**Assignment: API Feature Implementation for Order Management System**

**Overview**

You'll be adding features to a provided .NET 8 Web API project that simulates an order management system. The assessment focuses on your ability to implement, test, and document solutions efficiently within the existing architecture.

Requirements

**Feature Implementation (60-70 minutes)**

Add a discounting system that applies different promotion rules based on customer segments and order history

Implement an order status tracking feature with appropriate state transitions

Create an endpoint that returns order analytics (e.g., average value, fulfillment time)

**Testing (30-40 minutes)**

Write unit tests for the discount calculation logic

Include integration tests for at least one API endpoint

**Documentation & Optimization (20 minutes)**

Document your API changes using Swagger/OpenAPI annotations

Identify and implement at least one performance optimization

**Evaluation Criteria**

Code quality and organization

Proper implementation of .NET design patterns

Testing approach and coverage

API design and documentation

Performance considerations

**Submission**

Submit your completed project as a GitHub repository link, including a brief README explaining your approach and any assumptions made.

**Note:**

1. **Please avoid long and lengthy code. Write precise and clean code.**
2. **Share your GitHub project making it public. So that we can evaluate.**