

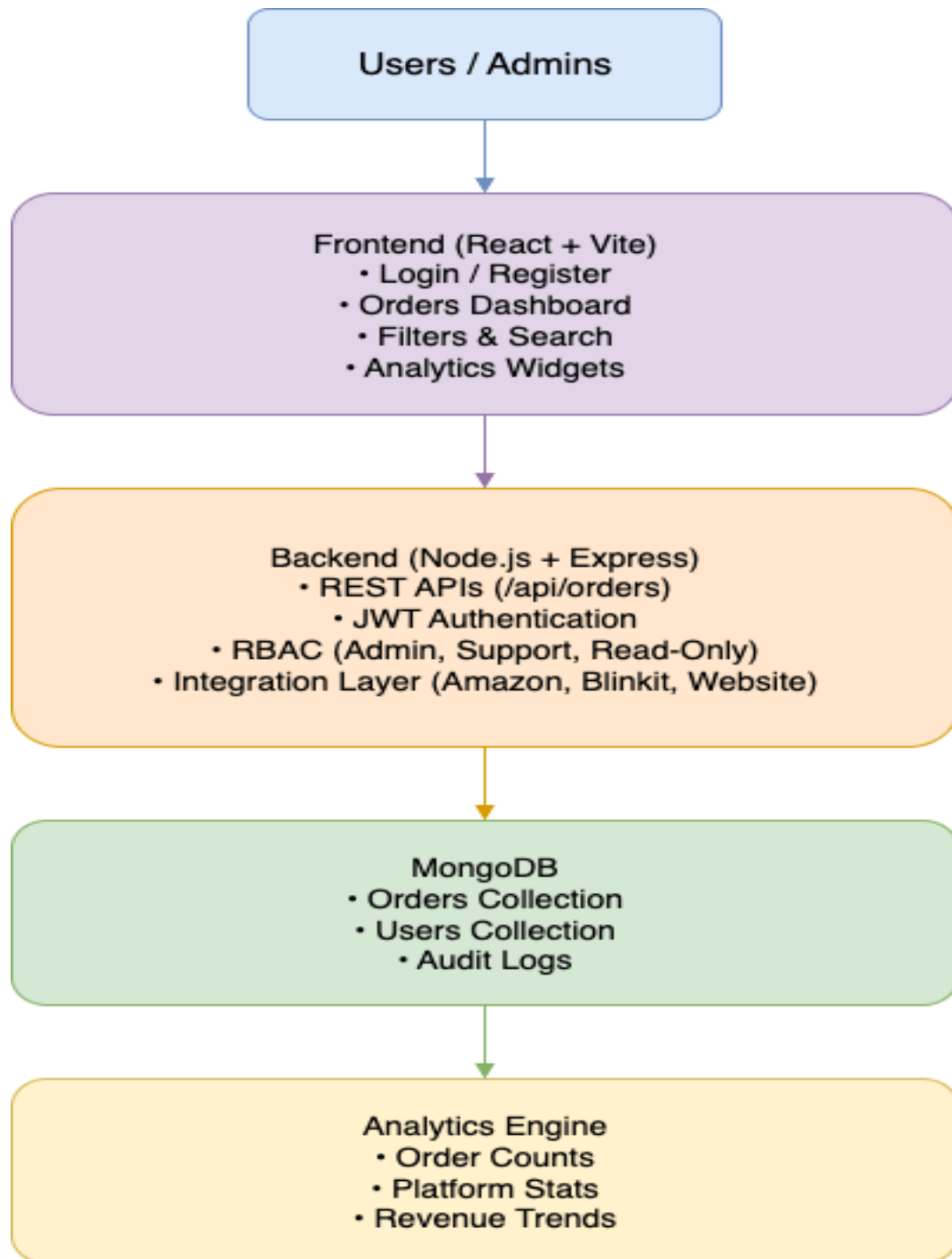
Palmonas Senior SDE Assignment - Technical Document

Overview

The Palmonas CRM is designed as an admin portal for managing customer orders across multiple e-commerce platforms such as the organic website, Amazon, and Blinkit. This MVP demonstrates expertise in full-stack development, containerization, authentication, and analytics.

System Design

The following diagram illustrates the architecture of the system:



Assumptions

- All e-commerce platforms expose APIs for fetching and updating orders.
- API tokens and credentials are available and securely stored.
- Minimal branding in MVP to focus on functionality.
- Role-Based Access Control (RBAC) implemented at a practical level.
- MongoDB is used as the primary database.

Prominent Features Implemented

1. Unified Order Dashboard: Centralized order view with filters and search.
2. Advanced Search & Filter: By status, platform, and customer.
3. Order Status Update: Admins can update and manage orders.

4. Order Analytics & Trends: Order counts, best-selling platform, and revenue trends.
5. User Management & RBAC: Authentication and roles (Admin, Support, Read-only).

AI Tools Usage

- ChatGPT was used to accelerate development by generating boilerplate code, creating system design documents, and providing deployment strategies.
- AI assistance was leveraged for optimizing frontend filtering logic and system design clarity.

Deployment

- The system is Dockerized with separate services for frontend, backend, and MongoDB.
- Deployment configured on Render using docker-compose.
- Environment variables are managed via .env files.