



Carlos Hilado Memorial State University

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ITPFL4 ADVANCE WEB APPLICATION DEVELOPMENT ENDTERM PROJECT

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Project Overview

Brief summary of the system

The Jewelry Management System is an e-commerce platform designed for selling stylish jewelry. The system enables customers to browse and purchase a wide range of products online, including earrings, necklaces, bracelets, and rings. It provides an easy-to-use interface for customers and efficient management of products, orders, and sales for administrators.

Target users

The target users are primarily women who love to buy jewelry for either personal use or as gifts for occasions. Men can also be target users since they love to purchase jewelry for their women.

Core features

- User registration and login
- Product catalog (earrings, necklaces, bracelets, rings)
- Product search and category filtering
- Product details with images and prices
- Shopping cart management
- Secure checkout and order placement
- Payment processing
- Order tracking and order history
- Customer profile management
- Admin product management (add, update, delete items)
- Inventory management
- Sales and order reports

System Objectives

What the system aims to solve or automate

The system aims to help people have affordable, but high-quality jewelry without needing to leave their homes. Customer just need to browse, order, and pay online and wait for their orders to arrive.



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Why it is useful

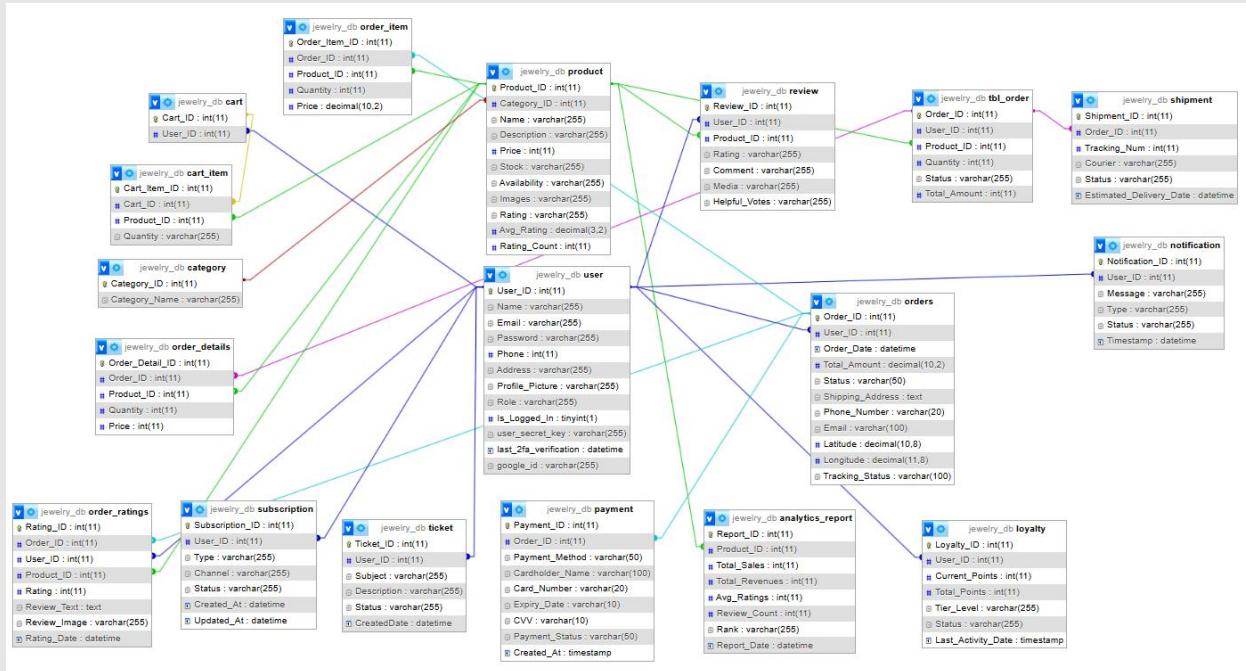
It is useful since it lessens the hassle for customers who have little to no time going to physical stores. Moreover, some customers prefer to order online rather than go to physical stores.

System Architecture

Technologies used - HTML, Tailwind CSS, JavaScript, PHP, MySQL.

Database Design

ERD



Database tables description

Table analytics_report
Report_ID integer
Product_ID integer
Total_Sales integer
Total_Revenues integer
Avg_Ratings integer
Review_Count integer
Rank varchar
Report_Date datetime

Table cart
Cart_ID integer
User_ID integer

Table cart_item
Cart_Item_ID integer
Cart_ID integer

Product_ID integer
Quantity varchar

Table category
Category_ID integer
Category_Name varchar

Table loyalty
Loyalty_ID integer
User_ID integer
Current_Points integer
Total_Points integer
Tier_Level varchar
Status varchar
Last_Activity_Date timestamp

Table notification
Notification_ID integer
User_ID integer
Message varchar
Type varchar
Status varchar
Timestamp datetime

Table orders
Order_ID integer
User_ID integer
Order_Date datetime
Total_Amount decimal
Status varchar
Shipping_Address text
Phone_Number varchar



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Email varchar

Latitude decimal
Longitude decimal
Tracking_Status varchar

Table order_details

Order_Detail_ID integer
Order_ID integer
Product_ID integer
Quantity integer
Price integer

Table order_item

Order_Item_ID integer
Order_ID integer
Product_ID integer
Quantity integer
Price decimal

Table order_ratings

Rating_ID integer
Order_ID integer
User_ID integer
Product_ID integer
Rating integer
Review_Text text
Review_Image varchar
Rating_Date datetime

Table payment

Payment_ID integer
Order_ID integer
Payment_Method varchar
Cardholder_Name varchar
Card_Number varchar
Expiry_Date varchar
CVV varchar

Payment_Status varchar
Created_At timestamp

Table product

Product_ID integer
Category_ID integer
Name varchar
Description varchar
Price integer
Stock varchar
Availability varchar
Images varchar
Rating varchar
Avg_Rating decimal
Rating_Count integer

Table review

Review_ID integer
User_ID integer
Product_ID integer
Rating varchar
Comment varchar
Media varchar
Helpful_Votes varchar

Table shipment

Shipment_ID integer
Order_ID integer
Tracking_Num integer
Courier varchar
Status varchar
Estimated_Delivery_Date datetime

Table subscription

Subscription_ID integer
User_ID integer

Type varchar

Channel varchar
Status varchar
Created_At datetime
Updated_At datetime

Table tbl_order

Order_ID integer
User_ID integer
Product_ID integer
Quantity integer
Status varchar
Total_Amount integer

Table ticket

Ticket_ID integer
User_ID integer
Subject varchar
Description varchar
Status varchar
CreatedDate datetime

Table user

User_ID integer
Name varchar
Email varchar
Password varchar
Phone integer
Address varchar
Profile_Picture varchar
Role varchar
Is_Logged_In tinyint
user_secret_key varchar
last_2fa_verification datetime
google_id varchar

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Sample data structure

User: Stores customer account information.

Fields: User_ID (PK), Name, Email, Password, Address, Phone_number, Profile Picture, and Role.

Implementation Details

How files are structured

- Both Assets and images folder contains images
- The db folder contains the database
- The vendor folder contains Composer and PHPGangsta
- The root folder contains PHP, composer.json, and composer.lock

Explanation of important modules

User Authentication Module

This handles user registration, login, logout, and password recovery. It keeps users logged in with PHP sessions and stores passwords safely using hashing.

Product Management Module

This lets the admin add, edit, or delete products and manage inventory. Product details like name, price, description, images, and stock are stored in MySQL, and JavaScript makes search, filtering, and image previews smooth.

Cart and Checkout Module

This lets users add products to the cart, change quantities, and remove items. Checkout collects user information and stores orders in the database. PHP does the calculations and JavaScript makes updates happen instantly.

Order Management Module

This lets the admin track orders, update status, and handle returns. Orders and order items are stored in MySQL, and JavaScript can show live order updates to users.

User Dashboard Module

This shows order history, profile information, saved addresses, and wishlists. JavaScript allows real-time updates like removing items from the wishlist.

Admin Dashboard Module

This gives the admin full control over users, products, orders, and site settings. JavaScript can show charts and stats, and Composer packages like PHPMailer can send notifications.

Search and Filtering Module

This lets users search products by name, category, or price. JavaScript handles live search and filters without reloading, while PHP gets results from the database.





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Security and Validation Module

This checks user input on both the frontend and backend. It stops SQL injection with prepared statements and keeps sessions secure.

Form handling and Server-side validation

Form handling

- User submits forms like signup, login, checkout
- Data is sent to the server using POST requests
- Server processes and responds with success or error messages

Server Side Validation

- Checks if fields are empty
- Validates email format and password strength
- Ensures numbers like price and quantity are valid
- Prevents duplicate emails or usernames
- Returns clear error messages to the user

Security considerations

- Prepared statements
- Password hashing
- Password salting
- Input validation and sanitization
- Database backups
- Secure cookies
- Session regeneration on login
- Role based access control
- Least privilege database user
- Encryption for sensitive data





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Data Integrity Requirements

Users

The screenshot shows the 'Manage Users' section of the Aurex application. On the left, there's a sidebar with a profile picture of 'STORE ADMINISTRATOR Benjo' and links for 'Dashboard', 'Manage Users' (which is selected), 'Manage Products', 'Manage Orders', 'Manage Ratings', and 'Sales Report'. A 'Sign Out' button is at the bottom. The main area has three tabs: 'ALL USERS' (8), 'ADMINS' (3), and 'CUSTOMERS' (5). Below is a table with columns: ID, NAME, EMAIL, ROLE, and ACTIONS (Edit and Delete). The data is as follows:

ID	NAME	EMAIL	ROLE	ACTIONS
68	matt	matt@gmail.com	Customer	[Edit] [Delete]
65	rebejoe	sgiam.rebejoe2@gmail.com	Customer	[Edit] [Delete]
8	Juan	juan@gmail.com	Customer	[Edit] [Delete]
7	france	france@gmail.com	Customer	[Edit] [Delete]
6	renz	renz@gmail.com	Customer	[Edit] [Delete]

Products

The screenshots show the Aurex e-commerce website with a dark brown header bar containing 'Aurex', 'Home', 'Collection', 'Products', 'Contact', 'Welcome, matt!', and 'Logout'.

- Bestseller Products:** This section features four products: 'Aurex Halo Studs', 'Aurex Solitaire Band', 'Aurex Meridian Bangles', and 'Aurex Driplite Earrings'. Each product card includes an image, name, price, stock status, review count, and 'Add to Cart' and 'Buy Now' buttons.
- Rings:** This section shows four rings: 'Aurex Vertex Ring', 'Aurex Linea Necklace', 'Aurex Zenith Huggie Hoops', and 'Aurex Zenith Twist Ring'. Each ring card includes an image, name, price, stock status, review count, and 'Add to Cart' and 'Buy Now' buttons.
- Necklaces/Bracelets:** This section shows two items: 'Aurex Solitaire Oval Pendant' and 'Aurex Lumina Tennis Bracelet'. Each item card includes an image, name, price, stock status, review count, and 'Add to Cart' and 'Buy Now' buttons.



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Aurex

STORE ADMINISTRATOR
Benjo

Dashboard

Manage Users

Manage Products

Manage Orders

Manage Ratings

Sales Report

Dr. Sign Out

ID	IMAGE	PRODUCT NAME	CATEGORY	PRICE (₱)	STOCK	AVAILABILITY	ACTIONS
12		Aurex Halo Studs	Earrings	₱150.00	41	In Stock	<button>Edit</button> <button>Delete</button>
11		Aurex Solitaire Band	Rings	₱600.00	40	In Stock	<button>Edit</button> <button>Delete</button>
10		Aurex Meridian Bangles	Bracelet	₱520.00	20	In Stock	<button>Edit</button> <button>Delete</button>
9		Aurex Droplet Earrings	Earrings	₱250.00	75	In Stock	<button>Edit</button> <button>Delete</button>
8		Aurex Vertex Ring	Rings	₱350.00	30	In Stock	<button>Edit</button> <button>Delete</button>
7		Aurex Lines Necklace	Necklace	₱450.00	60	In Stock	<button>Edit</button> <button>Delete</button>
4		Aurex Zenith Huggie Hoops	Earrings	₱500.00	7	In Stock	<button>Edit</button> <button>Delete</button>
3		Aurex Zenith Twist Ring	Rings	₱1,500.00	1	Low Stock	<button>Edit</button> <button>Delete</button>
2		Aurex Solitaire Oval Pendant	Necklace	₱200.00	15	In Stock	<button>Edit</button> <button>Delete</button>
1		Aurex Lumina Tennis Bracelet	Bracelet	₱200.00	101	In Stock	<button>Edit</button> <button>Delete</button>



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