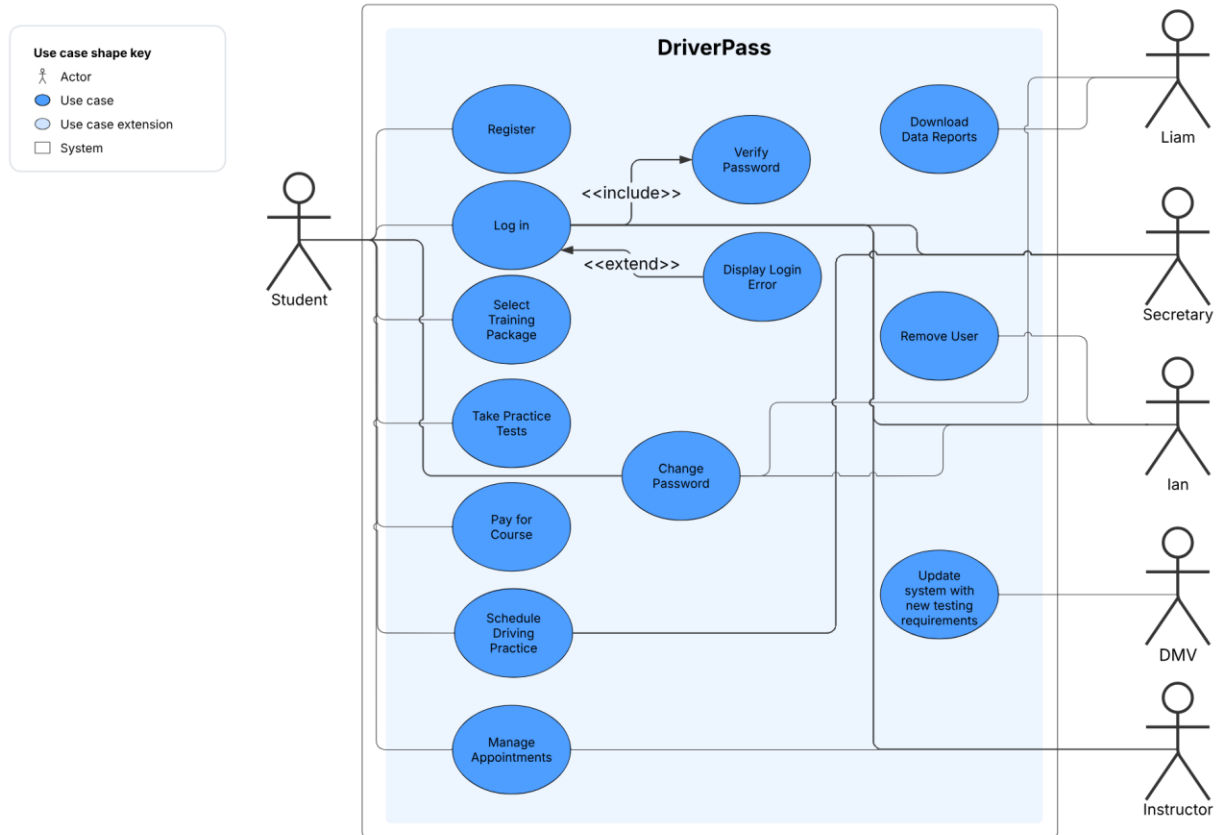


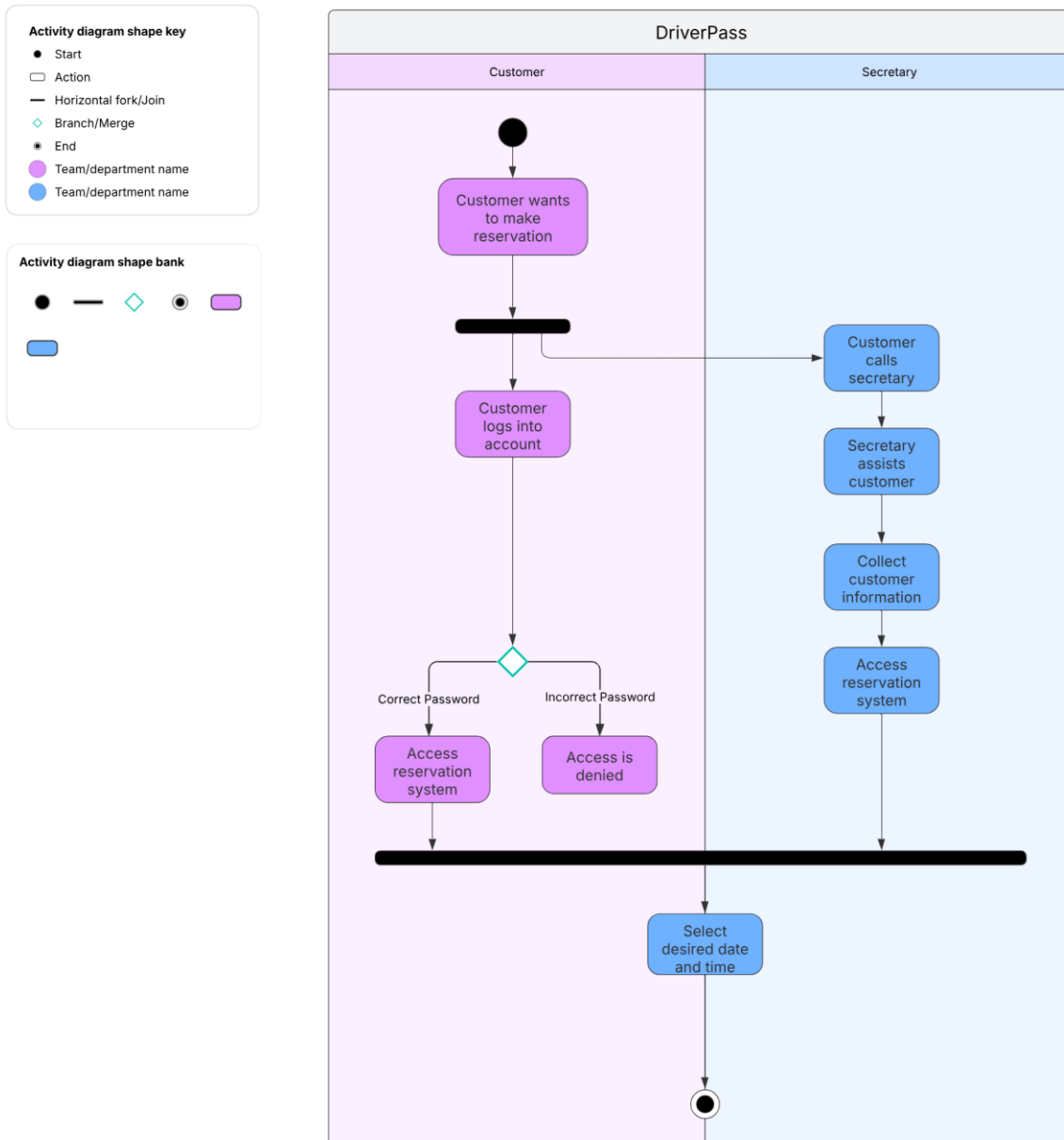
CS 255 System Design Document

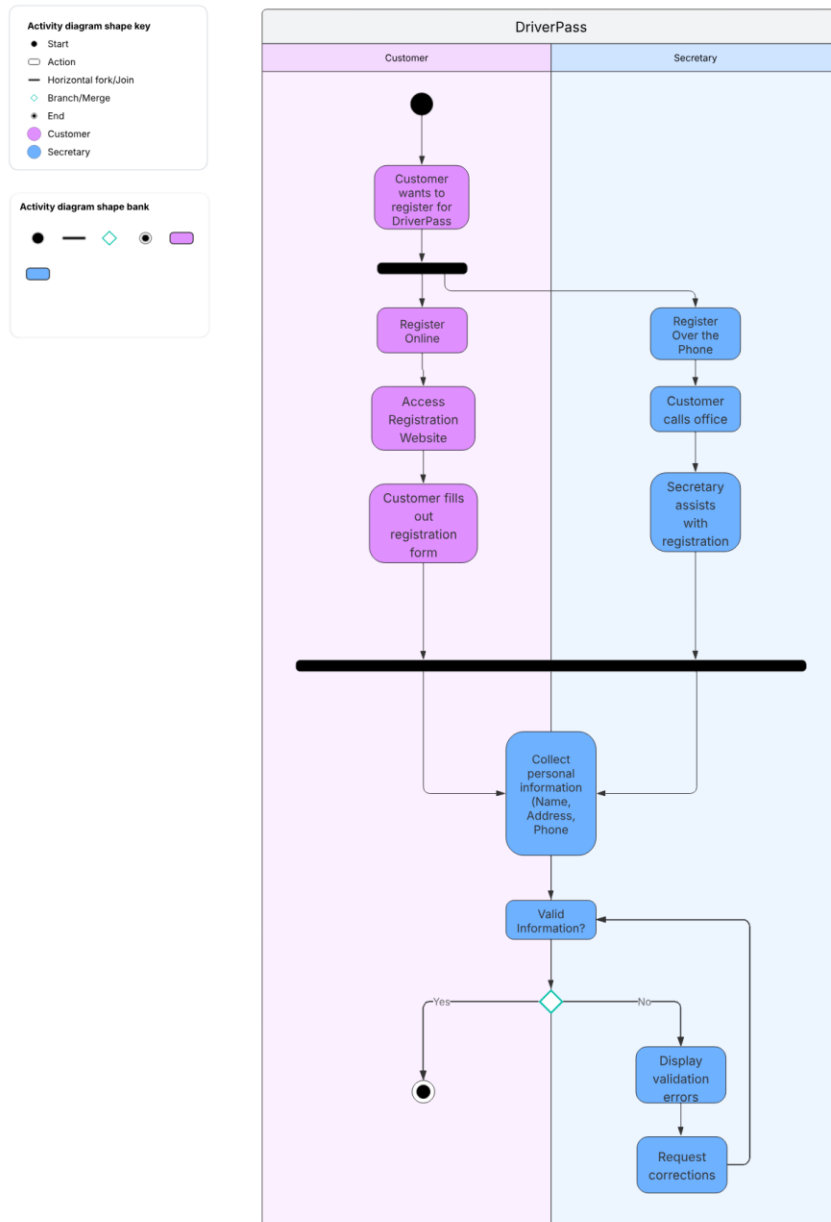
UML Diagrams

UML Use Case Diagram

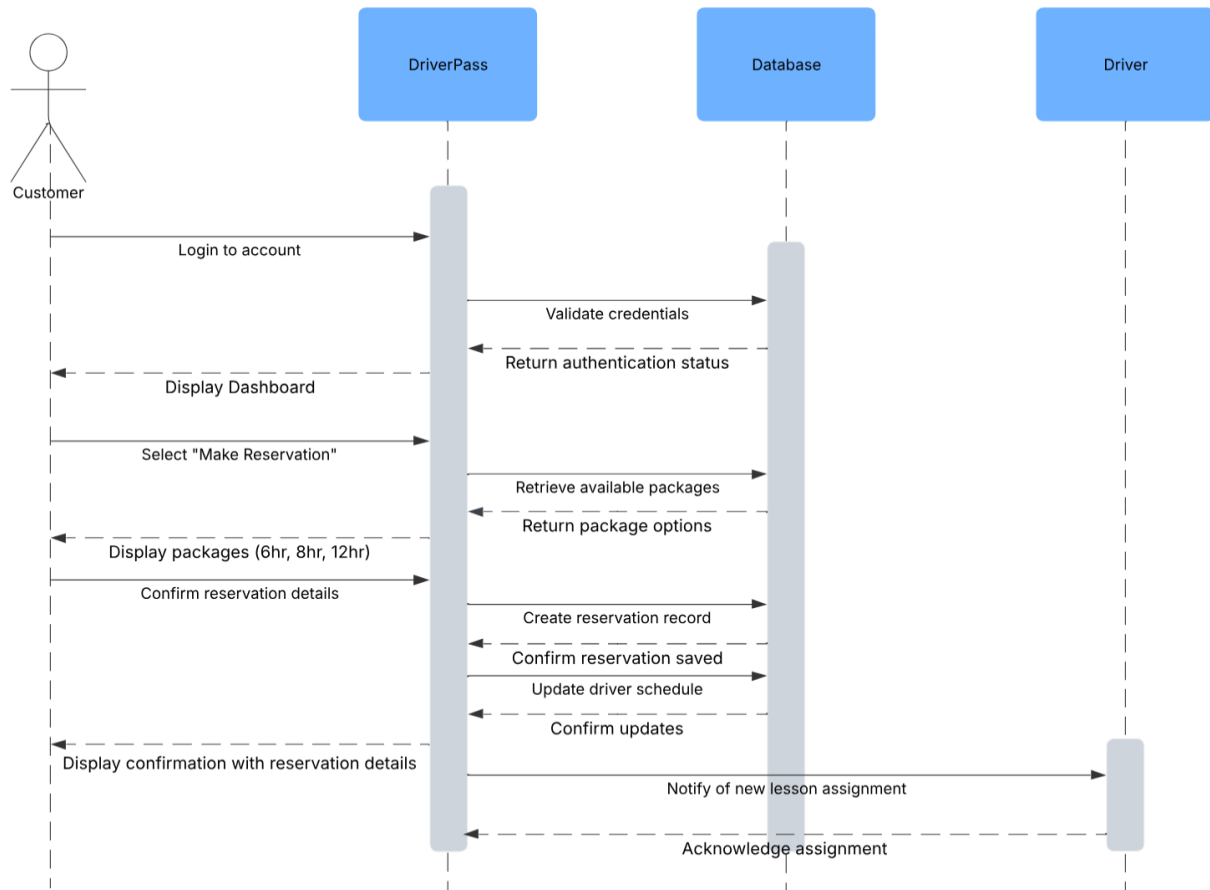


UML Activity Diagrams

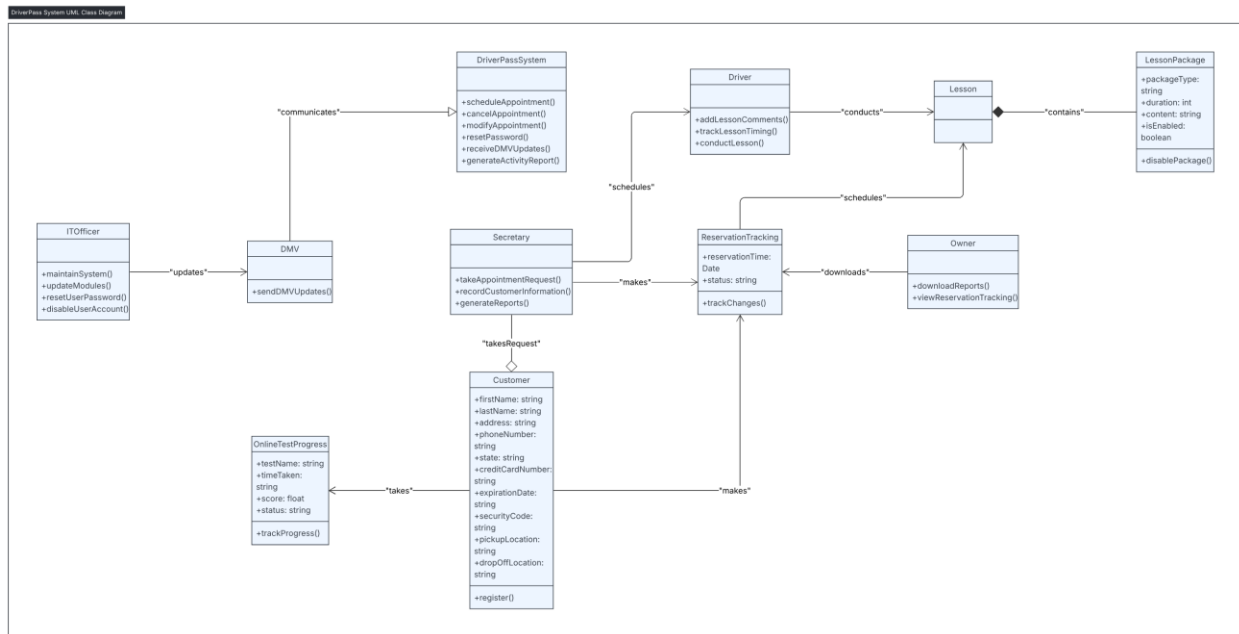




UML Sequence Diagram



UML Class Diagram



Technical Requirements

The DriverPass system has a variety of requirements. The hardware requirements include server infrastructure, utilizing cloud-based servers to host the web application and database, sufficient processing power to handle concurrent users accessing online classes, practice tests, and reservation systems. Additionally, we need storage capacity for customer data, test content, driver notes, photos, and activity reports. Finally, we should acquire backup storage systems for data redundancy and disaster recovery. In terms of required software, it will be a web-based application platform with cross-platform compatibility for various operating systems. It will also utilize a responsive web design framework to ensure proper display across different screen sizes. For system related data, we will implement a relational database management system to store customer information, reservations, test progress, and system data. Data encryption will be implemented for sensitive information (credit card details, personal information, passwords). Additionally, the database will have backup and recovery capabilities. SSL/TLS encryption will be used for secure data transmission. The system will require a multitude of tools, including a front-end framework, such as React, as well as a server-side language, such as Java. Additionally, we will need to craft database queries for the functionality of the backend using SQL. In terms of infrastructure, we will need to utilize a cloud-hosting platform, a content delivery network, load balancing to handle multiple concurrent users, and automated scaling capabilities to handle peak usage periods. To receive updates from the DMV, we will need API connectivity to be current on rules, policies, and sample questions.