

Build a Payment Gateway

The Challenge

Build a payment gateway system that merchants can integrate into their websites.

Time Limit: 3 days

What You Need to Build

1. **A Payment Gateway API** - Backend service that processes payments
 2. **An SDK** - Library that provide a widget making it easy for merchants to use your gateway
 3. **A Demo** - Show it working with a simple checkout page
 4. **A Merchant Portal** – A portal for merchant to view transactions
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Things to Consider

You're building a system where:

- Merchants need to accept payments from customers using credit card only
 - Merchants want an easy way to integrate your gateway
 - Payments need to be tracked and recorded
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Your Choice

Tech Stack to include: Java / Springboot / html / css

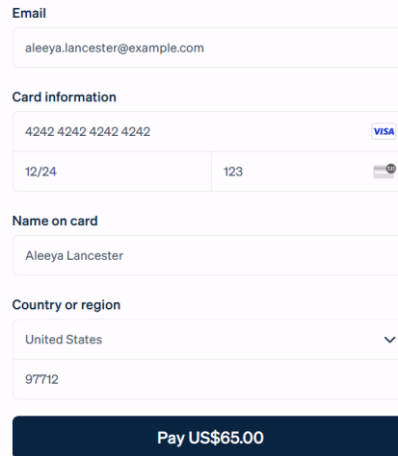
Tools: Any, no restrictions

Business Requirements

You're building PayFlow - a payment gateway for e-commerce merchants.

As a Customer, I want to:

1. Make a payment on a merchant's website by embedding the widget into the merchant cart checkout page



A sample payment widget form with the following fields:

- Email:** Input field containing "aleeya.lancaster@example.com".
- Card information:**
 - Card number: Input field containing "4242 4242 4242 4242" with a VISA logo.
 - Expiry date: Input field containing "12/24".
 - CVV: Input field containing "123" with a card icon.
- Name on card:** Input field containing "Aleeya Lancaster".
- Country or region:**
 - Country: Dropdown menu showing "United States".
 - Postcode: Input field containing "97712".
- Pay button:** A dark blue button labeled "Pay US\$65.00".

Sample widget

2. See confirmation when my payment succeeds or fails

Build a simple checkout page that demonstrates:

- a. Product Page - Shows a product (any item) with "Buy Now" button
- b. Checkout Page - Form with:
 - Amount (read-only)
 - Customer email input
 - Customer name
 - Card number input (use test card: 4242424242424242)
 - Expiry date (MM/YY) - CVV
 - Country
 - Postcode
 - "Pay" button
- c. Confirmation Page - Shows payment success/failure with transaction ID

As a Merchant, I want to:

1. Register and receive API credentials to use the gateway
2. Process customer payments through a simple integration
3. Receive notifications when payments are completed via webhook if URL is set.
4. View all my transactions with their statuses

Build a web portal that allow merchant to

- a. Register as a merchant
- b. Login
- c. View transactions with their statuses

Fullstack Engineer Take-home Assessment

STRICTLY CONFIDENTIAL

d. Set webhook URL



What to Submit

1. **Code** - GitHub repository
2. **README** - How to run it, what you built, why you made key decisions