Dev10 Capstone Project
Lego Store!
Angel Li

About me

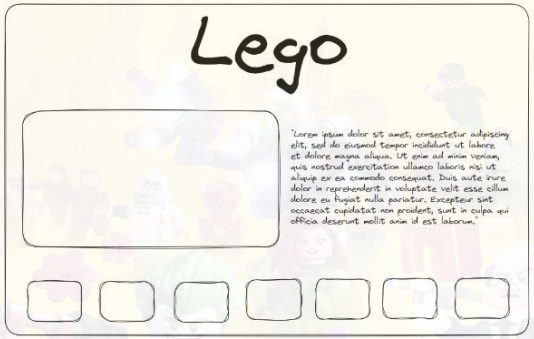
I am a recent graduate from Stony Brook University where I double majored in Information Systems and Applied Mathematics and Statistics. I got my first taste of programming through a required course, and I've been hooked on it ever since!

Why Dev10?

I applied to Dev10 because they provided me with a structured program to develop my programming skills that I was slightly exposed to. I wanted to build on the foundation I had started in college.

Legos!

- Ecommerce app
- Business model: Legos.
- Design of the store: colorful and nostalgic.
- Product pages with detailed product listings with descriptions, images, ratings, and prices.
- Blogs section for users to build a community for Lego enthusiasts
- News section for people to learn more about what's new!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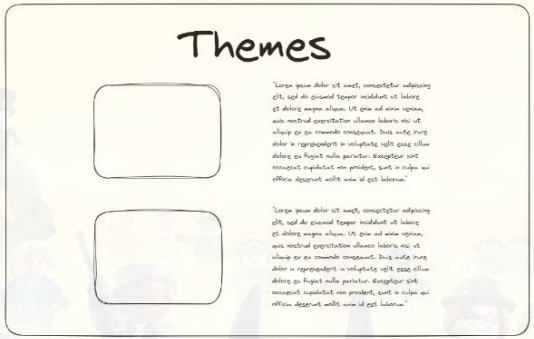
Themes
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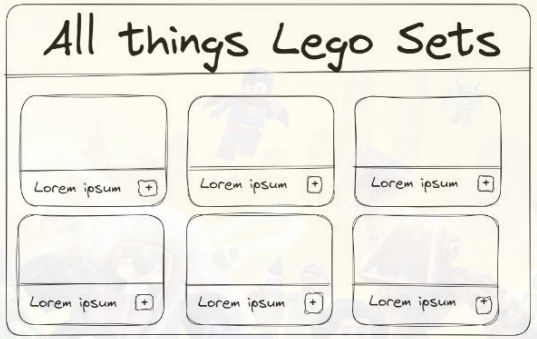
All things Lego Sets
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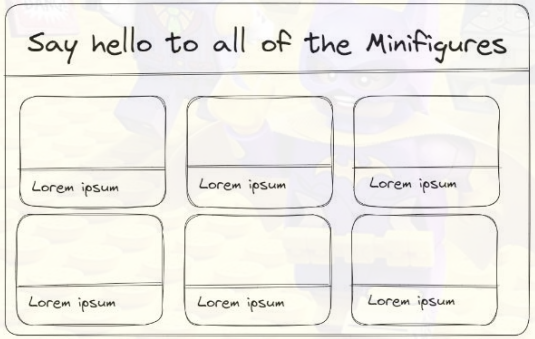
Say hello to all of the Minifigures
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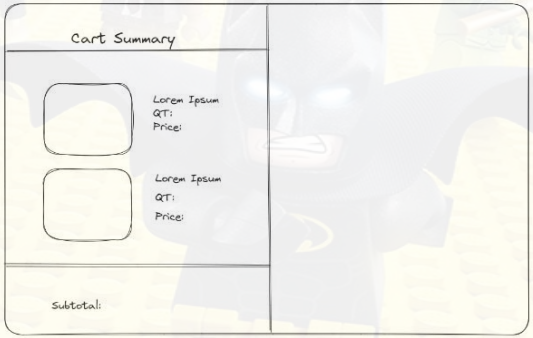
Cart Summary
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Price:
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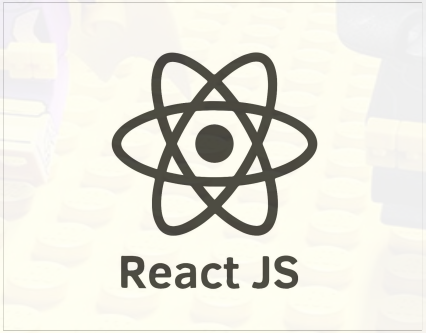
QT:
Price:
Subtotal:


Payment
Card Number:
Card Holder's Name:
Expiration Date:
CVC:

Development

Frontend Technologies:

- JavaScript: The core programming language for building dynamic and interactive web interfaces.
- React: A popular JavaScript library for building user interfaces, known for its component-based architecture.
- Framer Motion: A JavaScript animation library that enhances the user experience with fluid animations and transitions.
- Bootstrap: A CSS framework that simplifies the creation of responsive and visually appealing web layouts.



Development

Backend Technologies:

- Java: A versatile and platform-independent programming language for building the server-side components of your application.
- MySQL: A robust relational database management system used for storing and managing structured data.
- Spring Boot: An extension of the Spring Framework that simplifies the development of production-ready Java applications.
- Spring Framework: A comprehensive framework for building enterprise-level Java applications, offering features like dependency injection and aspect-oriented programming.
- Node.js: A runtime environment for executing JavaScript on the server side.
- Express.js: A web application framework for Node.js, used to create a server and handle HTTP requests.
- CORS (Cross-Origin Resource Sharing): Middleware for enabling cross-origin requests, allowing your backend to respond to requests from different domains.

Accomplishments

-Using React, Framer Motion, and Bootstrap, I was able to create a responsive user interface with a visually appealing layout with animations and transitions.

-Using Node.js, Express.js, and CORS Middleware, I was able to set up a server to handle HTTP requests that dealt with payments.

-MySQL helped me store and manage structured data on essential information for my application.

-Java, Spring Boot, and Spring Framework powered my backend, providing me with a foundation to handle business logic, data operations, and communication to my frontend.

Learning Goal

- Stripe API: An API for handling online payments, enabling secure and seamless transaction processing.
- Checkout and Payment Pages: Integrated Stripe's pre-built checkout and payment pages into my application to enable one-time and subscription-based payments.
- Testing Environment: Stripe offers a testing environment that allowed me to thoroughly test payment flows and integration before going live.

Challenges

My biggest challenge for this project was implementing my learning goal, which was Stripe.

Stripe's documentation is extensive, and while it's highly informative, it can be overwhelming, especially for someone new to it.

- To overcome this challenge, I spent a considerable amount of time studying Stripe's documentation and resources, gaining a deep understanding of how it works.
- In addition, I collaborated with Esin, who gave me good insight as to how to properly implement Stripe.

Setup

1. Open the command line terminal.
2. Navigate to the server directory, then the sql directory, and then run the two MySQL schemas: lego_production_schema.sql and lego_test_schema.sql
3. Go to the server directory and navigate through the following directories: src -> main -> java -> learn. Finally, run App.java
4. Open a new command line terminal.
5. Navigate to the client directory and then to the lego_store directory and start the client application with “npm start”
6. Open a new command line terminal
7. Navigate to the client directory and start the second client application with “npm start”