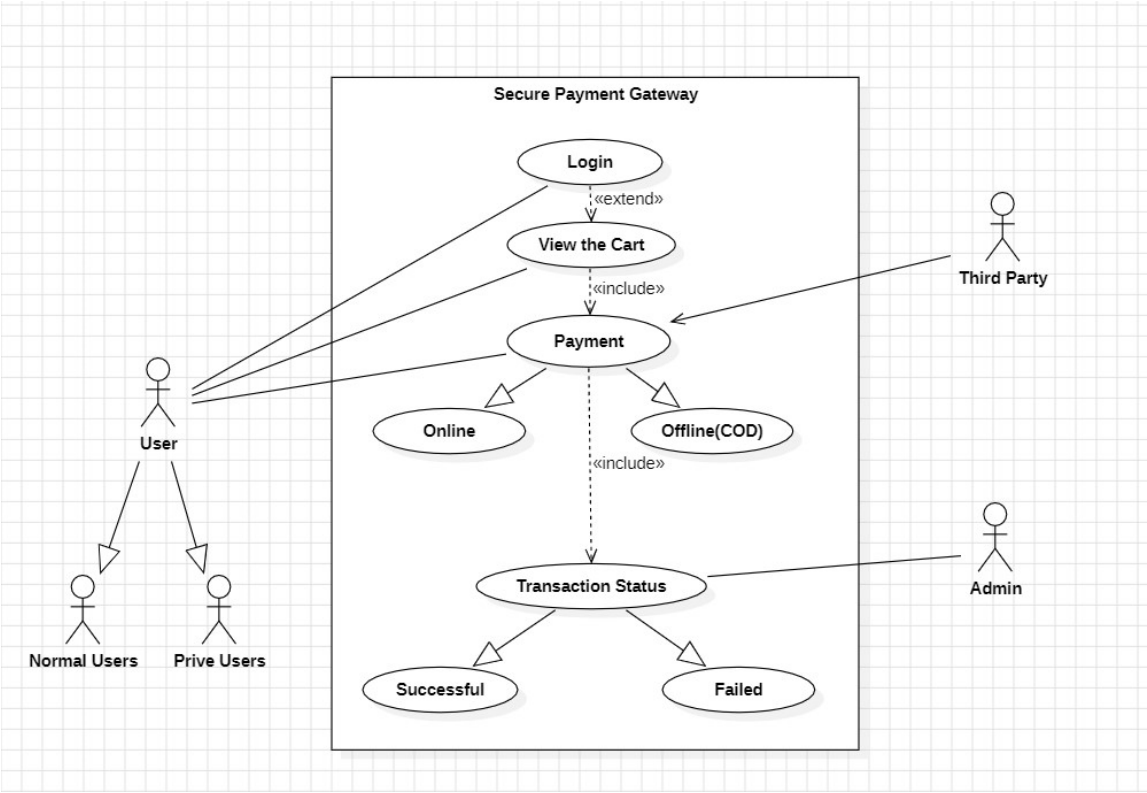
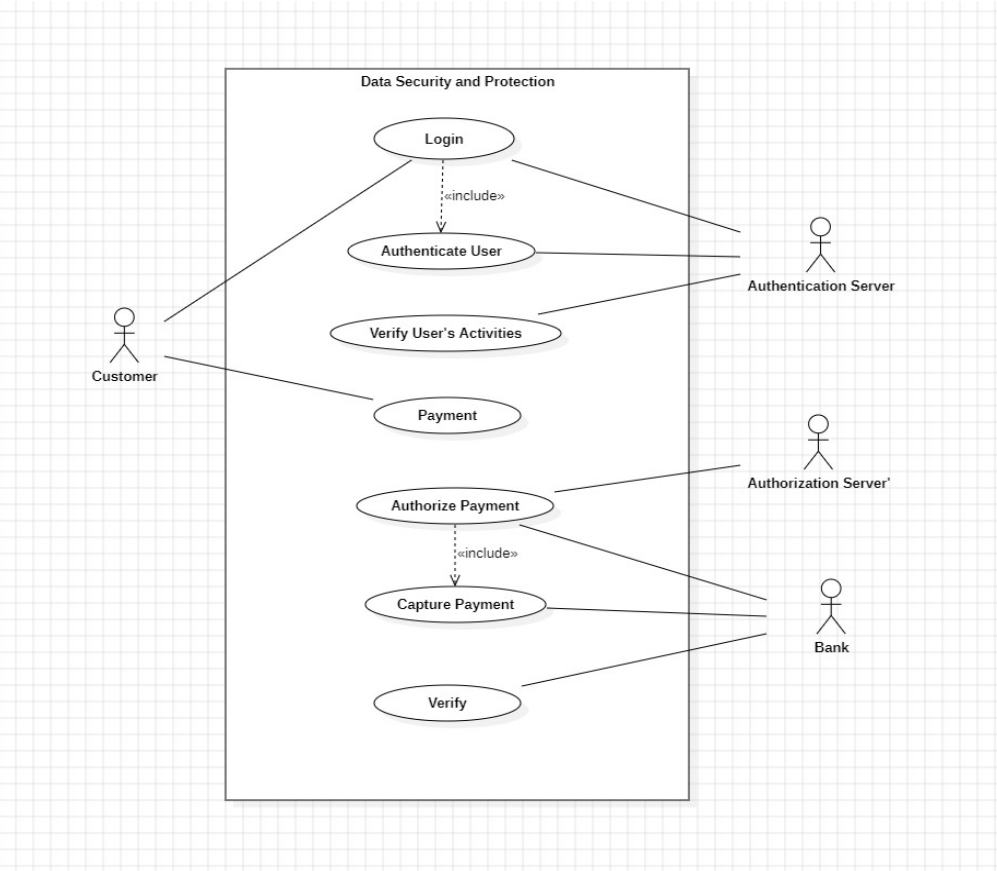
Beauty Retail E-Commerce Platform
Software Design Document

I. Use Case Diagrams:

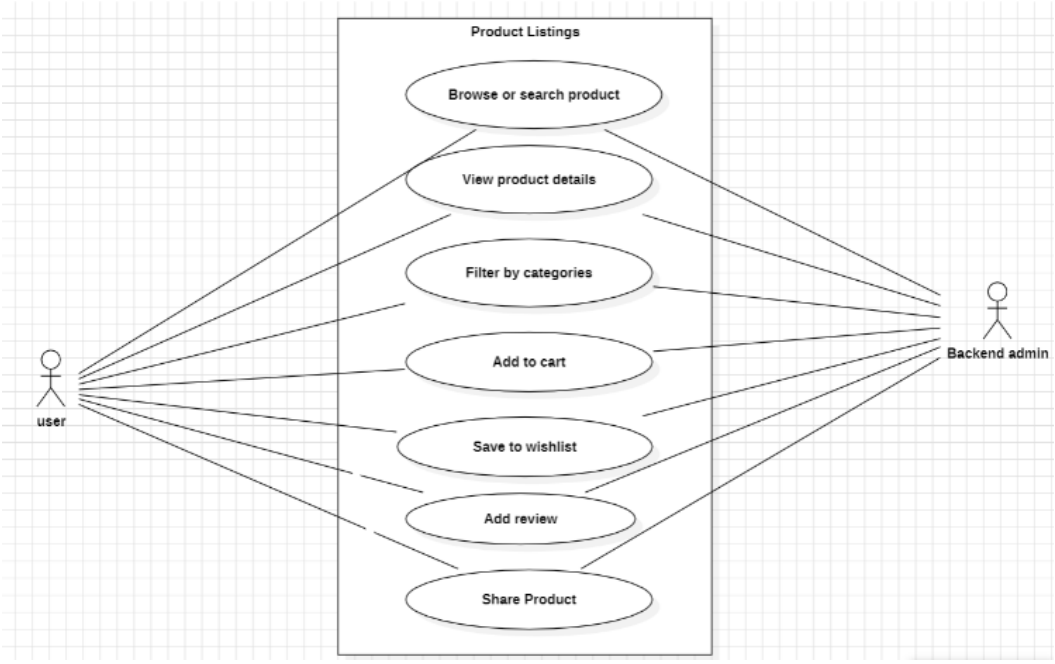
A. Secure Payment Processing **(PES2UG21CS519):**



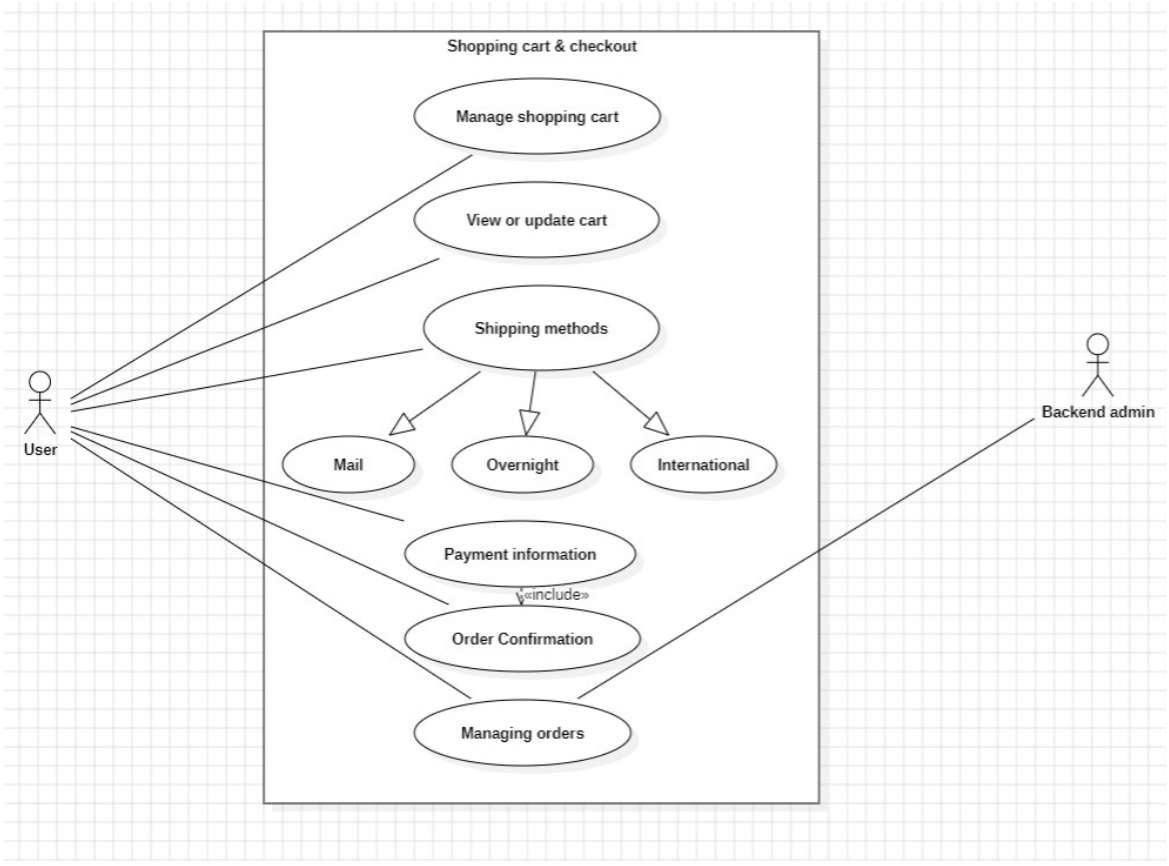
B.Data Security and Protection **(PES2UG21CS519)**:



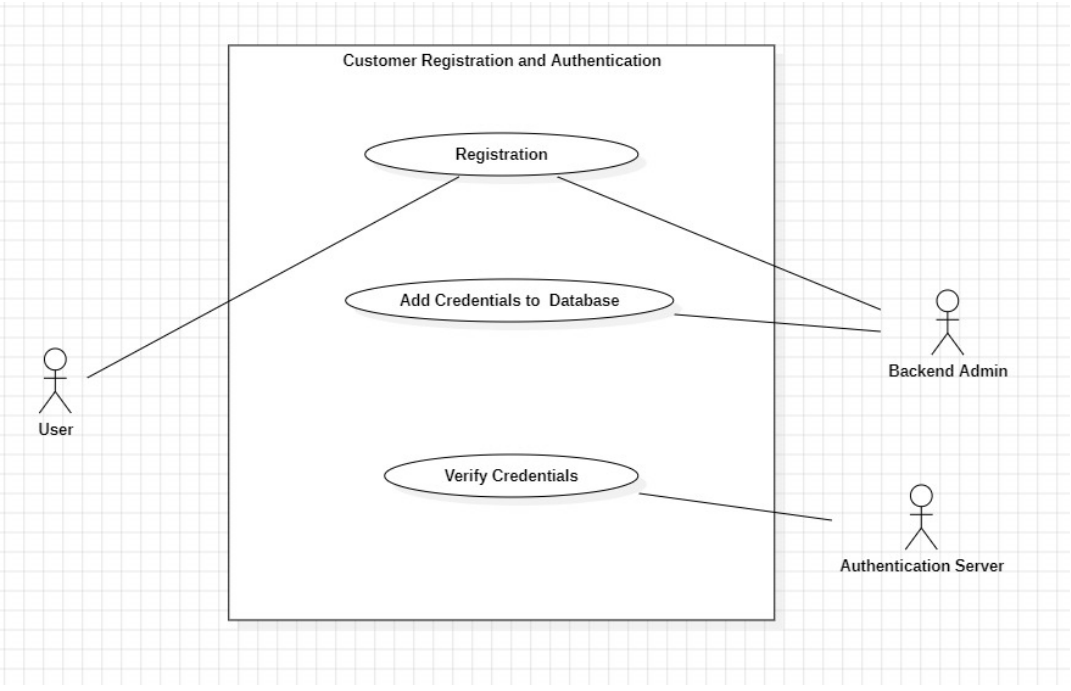
C. Product Listings **(PES2UG21CS531)**:



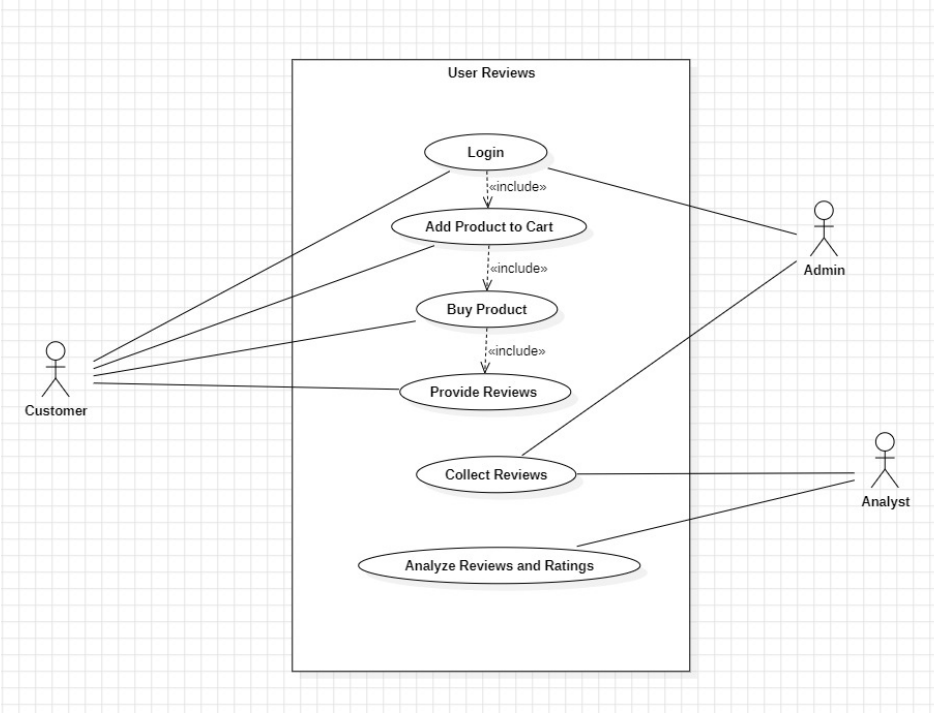
D. Shopping Cart and Checkout **(PES2UG21CS531)**:



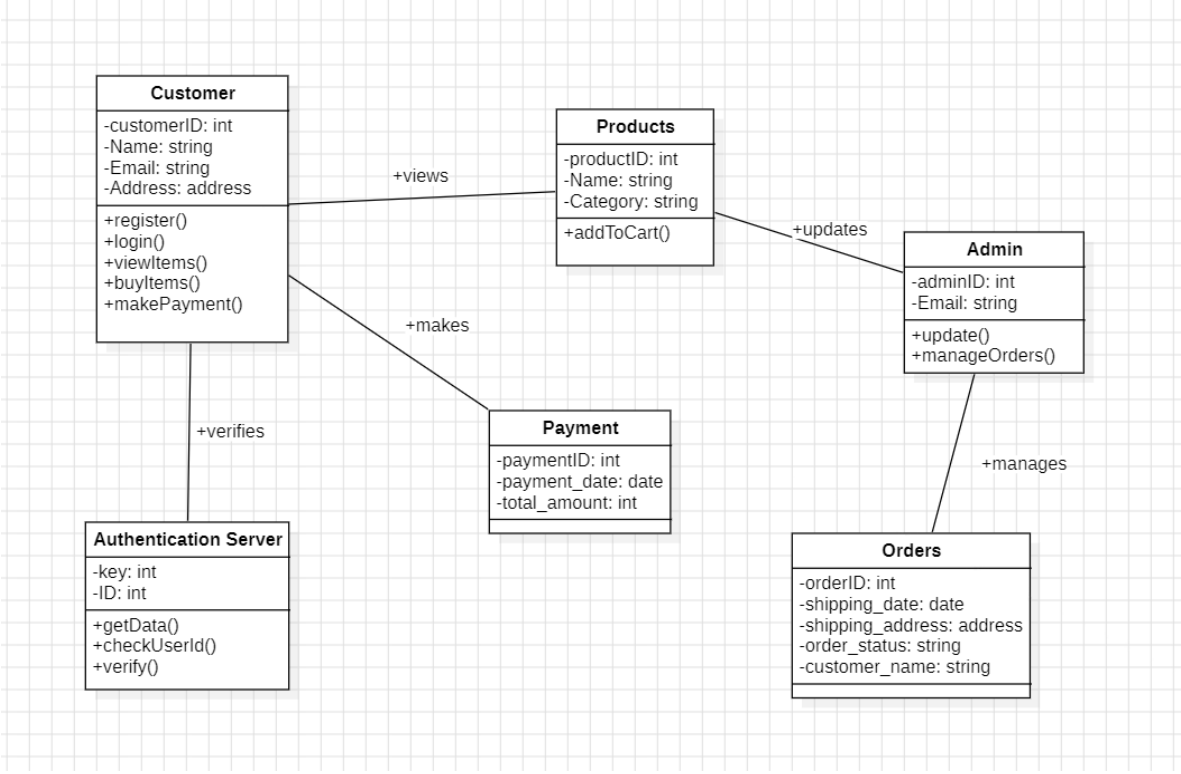
E. Customer Registration and Authentication **(PES2UG21CS541)**:



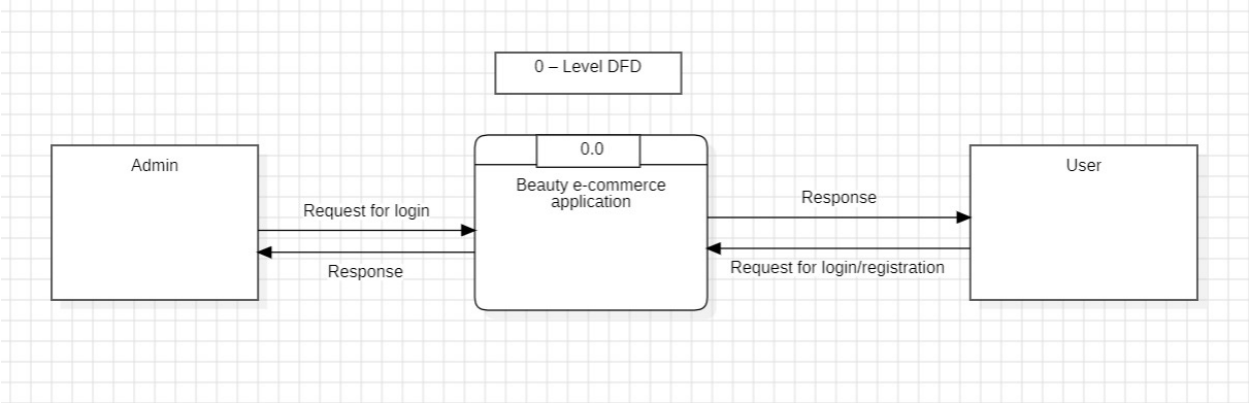
F. User Reviews and Ratings **(PES2UG21CS541)**:

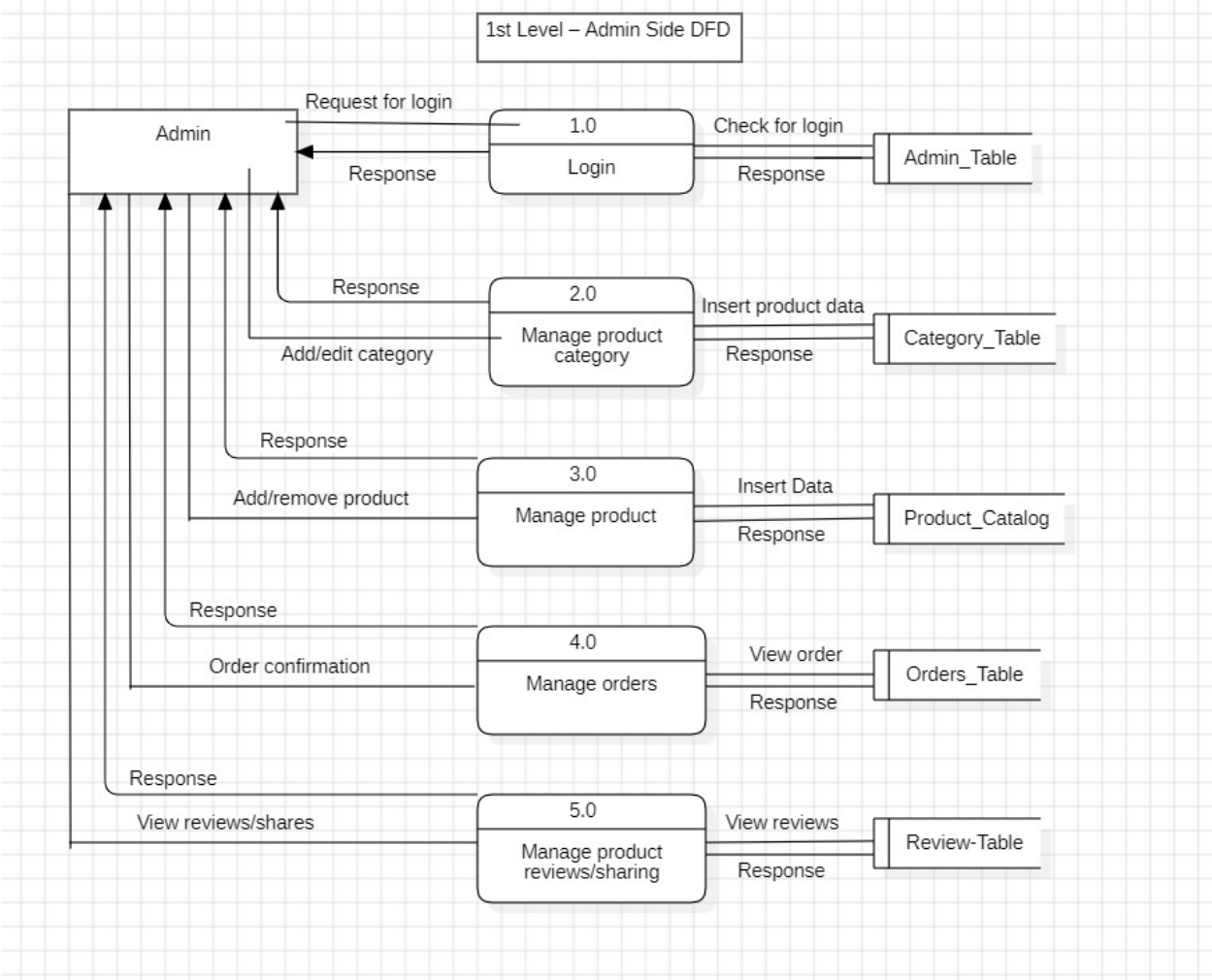


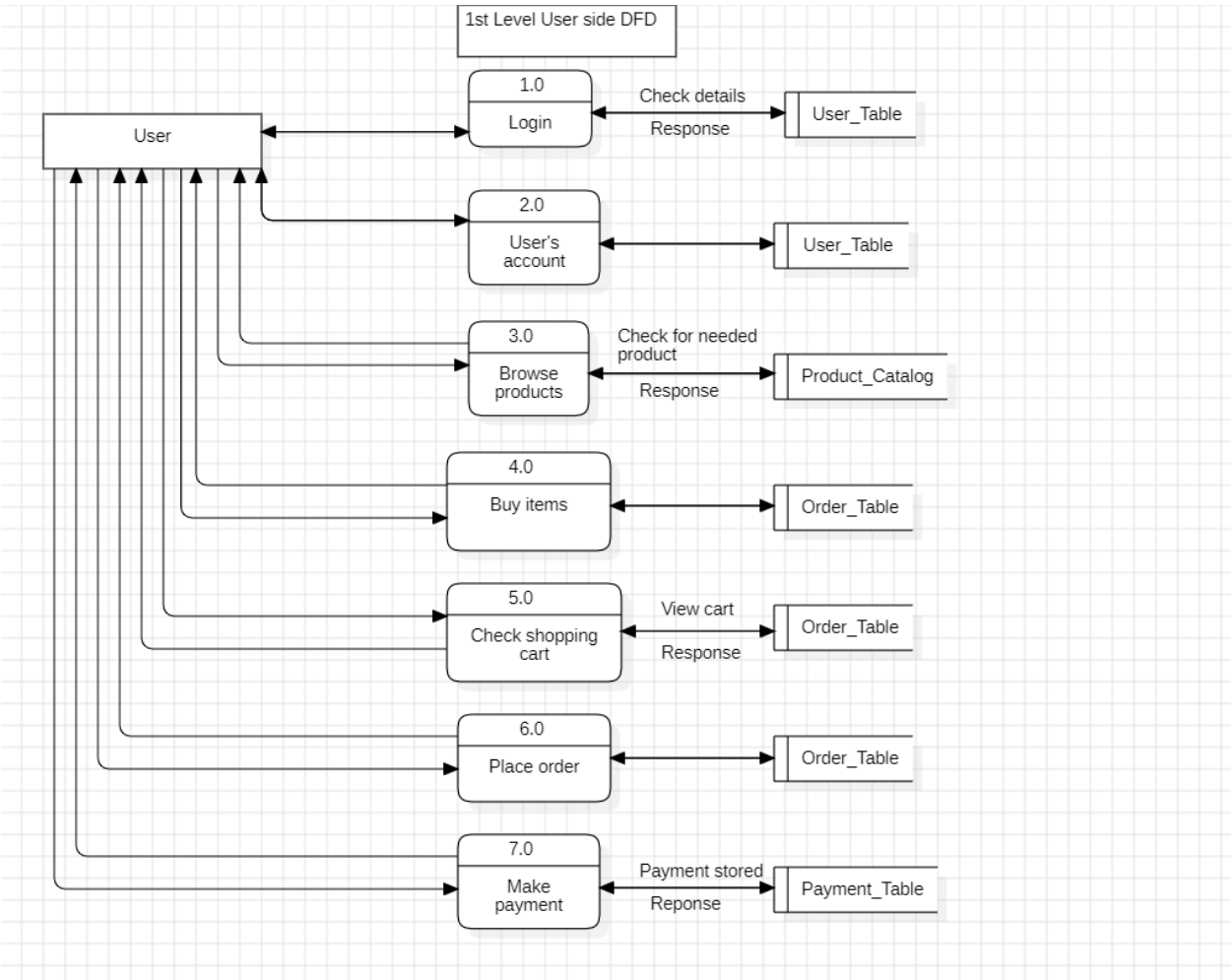
II. Class Diagram:



III. Data Flow Diagram:







IV. Architectural Style:

A microservices architectural style would be suitable for our e-commerce platform. A microservices architecture is one in which a software system is divided into a set of independent services, loosely coupled with each other, via APIs.

This architectural style was chosen for a plethora of reasons, some of which are :

Scalability: Microservices are readily capable of scaling specific services that are under heavy load, ensuring optimal performance, without scaling the entire system.

Maintainability: Each microservice can be developed and maintained by a small team, ensuring that teams are experts in their specific domains, leading to easier maintenance, updates, and bug fixes.

Integration With Third-Party Services: Integrating with external services (including payment gateways, shipping providers) is seamless in a microservices architecture. Each service can handle integrations independently, guaranteeing smooth communication with third-party providers.