



## E-commerce - MERN Stack Application

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## Introduction

**Arkham alley market** is a Batman-themed e-commerce platform built with the MERN stack (MongoDB, Express.js, React.js, Node.js). It offers a wide range of Batman merchandise including apparel, collectibles, gadgets, and décor. The platform features dynamic product filtering and sorting, a responsive UI, secure cart and checkout system, authentication, and an engaging dark-themed design inspired by Gotham City.

The **frontend** resides in the `client` folder.

The **backend** resides in the `server` folder.



# Getting Started

## 1. Download the folder

Open terminal to the folder `cd Batman_Arkham_shop`

### 1. Install Dependencies

For both client and server I made a standalone script which will help to run both flexibly.  
First inside the project which is

```
cd Batman_Arkham_shop
```

```
npm install && npm run install-all
```

```
npm run dev
```

This will install all the required dependencies in the whole project including client and server.

## 1 . Setup Environment Variables

In `/server/.env` => Already Added

`PORT=8080`

`MONGO_URI=your_mongodb_uri` `JWT_SECRET=your_jwt_secret`

`BREVO_API_KEY=your_brevo_key` `FRONTEND_URL=http://localhost:3000`

## 2 . Start the Application

In one terminal:

Outside the server and client do

```
npm run dev
```

As we are using `concurrently`

it will run both server and client together

There is also deployed website both server and client  
Please check if you need more fast testing without running locally.  
PROJECT URL - <https://batman-arkham-shop-client.vercel.app/>

## LOGIN DETAILS

email - [rahul@gmail.com](mailto:rahul@gmail.com)

Pass - 12345678\*aB

ADMIN:

Email - [admin@gmail.com](mailto:admin@gmail.com)

Pass - admin@123

## Run Instructions

For both I made single script which is in main root of file `npm run dev`

### ⌚ Seed Files (for database data)

No need as the database is implemented using mongodb url which can be accessible to any IP.

```
# Start the backend server
```

### 🧭 Service & Course Flow

- Navigate to `/` page.
- All products are listed based on the selected service.
- Click on products to the product detail page.

- From the product detail page, users can click the add to cart button.

If the user is not logged in, they will be redirected to the login page.

- If the user is logged in, the course is added to the cart and redirected Home page then continue to cart checkout.
- If the course is already in the cart, the message "Course is already in your cart." is shown with a Go to Cart button.

## Cart Page

- Navigate to </cart> page.
- Shows course(s), price(s), and a Remove button for each item.
- Added remove all cart on one click "CLEAR CART"
- Displays the Total Price.
- User can click Proceed to Checkout to continue.

## Checkout Page (Stripe)

On clicking Proceed to Checkout, users are shown Stripe payment form. Use the following dummy details:

Card Number: 4242 4242 4242 4242 MM/YY: 12/29

CVC: 123

Zip Code: 12345

After successful payment:

- The order is saved in the orders collection with a Paid status and will redirect to order page /orders

## Order History Page

- URL: <http://localhost:3000/orders>
- Lists all user orders.
- Each order links to the Order Detail page with full info.

## Authentication Flow

### **Login Page:**

- If email doesn't exist → Validation: Email does not exist.
- If password is incorrect → Validation: Incorrect password.
- On valid credentials → User logs in successfully.

### **Register Page:**

- Validation: Password must contain at least one special character, valid email format, etc.

### **Change Password:**

- On Login we have profile page where user can change the password by giving password and confirm password, both should match.
- After successful change password, user will get notification is successfully changed.

- **Navigation Based on Auth State:**
- Shows Login, Cart, and Logout buttons conditionally.

## Contact Forms

If a user has any query:

- Use Contact Us forms.
- Form data is also stored in the database.

## Admin Dashboard

We added admin role to make things more easy

Login to admin account to check total users, total orders, total products.

**ADD PRODUCT:** we have this feature admin can add the products that will be visible for all users and admin can also remove any product

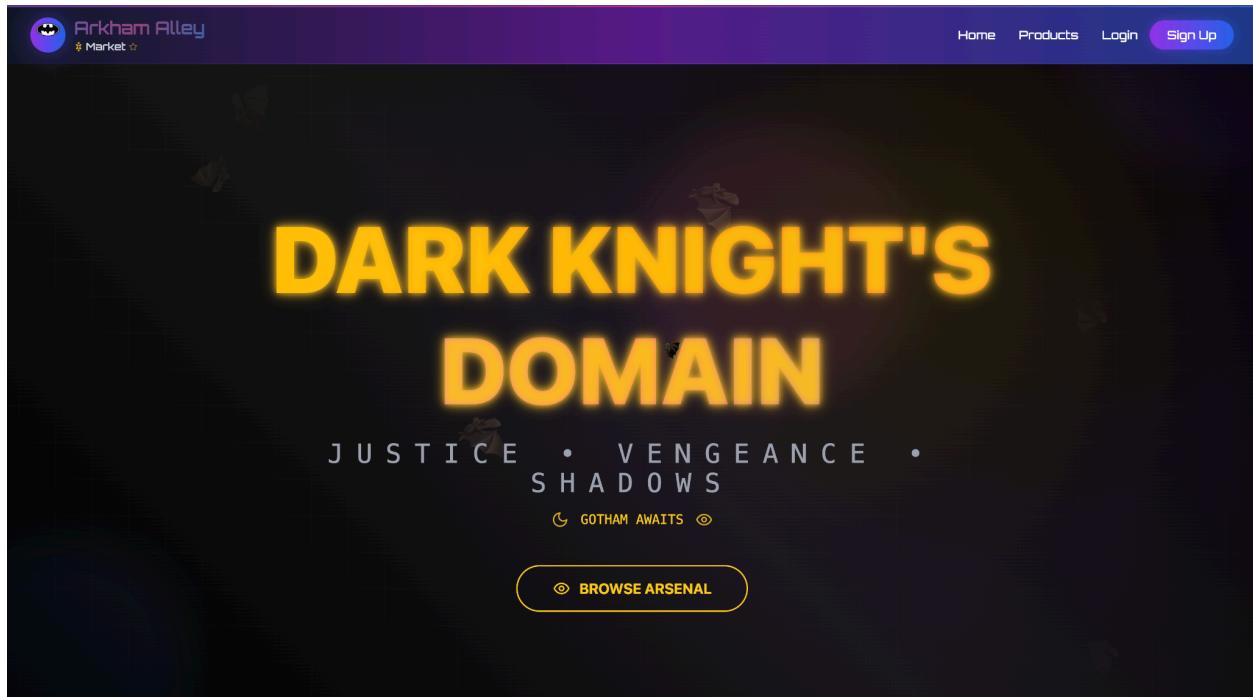
**ORDER STATUS :** Admin has the power to see all orders and change their status from pending to completed, shipped and delivered we are here only taking success cases scenarios.

## Features

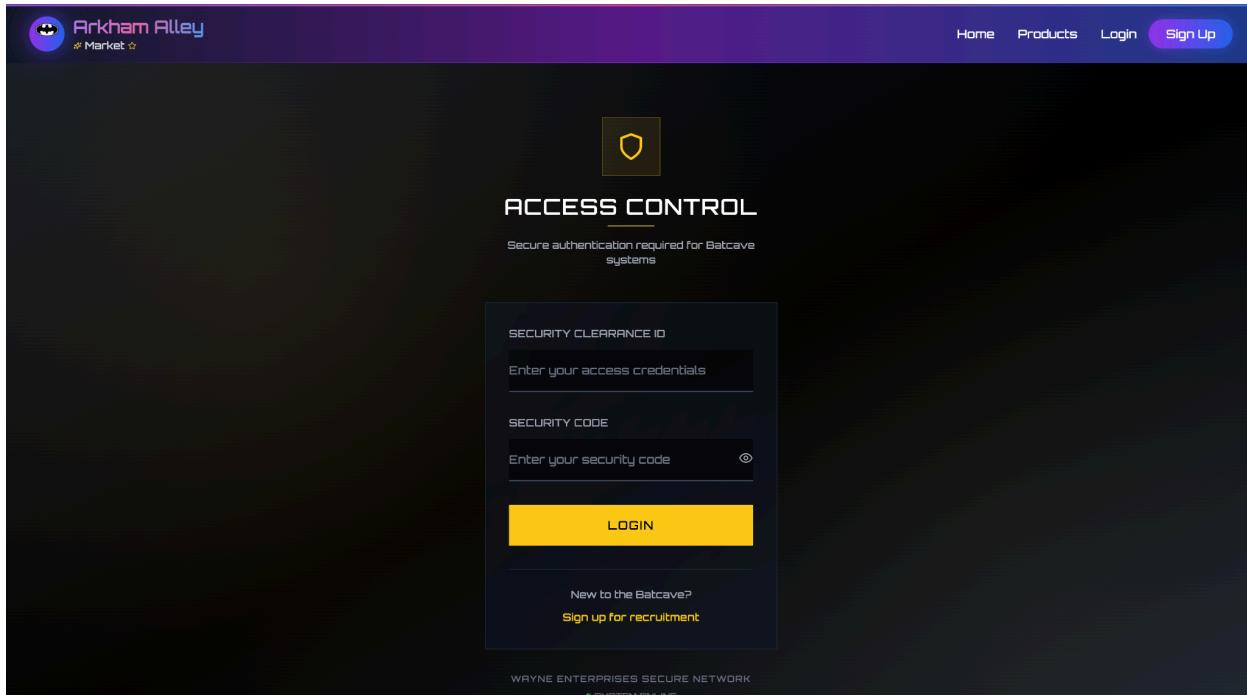
-  **Authentication (Register, Login, change Password)**
-  **Role-Based Access**
-  **Admin Dashboard**
-  **Payments**
- **State management Zustand**
-  **product Purchase & Cart Flow**
-  **Order Management**
-  **Order History and Detail Page**
-  **Terms & Conditions page**
-  **Contact Forms**
-  **Brevo Email Integration**
-  **Tailwind Styling**
-  **Dynamic Content (Courses, FAQ, Testimonials, Services, Orders)**



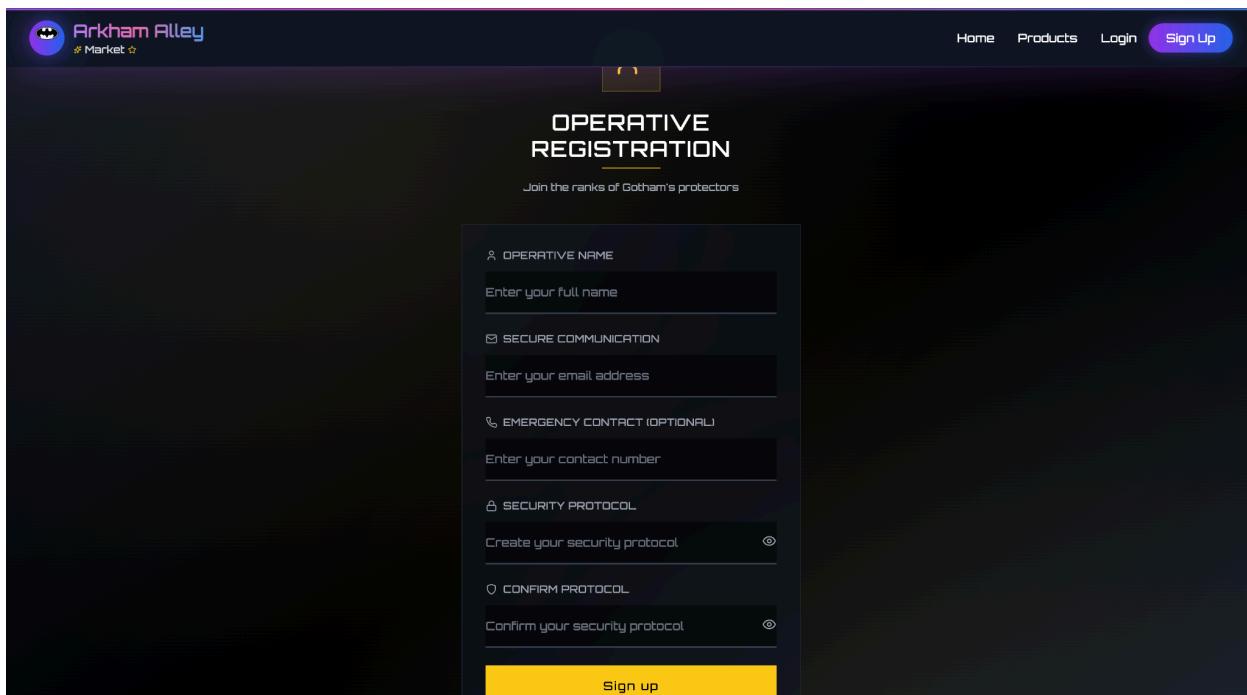
## Home page



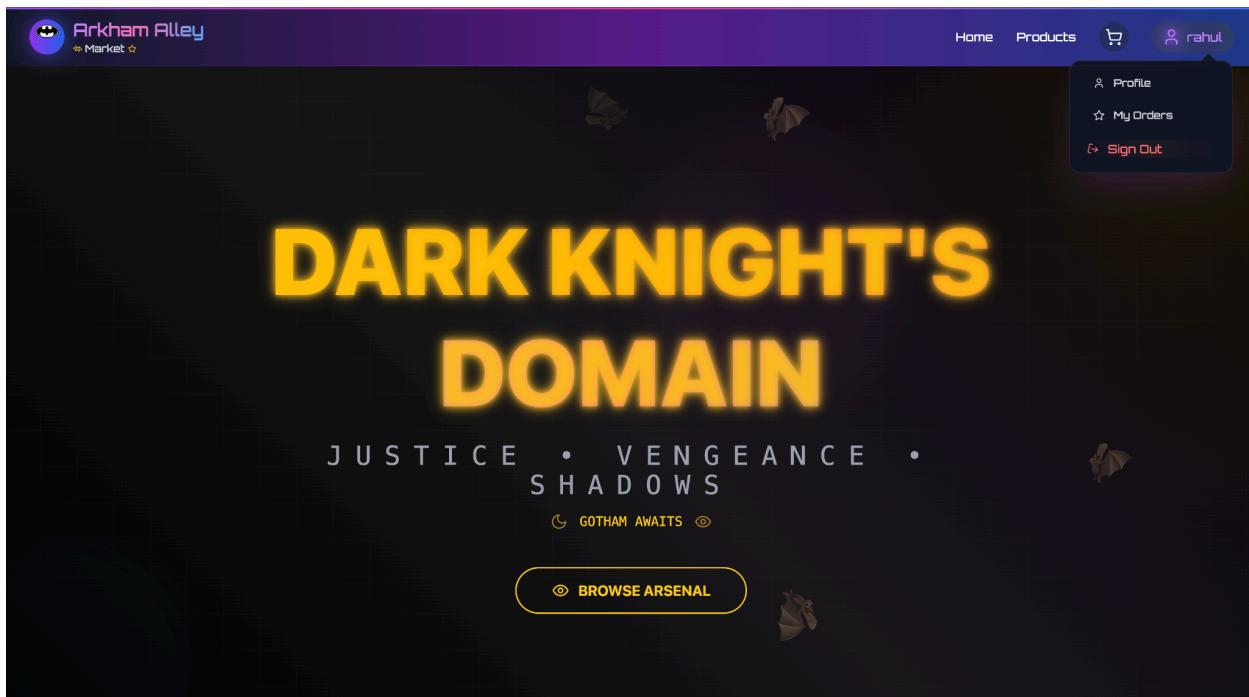
## Login page



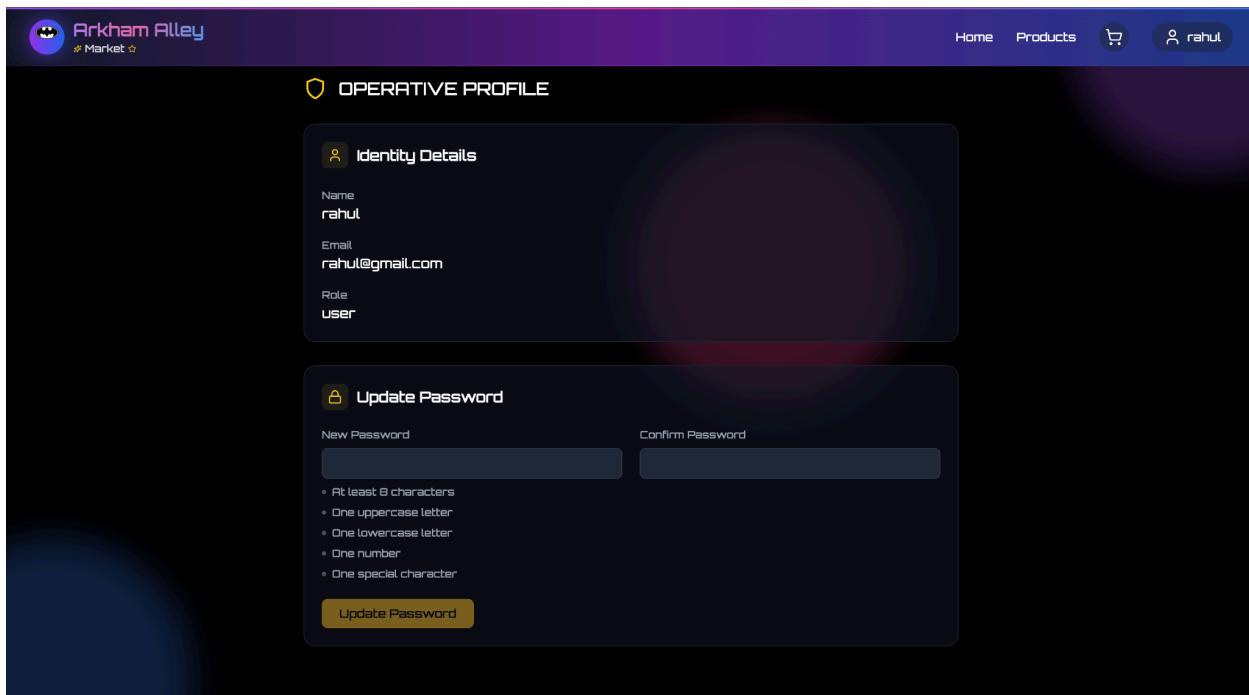
## Sign up page



## 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".

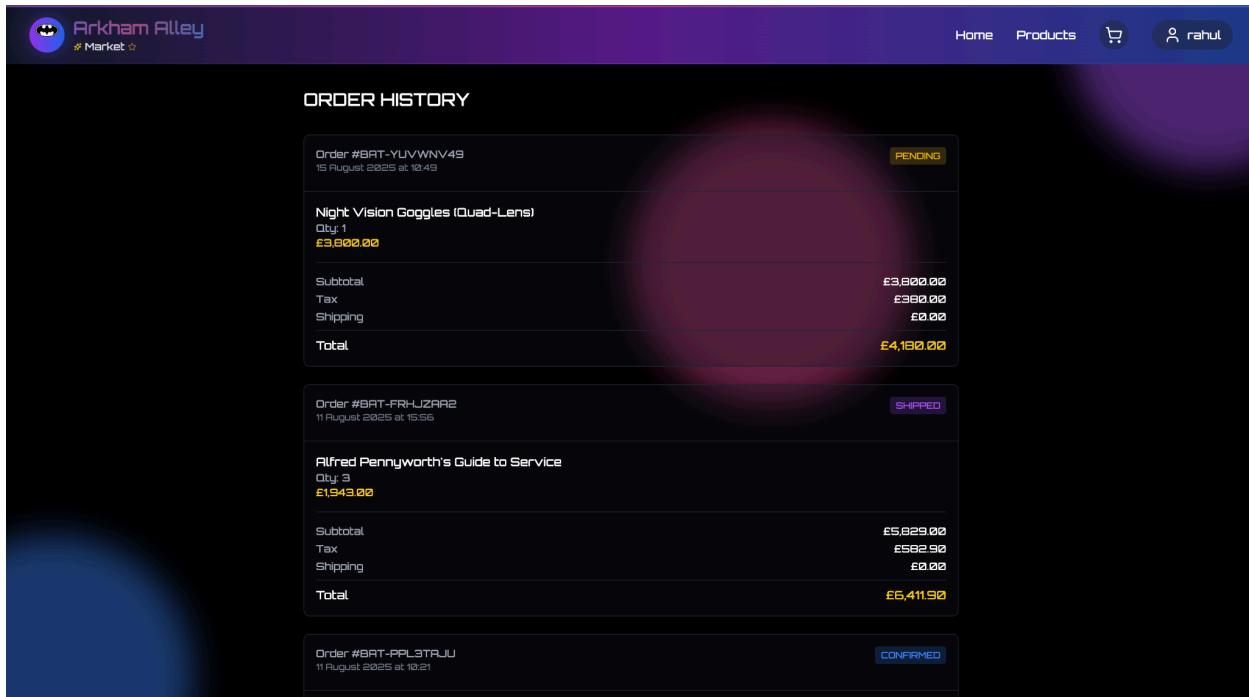
## Checkout page

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

rahul

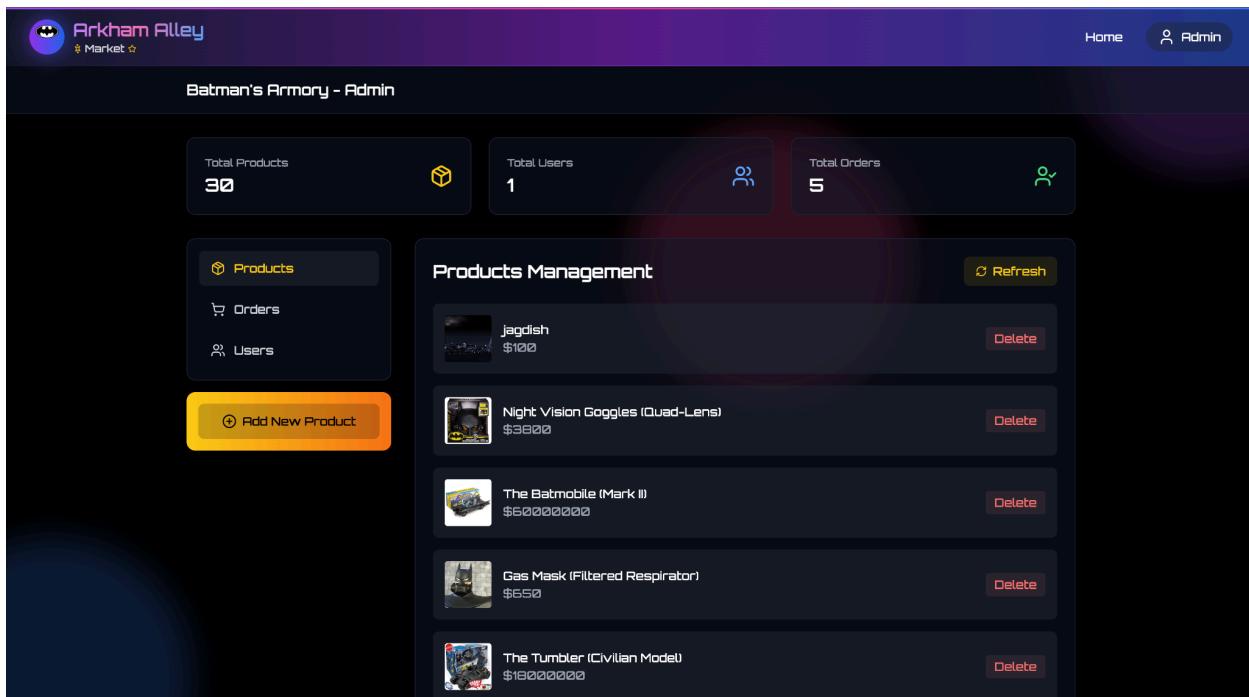
## ORDER HISTORY

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
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# 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

	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. Below it are 'Users' and a yellow 'Add New Product' button. The main area is titled 'ORDERS MANAGEMENT' and displays 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 right is 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 grid of tags: Tactical, WayneTech, Professional, Military-Grade, Prototype, Advanced, Stealth, Combat, Defense, and Surveillance.
- Product Images:** A dashed box with an upward arrow icon and instructions 'Upload files or drag and drop'.