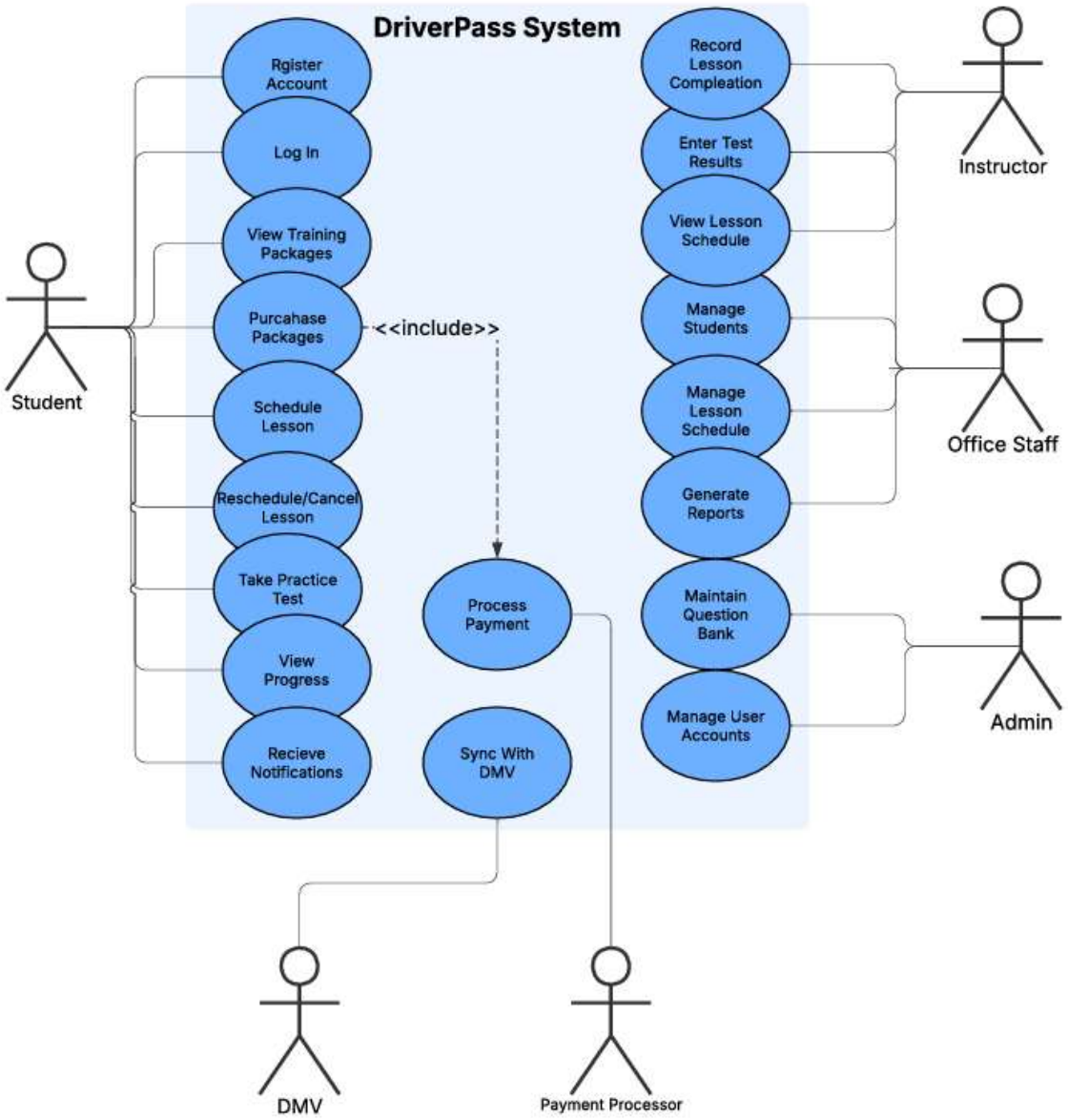
Southern New Hampshire University

CS 255 System Design Document Template

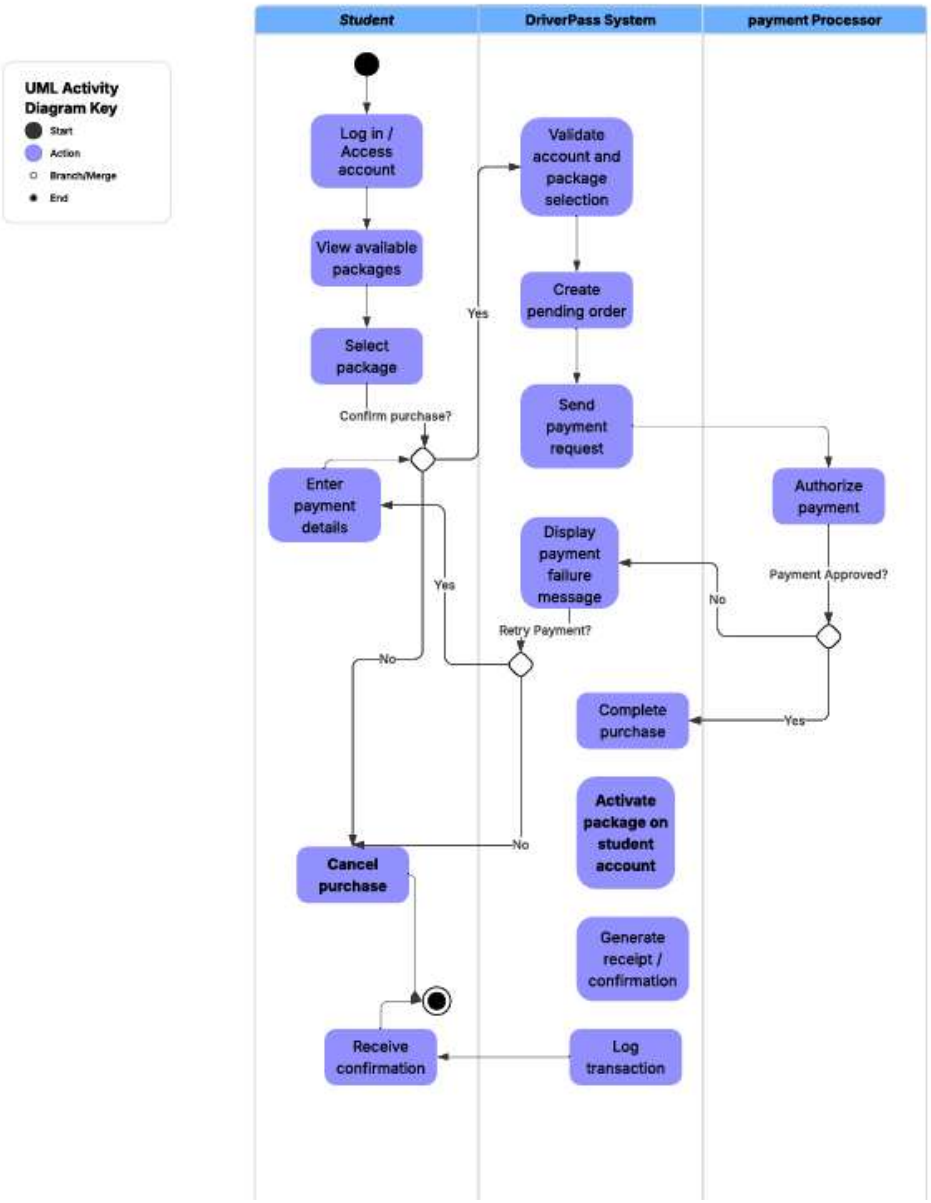
This template lays out all the different sections that you need to complete for Project Two. Each section has guidance to prompt your thinking. You will need to continually reference the interview transcript as you work to make sure that you are addressing your client's needs. There is no required length for the final document. Instead the goal is to complete each section based on what your client's needs are. Remove this note when you are finished, and replace all bracketed text with the relevant information.

UML Diagrams

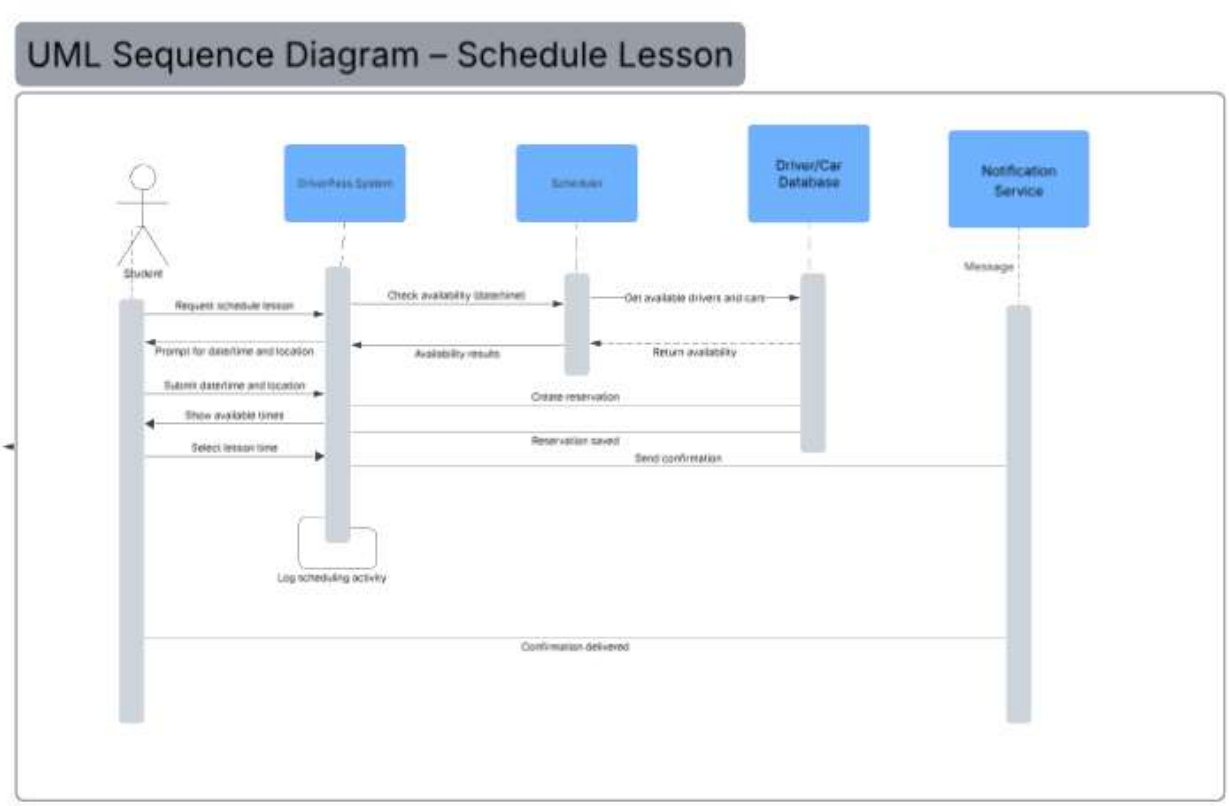
UML Use Case Diagram



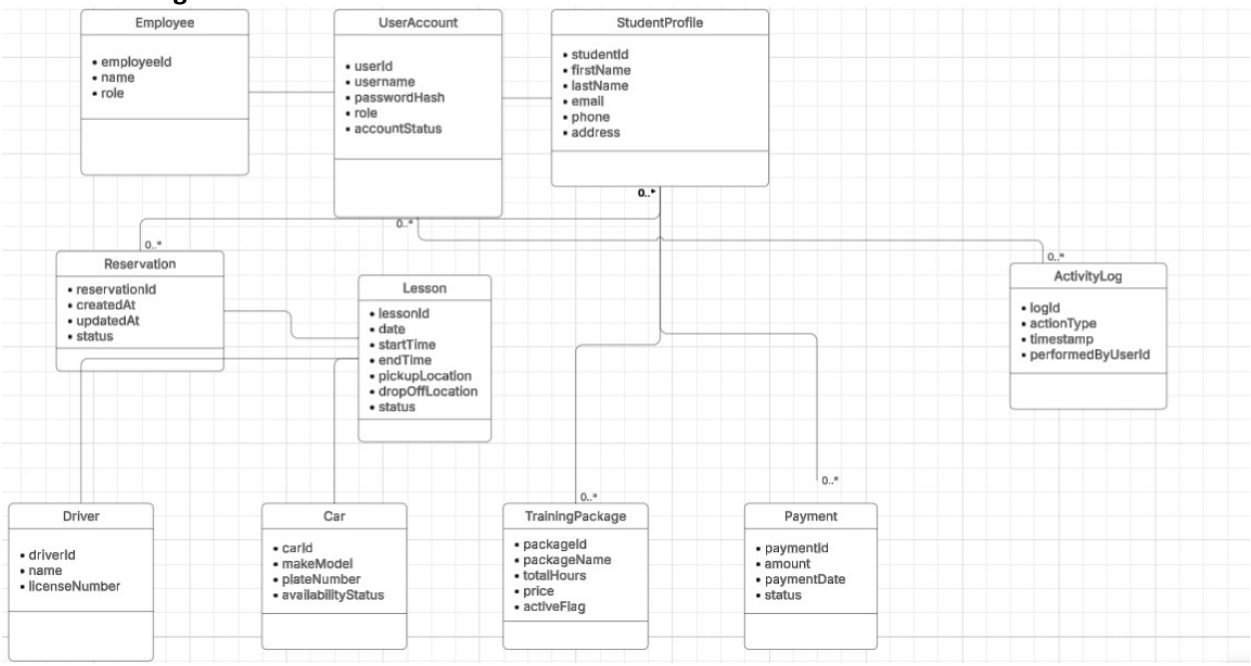
UML Activity Diagrams



UML Sequence Diagram



UML Class Diagram



Technical Requirements

The DriverPass system is designed as a web-based application that supports online access for students, instructors, office staff, administrators, and IT personnel. The system must be reliable, secure, and accessible from multiple devices while supporting scheduling, training packages, payments, and reporting.

Hardware Requirements

The DriverPass system will operate in a cloud environment and will not require specialized hardware at the business location. End users will need access to a desktop computer, laptop, tablet, or smartphone with an internet connection and a modern web browser. Administrators and office staff may use standard office computers for scheduling, reporting, and account management. Cloud servers will provide sufficient processing power and storage to handle user accounts, lesson scheduling, payment records, and activity logs.

Software Requirements

The system will run as a web application hosted on cloud infrastructure. It will require a server-side platform capable of handling user authentication, scheduling logic, and data processing. A relational database management system will be used to store user accounts, student profiles, reservations, lessons, vehicles, payments, and audit logs. The system must integrate with a third-party payment processing service to securely handle credit card transactions. Web browsers such as Chrome, Edge, Safari, or Firefox will be supported for user access.

Tools and Technologies

Development tools will include a cloud-compatible web framework, database management tools, and diagramming tools such as Lucidchart for system modeling. Version control tools will be used to manage system updates and maintenance. Security tools will be implemented to support password hashing, role-based access control, and secure communication. Reporting tools will allow administrators to generate activity and scheduling reports.

Infrastructure Requirements

The DriverPass system will be hosted on cloud infrastructure to ensure availability, scalability, and data backup. The system must support secure user authentication, encrypted data transmission, and role-based permissions for different types of users. Internet connectivity is required for all system interactions, including lesson scheduling, online practice tests, and payment processing. The system must also support integration with external systems, such as DMV data sources, to allow updates to training materials and practice tests.