



# Carlos Hilado Memorial State University

Alijis Campus • Binalbagan Campus • Fortune Towne Campus • Talisay (Main) Campus

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College of Computer Studies

## 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

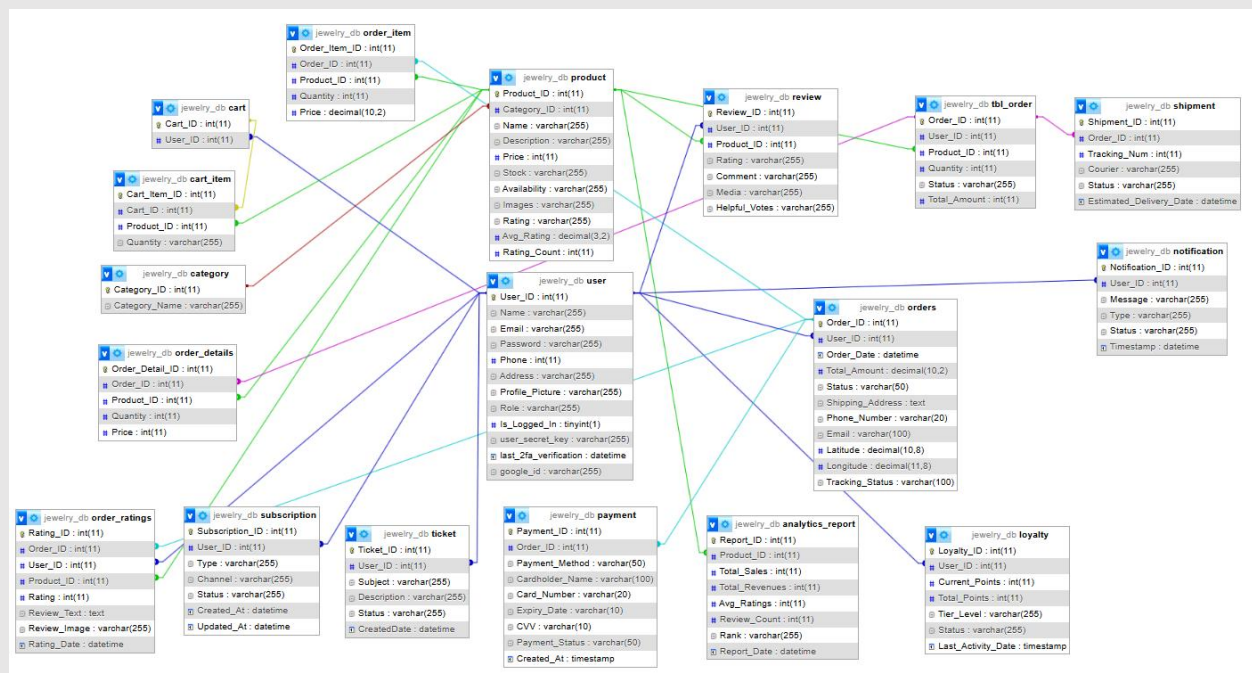
It is useful since it lessens the hassle for customers who have little to no time going to physical stores. Moreover, some customers prefer to order online rather than go to physical stores.

### 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  
CreateDate 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.

#### Security and Validation Module



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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

Aurex

STORE ADMINISTRATOR

Benjo

Dashboard

Manage Users

Manage Products

Manage Orders

Manage Ratings

Sales Report

Sign Out

Manage Users

+ Add New User

ALL USERS

8

ADMINS

3

CUSTOMERS

5

ID	NAME	EMAIL	ROLE	ACTIONS
68	matt	matt@gmail.com	Customer	<a href="#">Edit</a> <a href="#">Delete</a>
65	rebeja	agiam.rebeja2@gmail.com	Customer	<a href="#">Edit</a> <a href="#">Delete</a>
8	juan	juan@gmail.com	Customer	<a href="#">Edit</a> <a href="#">Delete</a>
7	france	france@gmail.com	Customer	<a href="#">Edit</a> <a href="#">Delete</a>
6	renz	renz@gmail.com	Customer	<a href="#">Edit</a> <a href="#">Delete</a>

#### Products

Aurex

Home

Collection

Products

Contact


Welcome, matt

Logout

Bestseller Products

Search products in this collection...

Earrings



Aurex Halo Studs

P950.00

Small, circular stud earrings with peak setting.

In Stock: 41


★★★★★ 5.00 (1 reviews)

Add to Cart

Buy Now

View All Reviews

Rings



Aurex Solitaire Band

P600.00

Classic silver solitaire wedding band.

In Stock: 40


★★★★★ 4.00 (2 reviews)

Add to Cart

Buy Now

View All Reviews

Bracelet



Aurex Meridian Bangle

P500.00

Chunky, polished stainless steel bangle bracelet.

In Stock: 20


★★★★★ 5.00 (1 reviews)

Add to Cart

Buy Now

View All Reviews

Earrings



Aurex Droplet Earrings

P280.00

Tear-drop shaped gold earrings, perfect for everyday wear.

In Stock: 75

★★★★★ 0.00 (0 reviews)

Add to Cart

Buy Now

View All Reviews

Add to Cart

Buy Now

View All Reviews

Add to Cart

Buy Now

View All Reviews

Add to Cart

Buy Now


View All Reviews

Add to Cart

Buy Now

View All Reviews

Rings



Aurex Vertex Ring

P900.00

Stunning sterling silver ring with a peak CZ stone.

In Stock: 30


★★★★★ 0.00 (0 reviews)

Add to Cart

Buy Now

View All Reviews

Necklace



Aurex Lines Necklace

P450.00

A delicate, 18k gold-plated line necklace.

In Stock: 50


★★★★★ 5.00 (1 reviews)

Add to Cart

Buy Now

View All Reviews

Earrings



Aurex Zenith Huggie Hoops

P600.00

avail

In Stock: 7


★★★★★ 0.00 (0 reviews)

Add to Cart

Buy Now

View All Reviews

Rings



Aurex Zenith Twist Ring

P1,500.00

avail

In Stock: 1

★★★★★ 0.00 (0 reviews)

Add to Cart

Buy Now

View All Reviews

Add to Cart

Buy Now

View All Reviews

Add to Cart

Buy Now

View All Reviews

Add to Cart

Buy Now


View All Reviews

Add to Cart

Buy Now

View All Reviews

Necklace



Aurex Solitaire Oval Pendant

P200.00

pearl

In Stock: 15


★★★★★ 0.00 (0 reviews)

Add to Cart

Buy Now

View All Reviews

Bracelet



Aurex Lumina Tennis Bracelet

P200.00

avail




In Stock: 101

★★★★★ 0.00 (0 reviews)

Add to Cart

Buy Now

View All Reviews

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Aurex

STORE ADMINISTRATOR

Benjo

Dashboard

Manage Users

Manage Products

Manage Orders

Manage Ratings

Sales Report

Sign Out

ID	IMAGE	PRODUCT NAME	CATEGORY	PRICE (P)	STOCK	AVAILABILITY	ACTIONS
12		Aurex Halo Studs	Earrings	P180.00	41	In Stock	<a href="#">Edit</a> <a href="#">Delete</a>
11		Aurex Solitaire Band	Rings	P600.00	40	In Stock	<a href="#">Edit</a> <a href="#">Delete</a>
10		Aurex Meridian Bangle	Bracelet	P500.00	20	In Stock	<a href="#">Edit</a> <a href="#">Delete</a>
9		Aurex Droplet Earrings	Earrings	P280.00	75	In Stock	<a href="#">Edit</a> <a href="#">Delete</a>
8		Aurex Vertice Ring	Rings	P300.00	30	In Stock	<a href="#">Edit</a> <a href="#">Delete</a>
7		Aurex Linea Necklace	Necklace	P450.00	50	In Stock	<a href="#">Edit</a> <a href="#">Delete</a>
4		Aurex Zenith Huggie Hoops	Earrings	P500.00	7	In Stock	<a href="#">Edit</a> <a href="#">Delete</a>
3		Aurex Zenith Twist Ring	Rings	P1,200.00	1	Low Stock	<a href="#">Edit</a> <a href="#">Delete</a>
2		Aurex Solitaire Oval Pendant	Necklace	P200.00	15	In Stock	<a href="#">Edit</a> <a href="#">Delete</a>
1		Aurex Lumina Tennis Bracelet	Bracelet	P200.00	101	In Stock	<a href="#">Edit</a> <a href="#">Delete</a>



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