSS of bin corrected here.

EMPORIUM						Home	Shop	Contact	Categories	
REMOVE	IMAGE	PRODUCT	PRICE	QUANTITY	TOTAL					
		Michael Kors Jet Set Glam Small Oval Crossbody Bag	Rs.340.00/piece	1  	Rs.340.00					
		Calvin Klein Elaine Bubble Lamb Novelty Key Item Flap Backpack	Rs.700.00/piece	1  	Rs.700.00					
		Michael Kors Jet Set Travel Continental Wallet Wristlet	Rs.600.00/piece	1  	Rs.600.00					
		Calvin Klein Key Item Saffiano Continental Zip Around Wallet with Wristlet Strap	Rs.394.00/piece	5  	Rs.1970.00					
						Add Shipping Address				