**Day 3 - API Integration Report - Quollex Marketplace**

**Introduction:**

This report outlines the API integration process for **Quollex Marketplace**, detailing the steps taken to integrate third-party APIs (Payment Gateway, Shipment Tracking) and the adjustments made to the existing Sanity CMS schema. Additionally, the report includes the migration steps and tools used to ensure a seamless integration and product management workflow.

**. API Integration Process**

The main goal of the API integration is to connect Ammerahs Marketplace's frontend with external services like **Payment Gateway API** and **Shipment Tracking API** while ensuring seamless communication with Sanity CMS for product management.

**a) Payment Gateway API Integration**

* **Objective**:  
  Enable users to securely complete transactions during the checkout process.
* **Steps**:
  1. **Payment API Selection**: Chose **Stripe** as the payment gateway due to its robust security and user-friendly integration features.
  2. **API Key Configuration**:
     + Generated API keys from Stripe’s dashboard.
     + Stored the keys securely in environment variables to prevent exposure.
  3. **Frontend Integration**:
     + Implemented the **Stripe.js** library to handle frontend payment interactions.
     + Created a payment form in the **Checkout** page.
     + On form submission, the frontend generates a payment token and sends it to the backend.
  4. **Backend Payment Handling**:
     + Created a backend route in **Next.js API routes** to receive payment token and order details.
     + Used Stripe’s SDK to create a charge or a customer subscription.
     + On successful payment, the backend updates the **Order Status** in **Sanity CMS** and responds with a confirmation.

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