

# VaagaiCart

E-Commerce Product Catalog

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# INTRODUCTION

- VaagaiCart is an e-commerce platform for browsing products, placing orders, and making secure payments.
- Supports **Admin** and **User** roles.
- Focuses on **security**, **easy navigation**, and **smooth transactions**.
- Integrates payment and email features for a complete shopping experience.

# E-COMMERCE 2025: USER INSIGHTS

167.2 M

## AMAZON

In 2023, Amazon has attracted 167.1 million users, indicating a substantial interest in online shopping as individuals embrace the platform for its convenience and diverse offerings

167.4 M

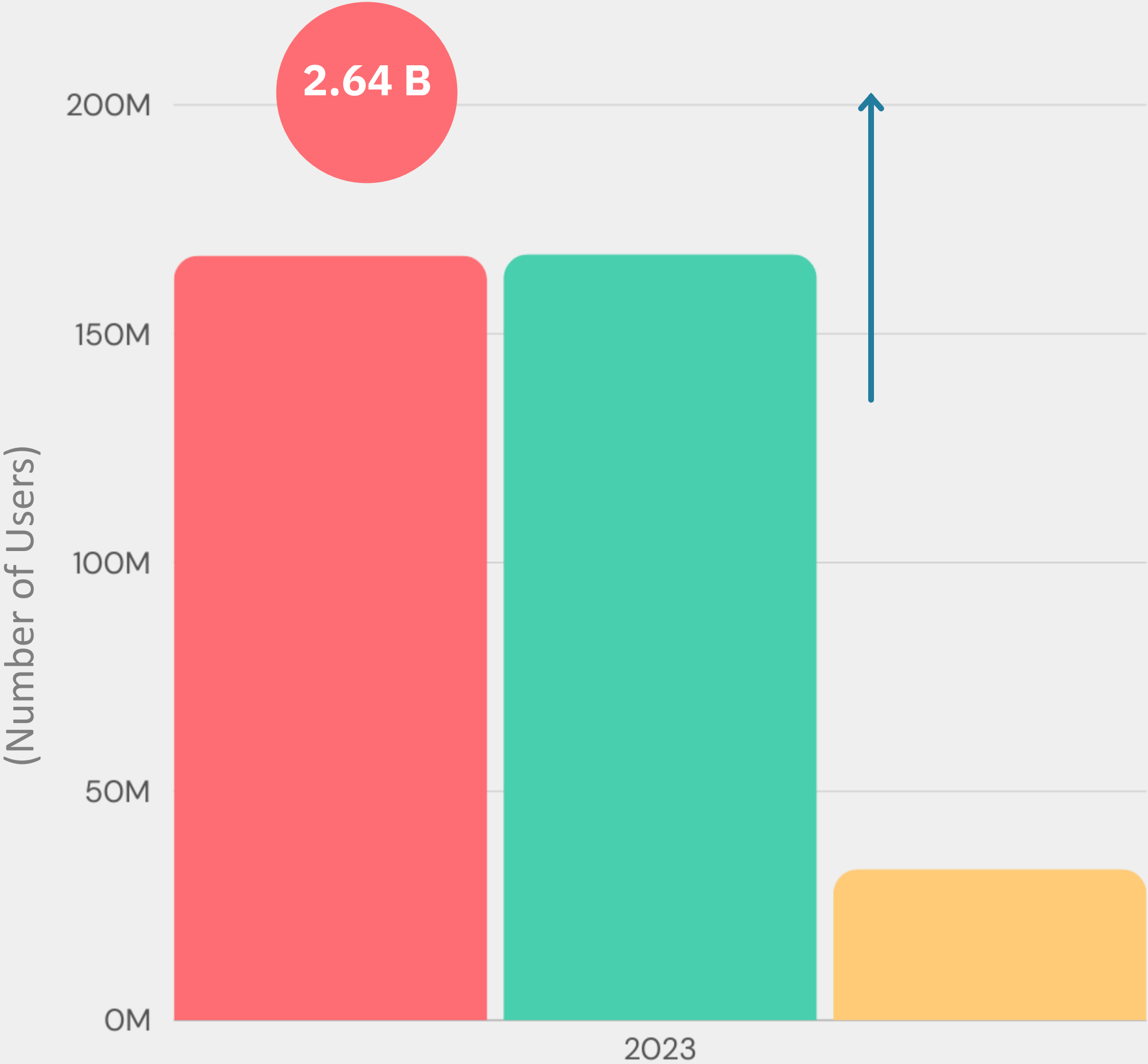
## FLIPKART

In 2023, Flipkart proudly hosts a user base of 167.4 million, showcasing the platform's widespread appeal and strong position in the realm of online shopping

33 M

## OTHERS

Other ecommerce platforms collectively reach 33 million users in 2023, highlighting the substantial user base distinctions across various online shopping destinations.



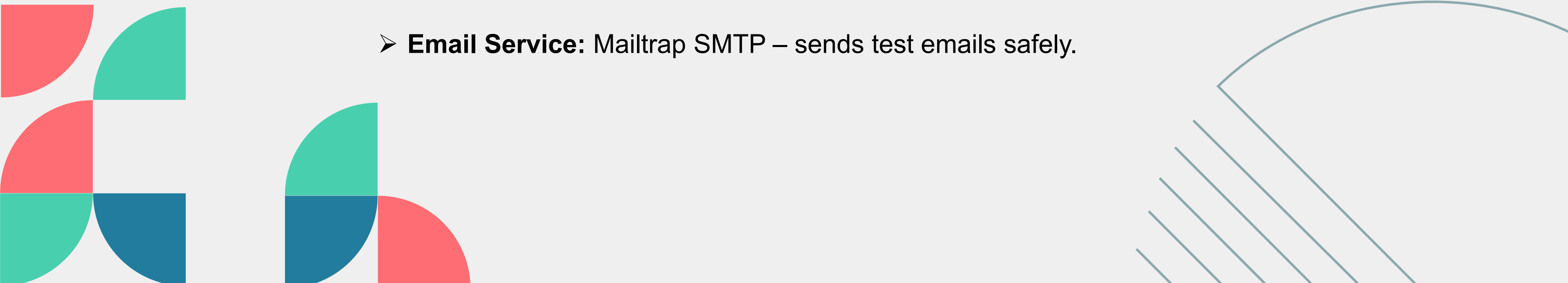
The top-left corner features a series of thin, light blue diagonal lines. The bottom-left corner contains several overlapping semi-circles in red, teal, and dark blue.

# PROBLEM STATEMENT

- Many small businesses lack an online platform to display and sell products.
- Customers need an easy way to browse, order, and pay online.
- Existing solutions are often **complex, costly, or insecure.**
- VaagaiCart solves this by offering a **secure, role-based, and affordable solution.**



# TECHNOLOGY STACK

- **Backend:** Spring Boot – builds secure REST APIs.
  - **Frontend:** React (Vite) – fast and responsive user interface.
  - **Database:** MySQL – stores product, user, and order data.
  - **Security:** Spring Security + JWT – protects user data and restricts access.
  - **Payments:** Stripe – handles online transactions securely.
  - **Email Service:** Mailtrap SMTP – sends test emails safely.
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# UNIQUENESS AND FEATURES



- **JWT Authentication** – secure login & role-based access.
- **Admin Dashboard** – add, update, delete products.
- **Product Search** – easy browsing for users.
- **Order Management** – place and track orders.
- **Stripe Payment** – fast and secure payments.
- **Email Notifications** – order confirmations via Mailtrap.
- **Validation & Error Handling** – prevents incorrect data and system crashes.



# CHALLENGES FACED

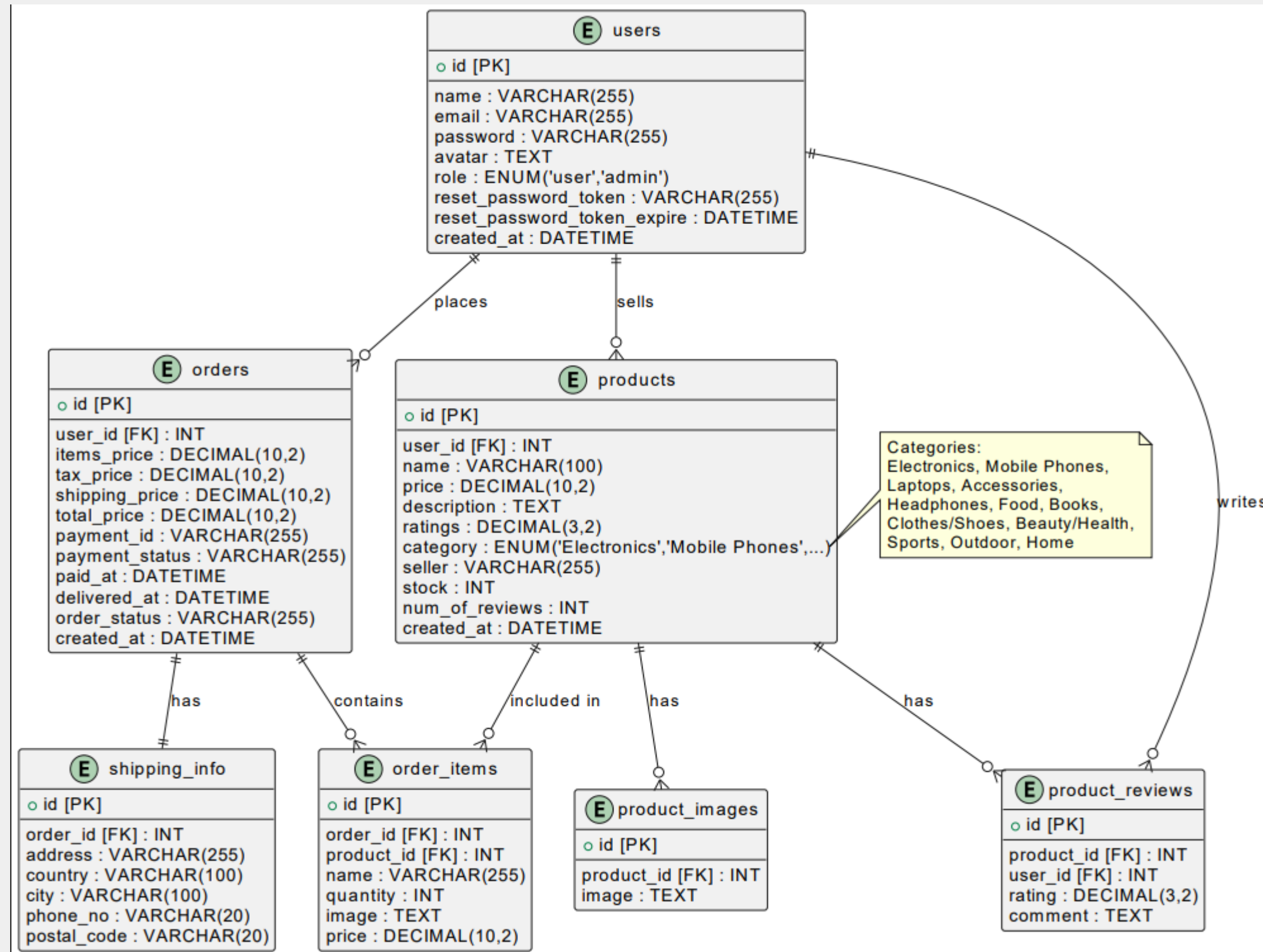
- **CORS Errors** – solved by configuring allowed origins in the backend.
- **Database Connectivity** – fixed by proper MySQL configuration.
- **Stripe API Integration** – required learning payment flow and keys setup.
- **JWT Token Expiry Issues** – handled with proper token refresh logic.

# FLOW DIAGRAM

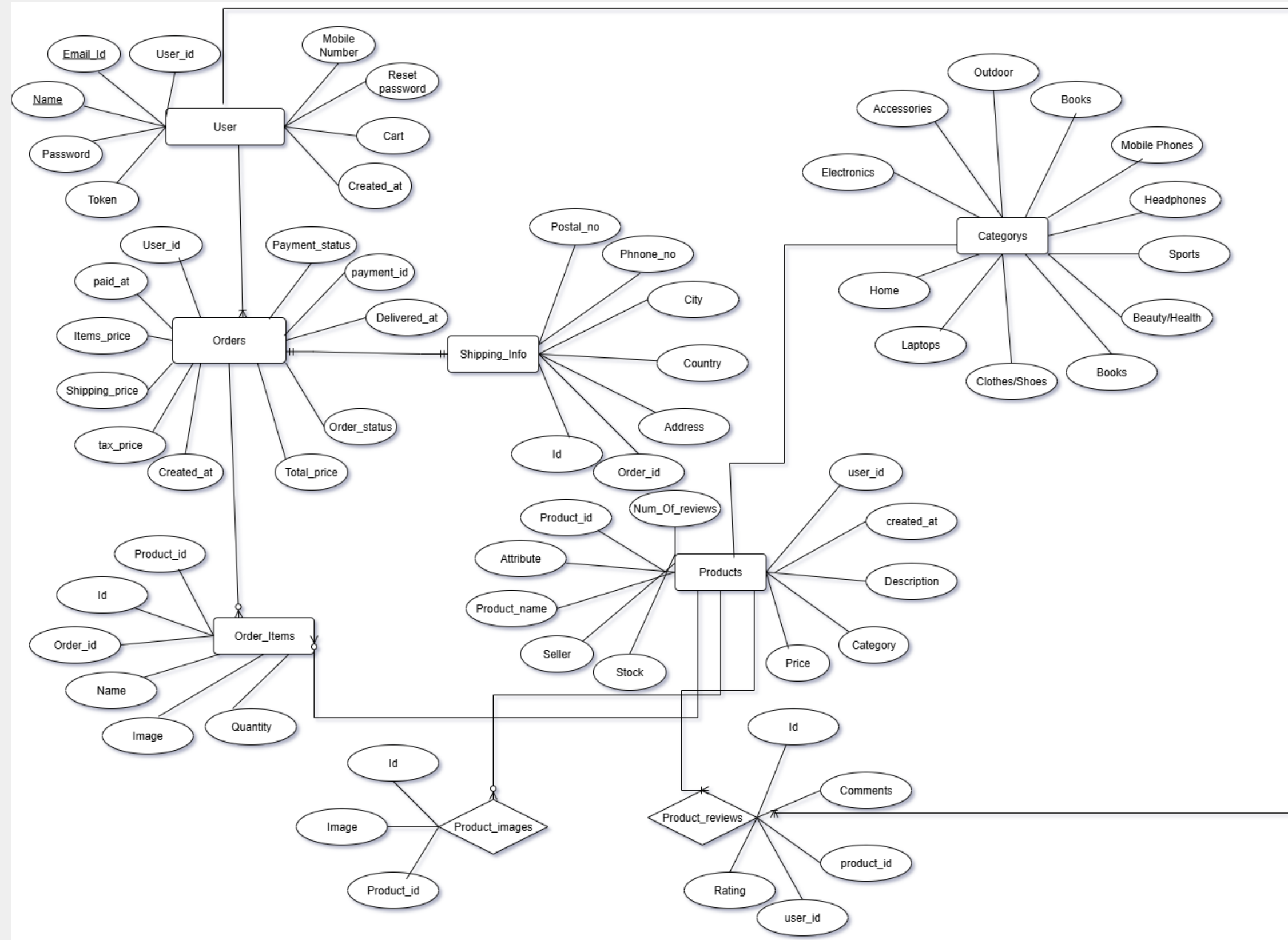




# UML DIAGRAM

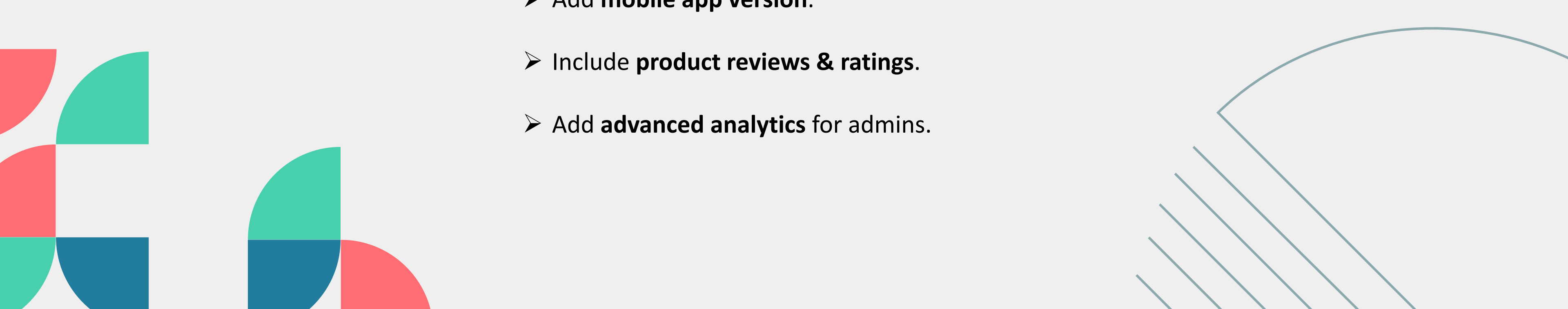


# ER DIAGRAM



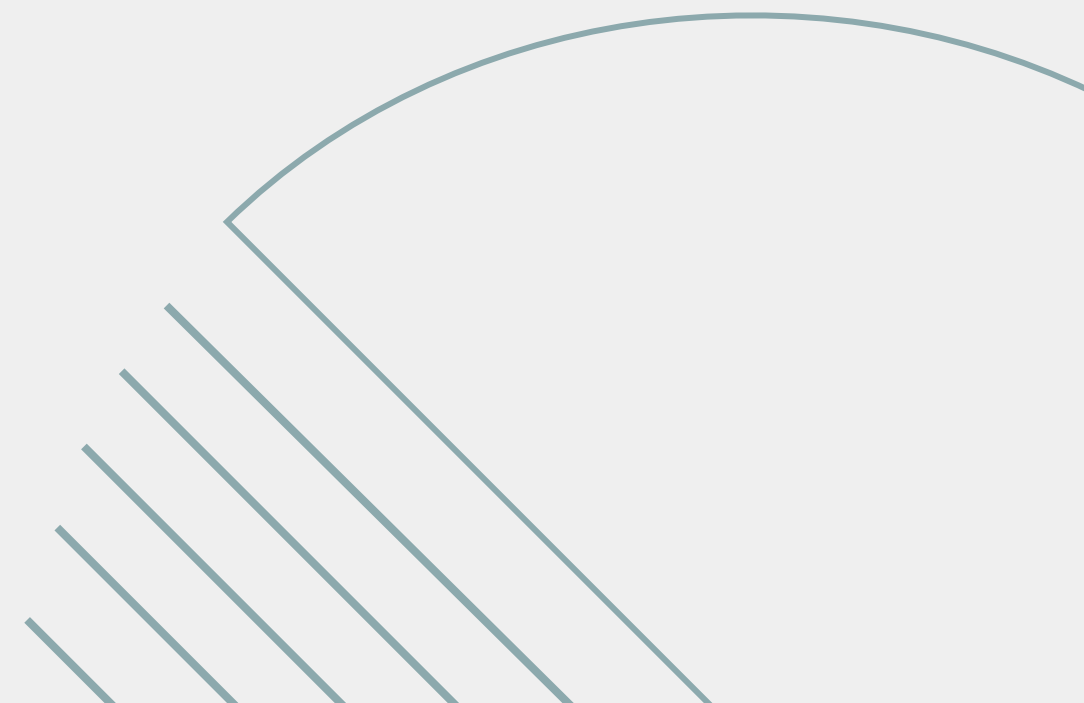


# FUTURE ENHANCEMENT

- Add **real-time notifications** for order status.
  - Support for **multiple languages**.
  - Add **mobile app version**.
  - Include **product reviews & ratings**.
  - Add **advanced analytics** for admins.
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# CONCLUSION

- Learned how to build a **secure, full-stack e-commerce app**.
- Gained experience with **Spring Boot, React, and MySQL**.
- Improved skills in **API integration, payments, and authentication**.
- Project can help small businesses sell products online effectively.



The background features four decorative geometric patterns in the corners. The top-left corner has a series of parallel diagonal lines in a light blue-grey color. The top-right corner contains a cluster of overlapping semi-circles in yellow, dark blue, red, and teal. The bottom-left corner features a similar cluster of overlapping semi-circles in red, teal, dark blue, and red. The bottom-right corner has a series of parallel diagonal lines in a light blue-grey color, mirroring the top-left pattern.

**THANK YOU**