



E-commerce - MERN Stack Application

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Batman Arkham Alley Market

Batman Arkham Alley Market is a Batman-themed e-commerce platform built using the MERN stack (MongoDB, Express.js, React.js, Node.js).

It offers a wide range of Batman merchandise including apparel, collectibles, gadgets, and décor, with a dynamic product filtering & sorting system, responsive UI, secure checkout, authentication, and a dark Gotham-inspired design.

Project Structure

- Frontend: Located in the `/client` folder (React.js + TailwindCSS)
 - Backend: Located in the `/server` folder (Node.js + Express.js + MongoDB)
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Getting Started

1 Download & Install Dependencies

bash

- `# Clone or download the project`
 - `cd Batman_Arkham_shop`
 - `npm install`
 - `# Install root dependencies + client & server dependencies`
 - `npm install && npm run install-all`
-

2 Environment Variables

The backend environment variables are already added in `/server/.env`:

- `PORT=8080`
- `MONGO_URI=your_mongodb_uri`
- `JWT_SECRET=your_jwt_secret`
- `FRONTEND_URL=http://localhost:3000`

3 Running the Project

We use Concurrently to run both frontend & backend together.

- `# Run both client & server together`
 - `npm run dev`
-

4 Live Demo

For faster testing, you can access the deployed version:

 Client: [Batman Arkham Shop](#)

 User Login:

Email: `rahul@gmail.com`

Password: `12345678*aB`

 Admin Login:

Email: `admin@gmail.com`

Password: `admin@123`

User Flow

1. Visit the Homepage – All products are listed.
2. Apply filters/sorting to browse items.
3. Click on a product → view Product Detail page.

4. Add product to Cart:

- If not logged in → Redirect to Login page.
- If logged in → Product is added to the cart.

5. Proceed to Checkout:

- Uses Stripe payment (Test Card: 4242 4242 4242 4242, Exp: 12/29, CVC: 123, ZIP: 12345)
- On success → Order is stored in MongoDB with status Paid.

6. View Order History:

- Lists all orders with links to detailed view.
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Cart Page

- Displays all products in the cart with:
 - Price
 - Remove (single item) & Clear Cart (all items) options
 - Total Price
 - Checkout button → Redirect to Stripe payment page.
-



Payment

- Test Card:

4242 4242 4242 4242

Exp: 12/29 | CVC: 123 | ZIP: 12345



Authentication

- Login: Validates email & password.
 - Register: Checks password strength & email format.
 - Change Password: Requires matching password & confirm password.
 - Role-Based Navigation: Shows different options for logged-in users & admins.
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Contact Form

- Accessible from the "Contact Us" page.
 - Saves messages in the database.
 - Integrated with Brevo Email API.
-



Admin Dashboard

Features:

- View total Users, Orders, Products

- Add Product (visible to all users)
 - Delete Product
 - Manage Orders:
 - Update order status: Pending → Completed → Shipped → Delivered
-

Key Features

-  Authentication & Authorization
 -  Role-Based Access (User/Admin)
 -  Cart & Checkout Flow
 -  Stripe Payments
 -  Order Management
 -  Order History & Details
 -  Contact Form + Brevo Email Integration
 -  Deployed Client & Server
 -  TailwindCSS Dark Theme
 -  Zustand State Management
-

Tech Stack

Frontend:

- **React.js**
- **TailwindCSS**
- **Zustand**

Backend:

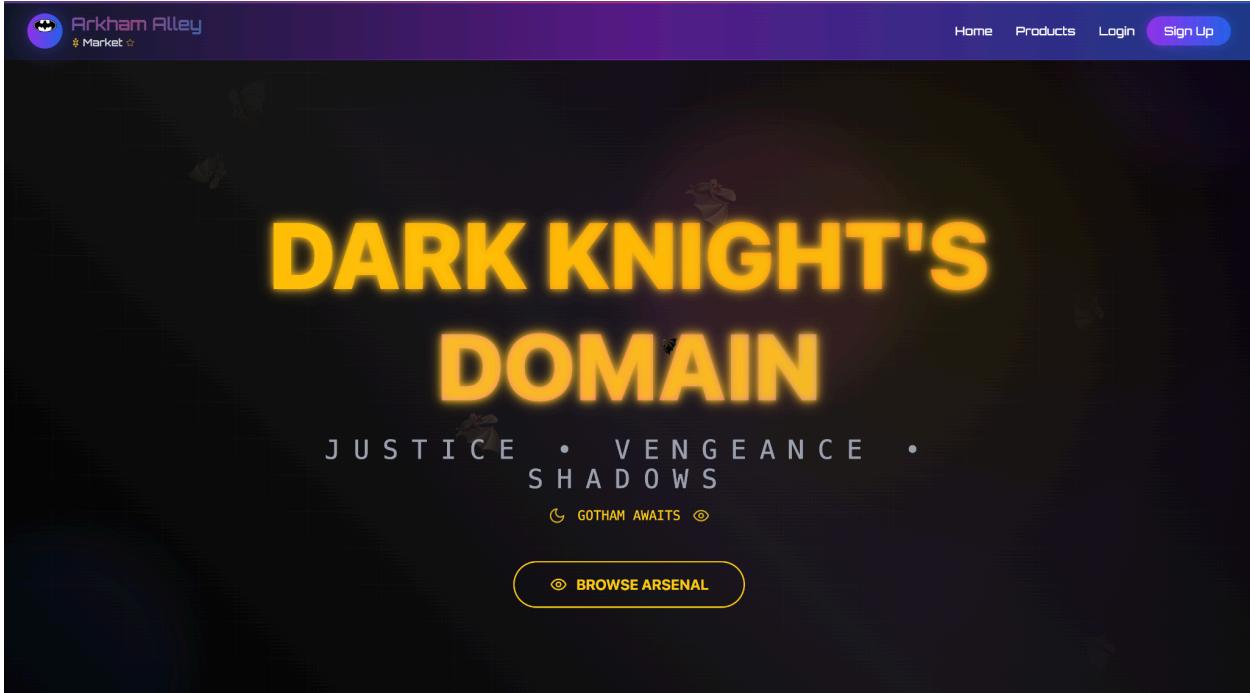
- **Node.js**
- **Express.js**
- **MongoDB (Mongoose)**
- **JWT Authentication**

Other:

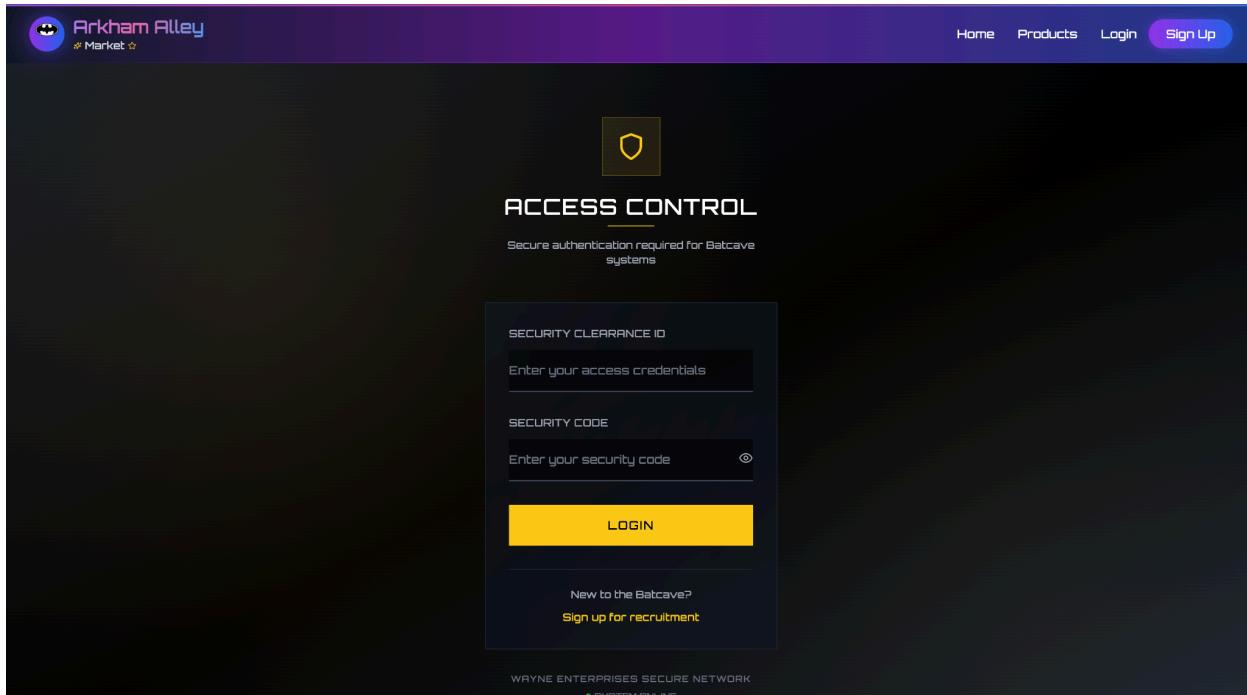
- **Concurrently**



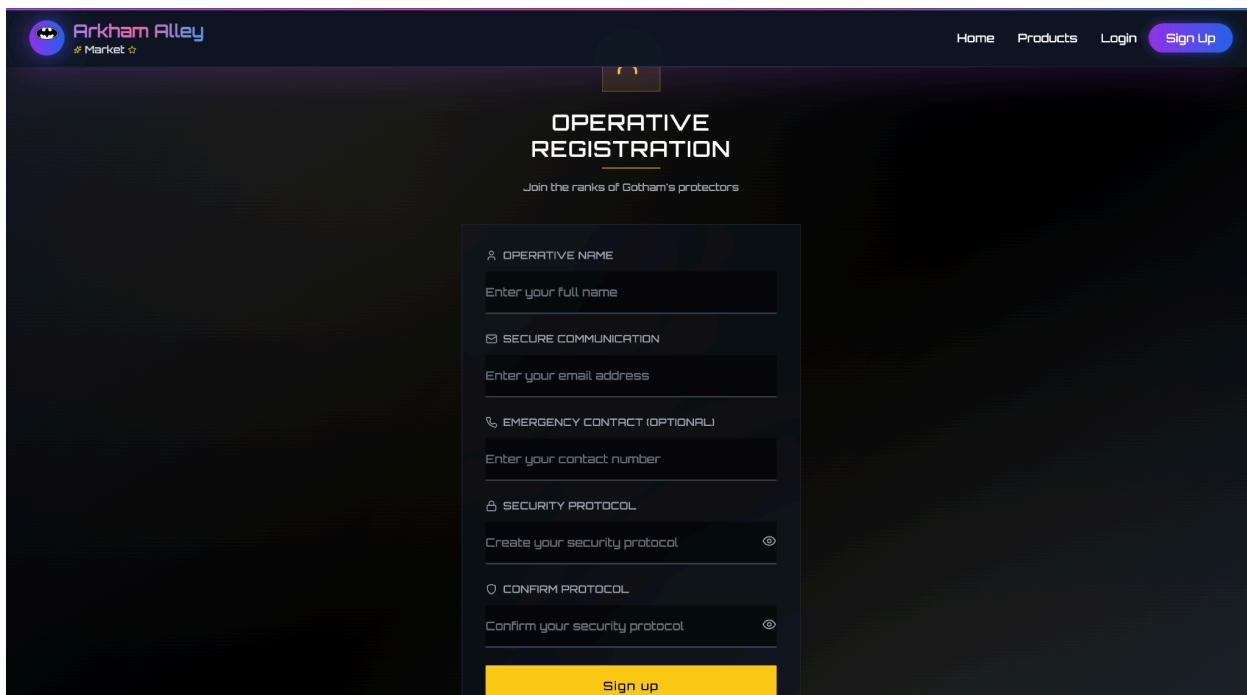
Home page



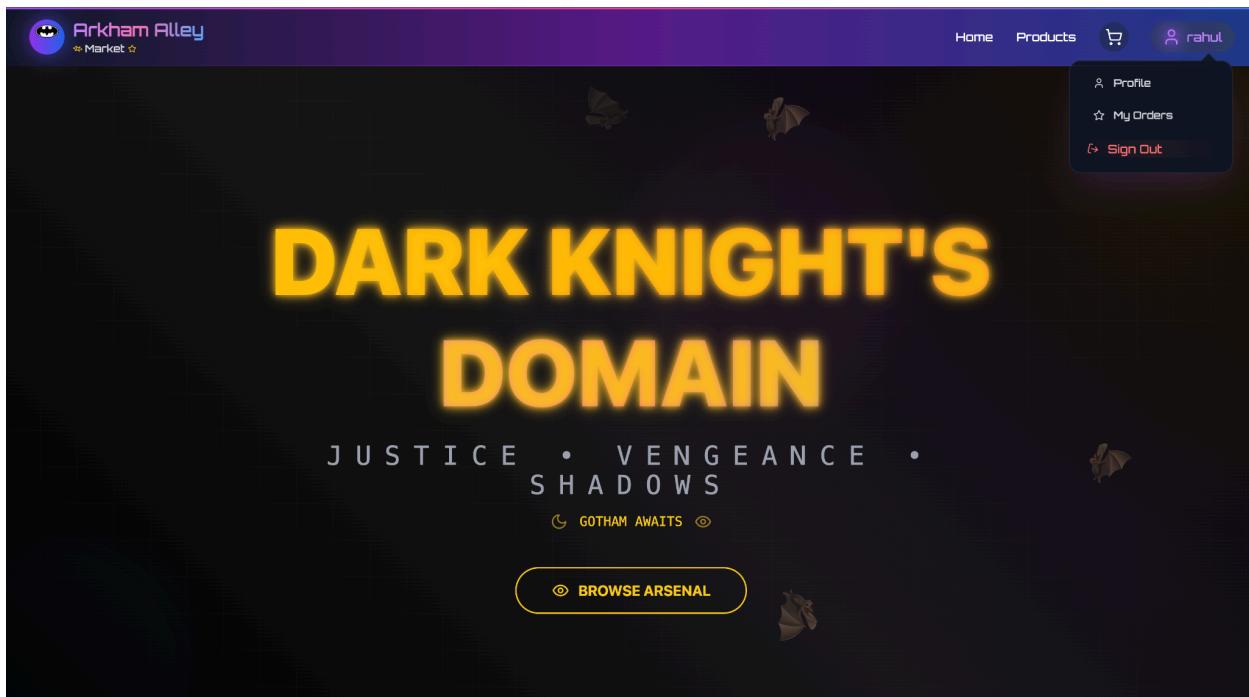
Login page



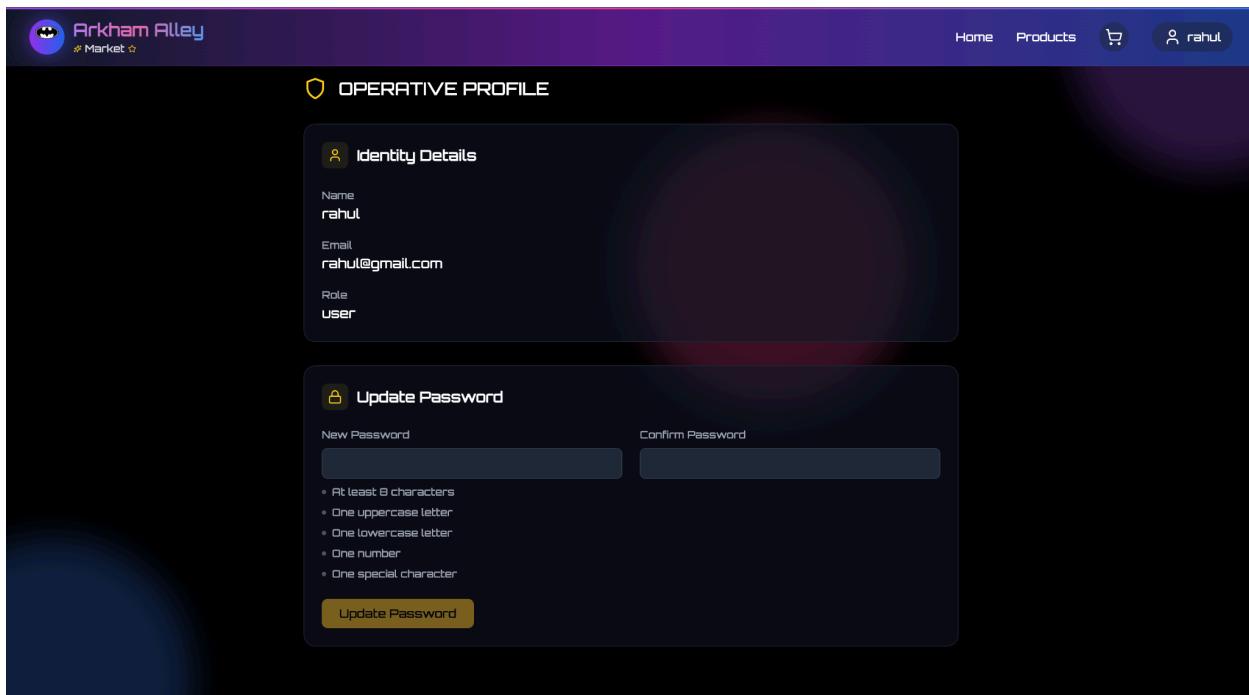
Sign up page



User dashboard login



Profile page



Footer

The screenshot shows the footer section of the Arkham Alley website. At the top, there's a navigation bar with links for Home, Products, a shopping cart icon, and a user profile for 'rahul'. Below this is a large yellow-to-orange gradient banner with the text 'BECOME A KNIGHT OF GOTHAM' in bold black letters. Underneath the banner, a smaller text reads 'Become a guardian of Gotham. Join thousands who have embraced the shadows.' followed by a 'BECOME A KNIGHT' button. The main footer area has a black background. It contains three columns of links: 'BATMAN'S ARMORY' (Premium Combat Equipment, Gotham City, Secret Location, info@batmansarmory.com, 1-888-BAT-GEAR), 'Navigation' (Home, Products, Cart, Orders), and 'Support' (Contact Us, Privacy Policy, Terms of Service, FAQ). At the bottom, there's a copyright notice '© 2025 Batman's Armory. All rights reserved.' and social media icons for Twitter, Facebook, Instagram, and YouTube.

Products

The screenshot shows the products page of the Arkham Alley website. At the top, there's a navigation bar with links for Home, Products, a shopping cart icon, and a user profile for 'rahul'. Below this is a large yellow banner with the text 'FEATURED PRODUCTS' in bold purple letters. The page displays eight product cards arranged in two rows of four. Each card includes an image, the product name, category, price, and a brief description. The products are: 1. jagdish (Gadgets) - Gadgets: \$100. 2. Night Vision Goggles... (Surveillance) - Surveillance: \$3800. 3. The Batmobile (Mark II) (Vehicles) - Vehicles: \$6000000. 4. Gas Mask (Filtered Respirator) (Armor) - Armor: \$650. 5. The Tumbler (Vehicles) - Vehicles: \$2000. 6. Bat-Brand (Heated) (Utility) - Utility: \$4500. 7. Ball Bearings (Consumables) - Consumables: \$8500000. 8. Line Launcher (Utility) - Utility: \$800.

Product details

Arkham Alley
Market

BACK TO ARSENAL



SURVEILLANCE
Night Vision Goggles (Quad-Lens)

★★★★★ 15 field reports

£3,800.00 £4,500.00

SPECIFICATIONS
Panoramic night vision goggles providing a 120-degree field of view. Combines thermal and light amplification technologies for superior clarity in absolute darkness. Lightweight and designed for long-duration wear.

QUANTITY: 1 AVAILABILITY: 11 units ready

ADD TO LOADOUT

CLASSIFICATIONS: SURVEILLANCE, ADVANCED, TACTICAL

Mission Critical Equipment

Cart page

The screenshot shows the Arkham Alley Equipment Storage cart page. At the top, there's a purple header with the Arkham Alley logo, a Market link, and a user profile for rahul with a notification badge. Below the header, the title "EQUIPMENT STORAGE" is displayed, along with a message indicating "1 items in tactical storage". A "CLEAR STORAGE" button is located in the top right corner.

The main content area features a product card for "Night Vision Goggles (Quad-Lens)". The card includes an image of the goggles, a quantity selector set to "1", a price of "£3,800.00", and a note that "11 units available". To the right of the product card is a "MISSION SUMMARY" section. This section details the cost breakdown: "Equipment Cost £3,800.00", "Security Tax £380.00", and "Delivery FREE". The total cost is summarized as "TOTAL COST £4,180.00". Below this, there are two buttons: "SECURE CHECKOUT" and "CONTINUE MISSION". A "SECURE TRANSACTION" box at the bottom right states: "Protected by Wayne Enterprises encryption technology".

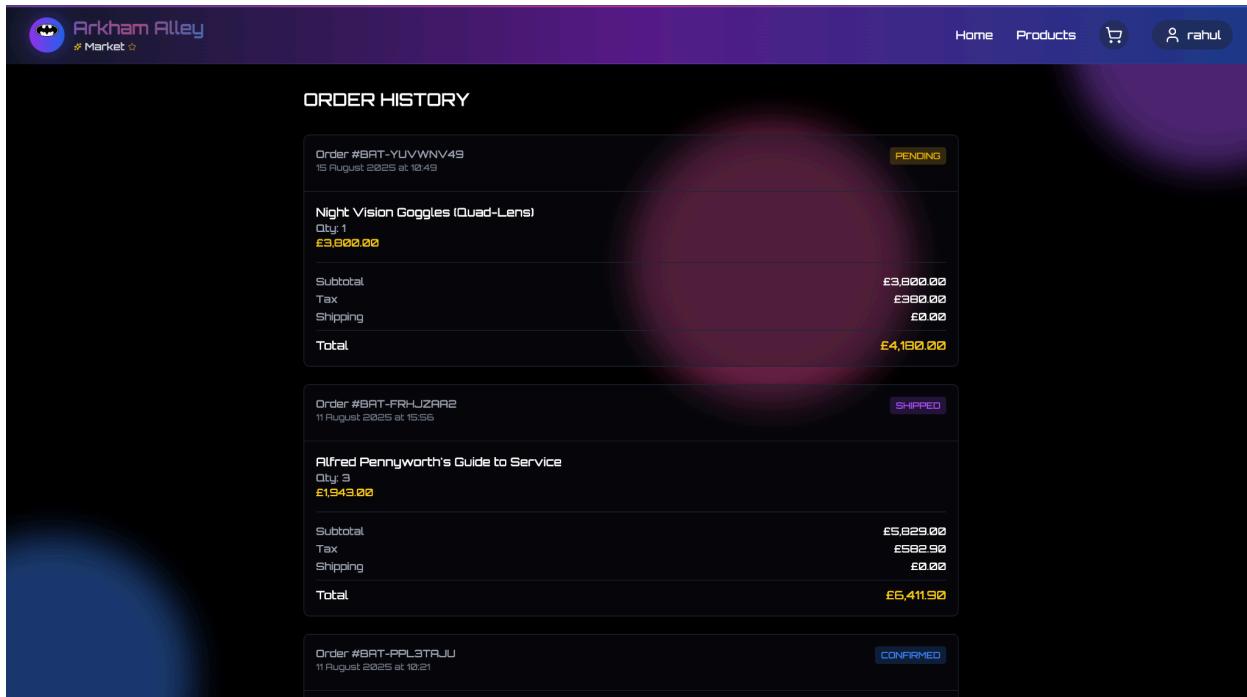
Checkout page

The screenshot shows the Arkham Alley Checkout page. The top navigation bar is identical to the Cart page, featuring the Arkham Alley logo, Market link, and user profile for rahul with a notification badge.

The main content area is titled "CHECKOUT". It is divided into several sections:

- SHIPPING ADDRESS:** Fields for "jagdish", "252 pershore road", "birmingham", "b1279N", and "01393069417".
- ORDER SUMMARY:** A summary of the order items and costs:
 - Product: Night Vision Goggles (Quad-Lens) QTY: 1 Price: £3,800.00
 - Subtotal: £3,800.00
 - TAX: £380.00
 - Shipping: FREE
 - Total: £4,180.00
- PAYMENT METHOD:** Options include "Credit Card" (selected), "PayPal", and "Cash on Delivery". Below these are fields for card number ("4242 4242 4242 42"), name ("jagdish"), expiration ("11/29"), and CVV ("123").
- A checkbox labeled "I agree to the Terms and Conditions" is present.
- A large yellow "PLACE ORDER" button is located at the bottom right of the payment method section.

Order history



ARKHAM ALLEY Market

Home Products Cart rahul

ORDER HISTORY

Order #BRT-YUVWNV49
15 August 2025 at 10:49 PENDING

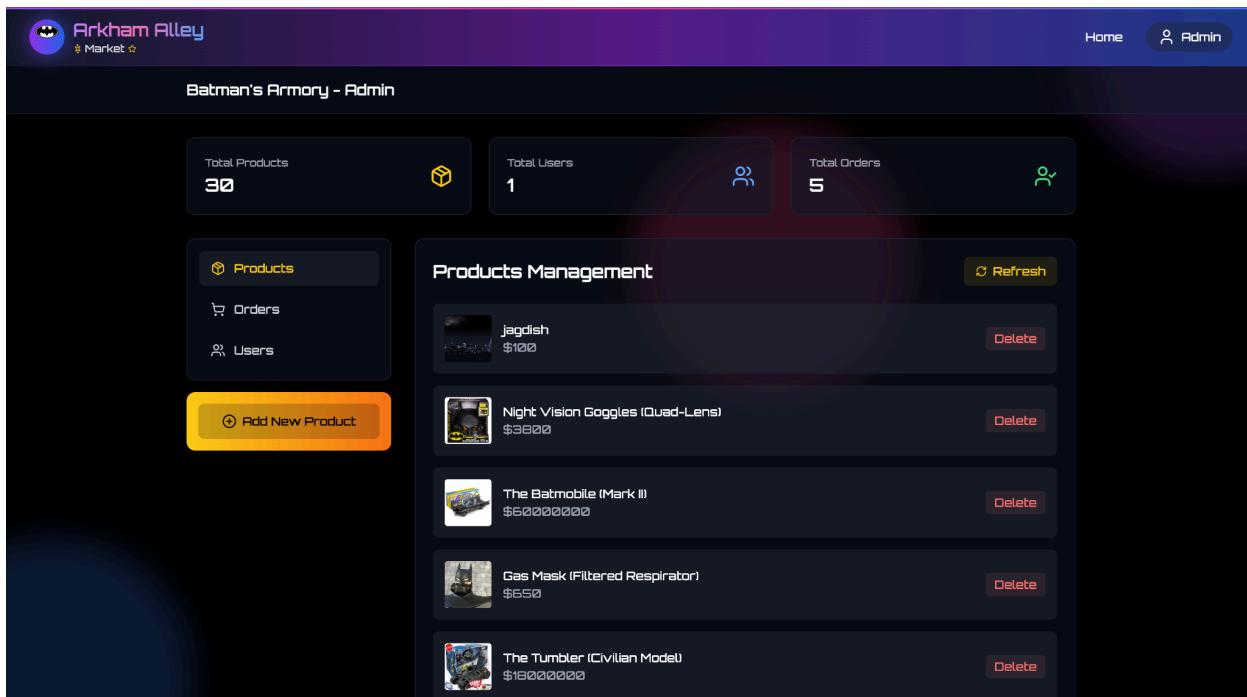
Night Vision Goggles (Quad-Lens)	Qty: 1	£3,800.00
Subtotal		£3,800.00
Tax		£380.00
Shipping		£0.00
Total		£4,180.00

Order #BRT-FRH-LIZAR2
11 August 2025 at 15:56 SHIPPED

Alfred Pennyworth's Guide to Service	Qty: 3	£1,543.00
Subtotal		£5,829.00
Tax		£582.90
Shipping		£0.00
Total		£6,411.90

Order #BRT-PPL3TAJU
11 August 2025 at 10:21 CONFIRMED

ADMIN DASHBOARD



ARKHAM ALLEY Market

Home Admin

Batman's Armory - Admin

Total Products: 30 📦

Total Users: 1 👤

Total Orders: 5 🛒

📦 Products 🛒 Orders 👤 Users

+ Add New Product

Products Management

Refresh

Image	Name	Price	Action
	jagdish	\$100	Delete
	Night Vision Goggles (Quad-Lens)	\$3800	Delete
	The Batmobile (Mark II)	\$6000000	Delete
	Gas Mask (Filtered Respirator)	\$650	Delete
	The Tumbler (Civilian Model)	\$1800000	Delete

ADMIN : Order Status change

The screenshot shows the Arkham Alley Admin dashboard for Batman's Armory. At the top, there are three summary cards: 'Total Products 30' with a box icon, 'Total Users 1' with a person icon, and 'Total Orders 5' with a document icon. On the left, a sidebar has 'Products' selected, showing 'Orders' as the active tab, and 'Users'. A yellow button labeled '+ Add New Product' is visible. The main area is titled 'ORDERS MANAGEMENT' and shows a table of five orders. The columns are Order #, Date, Customer, Total, Items, and Status. The orders are:

Order #	Date	Customer	Total	Items	Status
BAT-YUVWNV49	15 Aug 2025	jagdish	£4,180.00	1 items	Pending
BAT-FRHJZAR2	11 Aug 2025	jagdish	£6,411.90	3 items	Shipped
BAT-PPL3TAJU	11 Aug 2025	jagdish	£550,000.00	1 items	Confirmed
BAT-0SE0ZQY6	10 Aug 2025	jagdish	£550,000.00	1 items	Confirmed
BAT-E7MUL1PD	9 Aug 2025	jagdish	£1,100.00	2 items	Delivered

Add products

The screenshot shows the 'Add New Product' form. At the top, it says 'Add New Product' and has a 'Back to Products' link. The form fields include:

- Product Name:** Input field with placeholder 'e.g. Advanced Tactical Grappling Hook' and a dropdown menu set to 'Tactical Equipment'.
- Description:** Text area with placeholder 'Military-grade specifications and key features...' and character count '0/500 characters'.
- Price:** Input field showing '\$ 1285.75'.
- Original Price (Optional):** Input field showing '\$ 1900.11'.
- Stock Quantity:** Input field with placeholder 'Enter quantity in stock'.
- Tags (comma-separated):** A list of tags: Tactical, WayneTech, Professional, Military-Grade, Prototype, Advanced, Stealth, Combat, Defense, Surveillance.
- Product Images:** A dashed box with an upward arrow icon and instructions 'Upload files or drag and drop' and 'PNG, JPG, GIF up to 10MB'.