Southern New Hampshire University

CS 255 System Design Document

UML Diagrams

UML Use Case Diagram

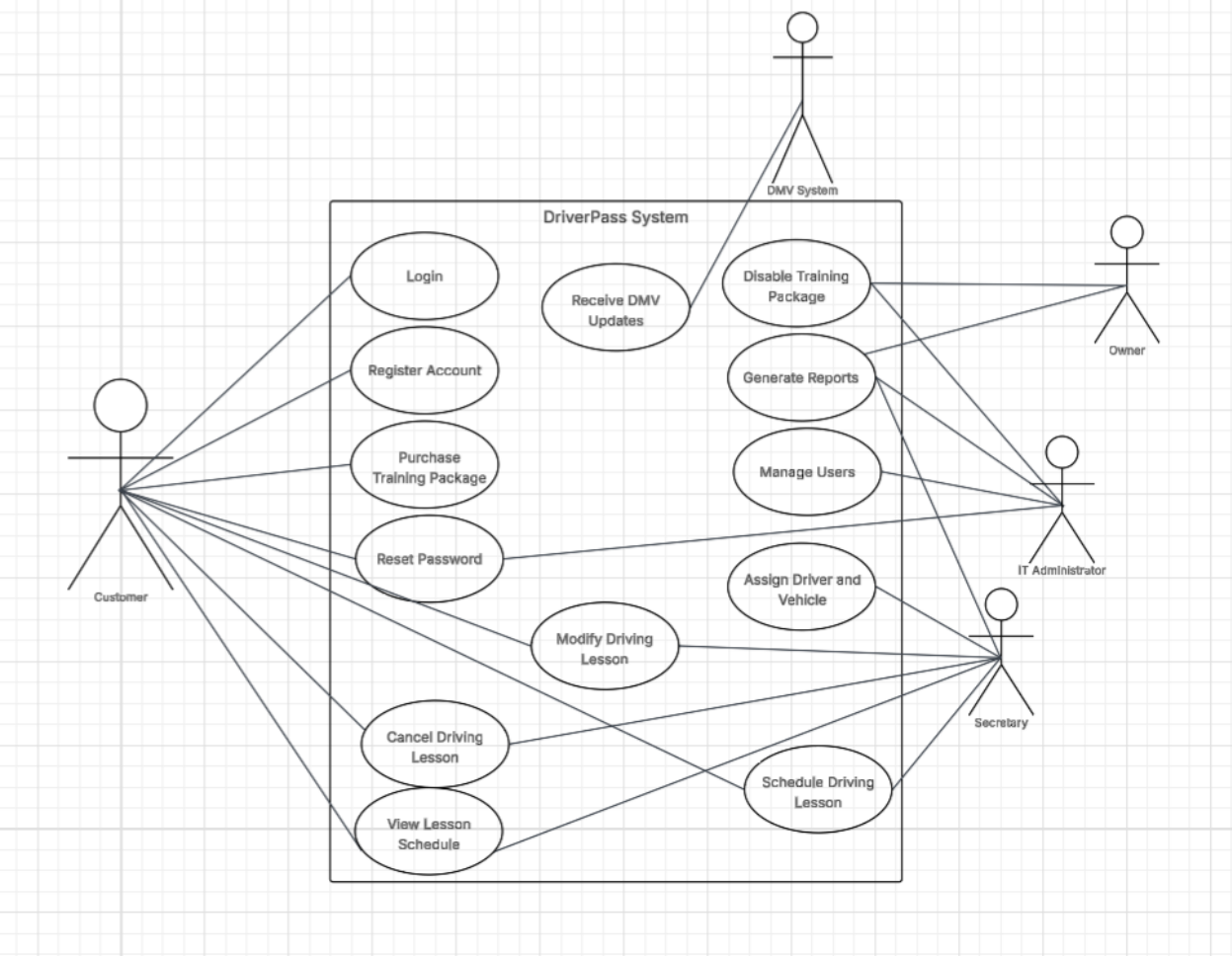

Figure 1: DriverPass UML Use Case Diagram

UML Activity Diagrams

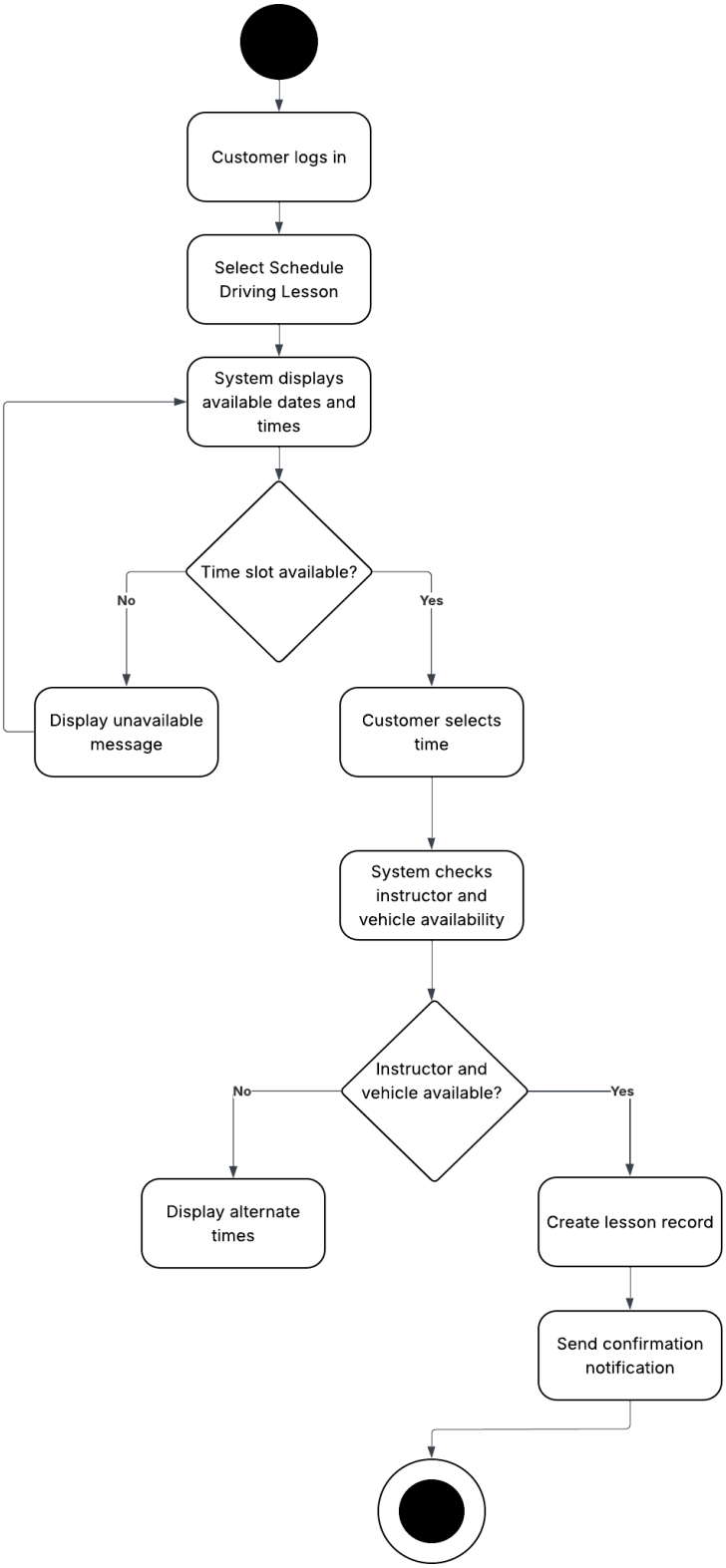

Figure 2: Activity Diagram – Schedule Driving Lesson

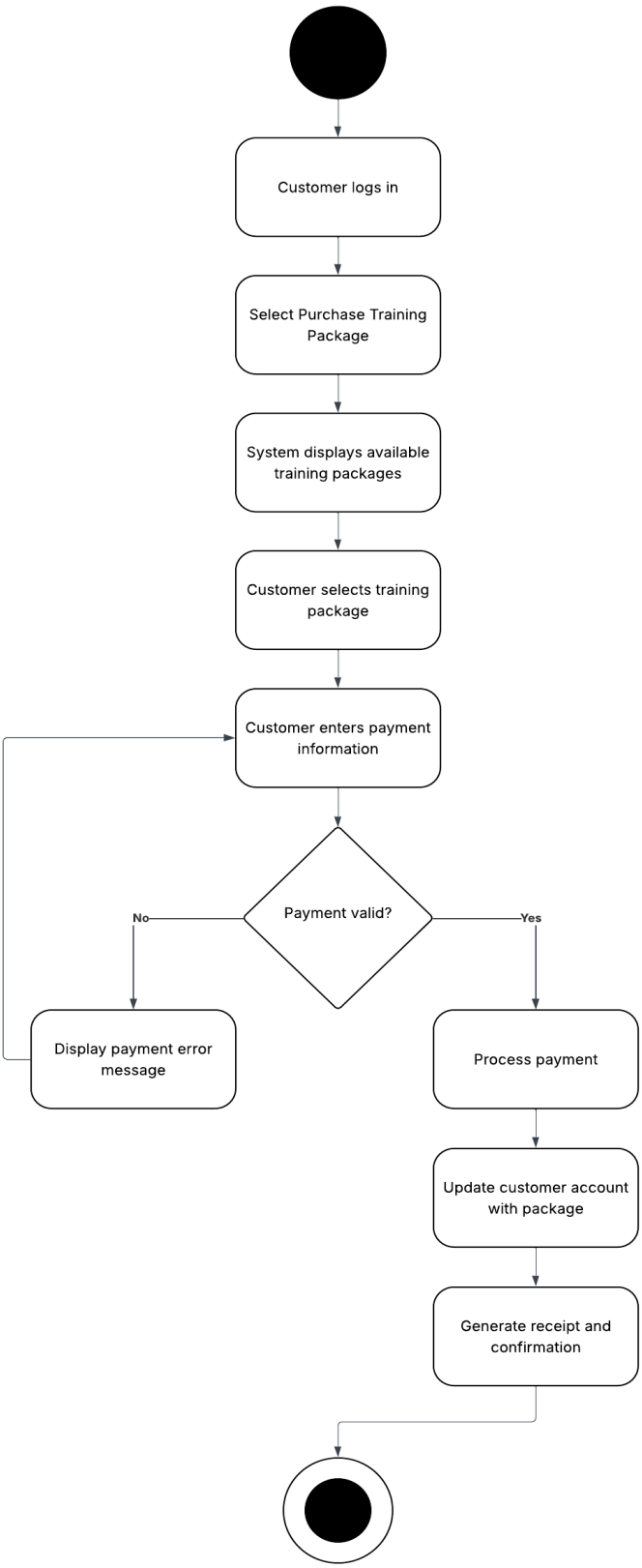

Figure 3: Activity Diagram – Purchase Training Package

UML Sequence Diagram

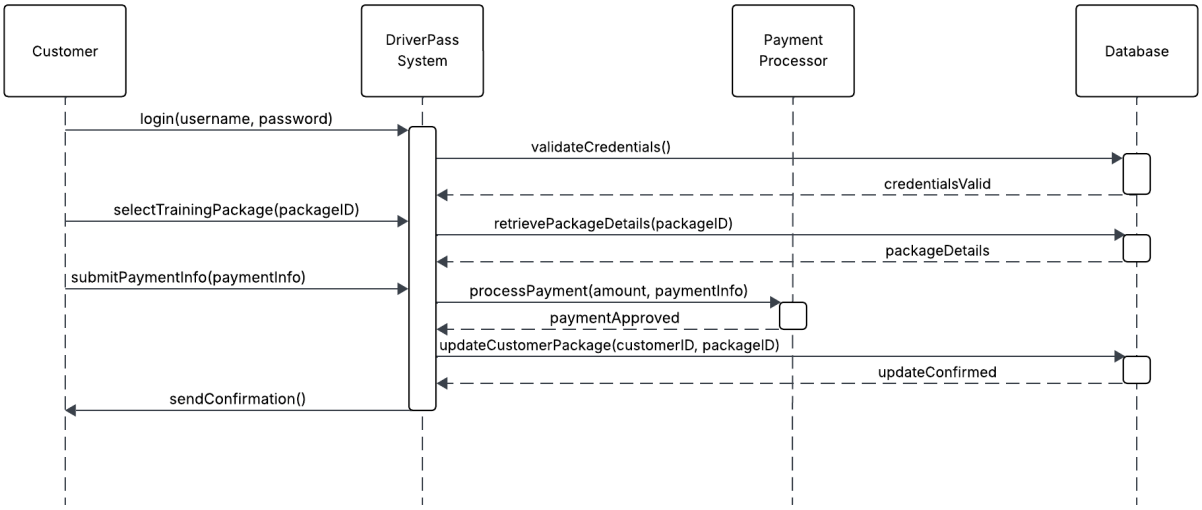

Figure 4: UML Sequence Diagram

UML Class Diagram

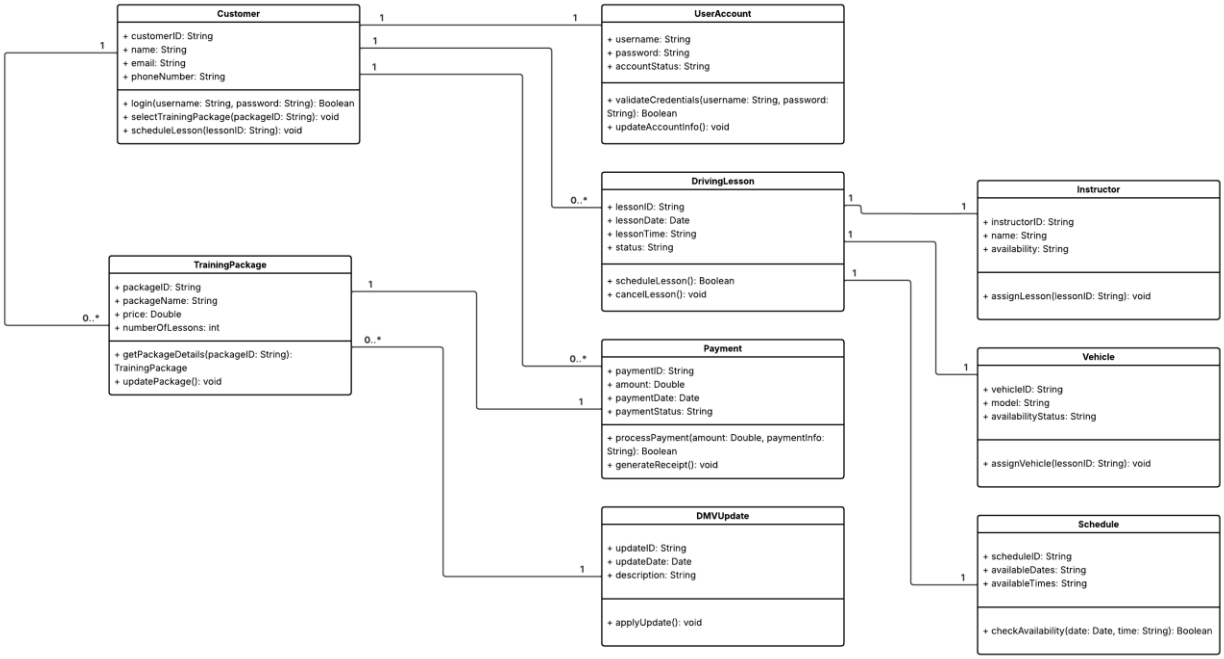

Figure 5: UML Class Diagram

Technical Requirements

The DriverPass system is going to require a reliable and secure technical infrastructure to support online user access, lesson scheduling, payment processing, and administrative management. For hardware, customers will need access to a smartphone, tablet, or computer with internet connectivity. The DriverPass company will require secure servers to host the application and database, as well as workstations for administrative staff and instructors to manage schedules, training packages, and customer information.

From a software perspective, the system will operate as a web-based application built using modern development frameworks like HTML, CSS, and JavaScript for the front end, with a server-side technology such as Java, Python, or .NET handling business logic and system operations. A relational database management system such as MySQL or PostgreSQL will be required to store customer accounts, lesson schedules, payment records, and training package data. The system will also need to integrate with a third-party payment processor to securely handle online transactions like Stripe or PayPal.

In terms of infrastructure, the system will require secure web hosting services, HTTPS encryption for data transmission, user authentication mechanisms, and regular database backups to ensure reliability and data protection. Role-based access controls will be implemented to restrict administrative functions to authorized personnel. The system should also support scalability to accommodate increasing numbers of users and lessons as the business grows.