

Services Relationship Document

Project Name:

MarketMint

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1. Overview

This document explains how the **Frontend, Backend, Database, and Services** interact in the Mini Amazon Clone project, and shows the relationship with external services such as AWS.

2. Architecture Diagram

Frontend (EJS Templates / Browser)

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Backend (Node.js / Express)

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+--> MongoDB (Database: Users, Products, Orders, Cart)

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+--> AWS SES (Email service for signup and order confirmation)

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+--> AWS S3 (Optional: storing product images)

3. Description of Relationships

1. Frontend → Backend

- User actions (signup, login, add to cart, place order) send HTTP requests to backend APIs.
- Backend responds with HTML pages, JSON data, or status messages.

2. Backend → Database (MongoDB)

- Stores and retrieves users, products, orders, etc.
- Handles queries and updates for all CRUD operations.

3. Backend → AWS SES (Simple Email Service)

- Sends verification emails for new users.
- Operates in sandbox mode (only verified emails can be used for testing).

4. Backend → AWS S3 and CloudFront

- Stores product images, logos and serves them to frontend pages through cloudfront.

4. External Services & Links

Service	Purpose	External Link
AWS SES	Sending emails	https://aws.amazon.com/ses/
AWS S3	Storing images	https://aws.amazon.com/s3/
AWS CloudFront	Accessing Images	https://aws.amazon.com/cloudfront/
AWS EC2	Hosting website	https://aws.amazon.com/EC2/
MongoDB	Database	https://www.mongodb.com/

5. Notes

- Ensure AWS credentials are correctly configured in `.env`.
- Database must be running for backend to function.
- Services interactions are **synchronous** for user actions like signup and order placement.