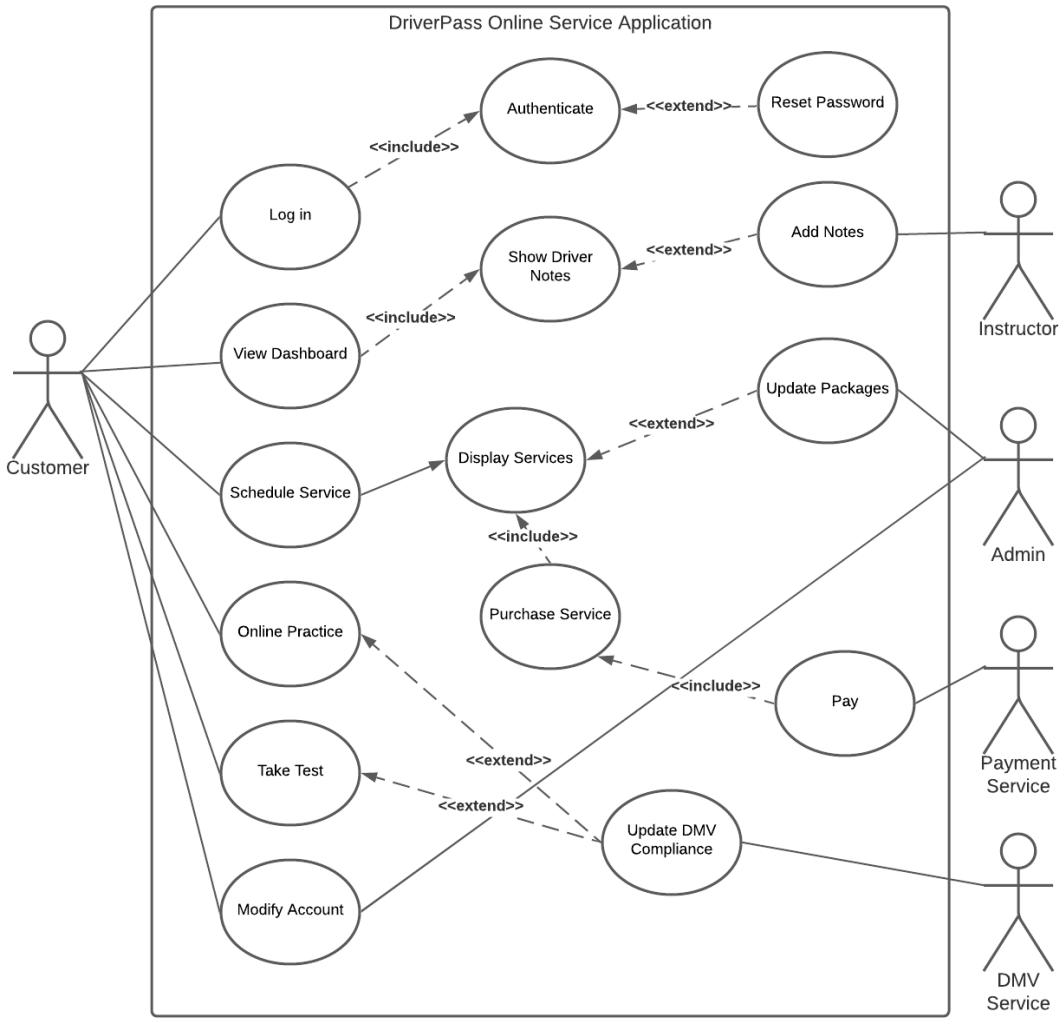
CS 255 System Design Document Template

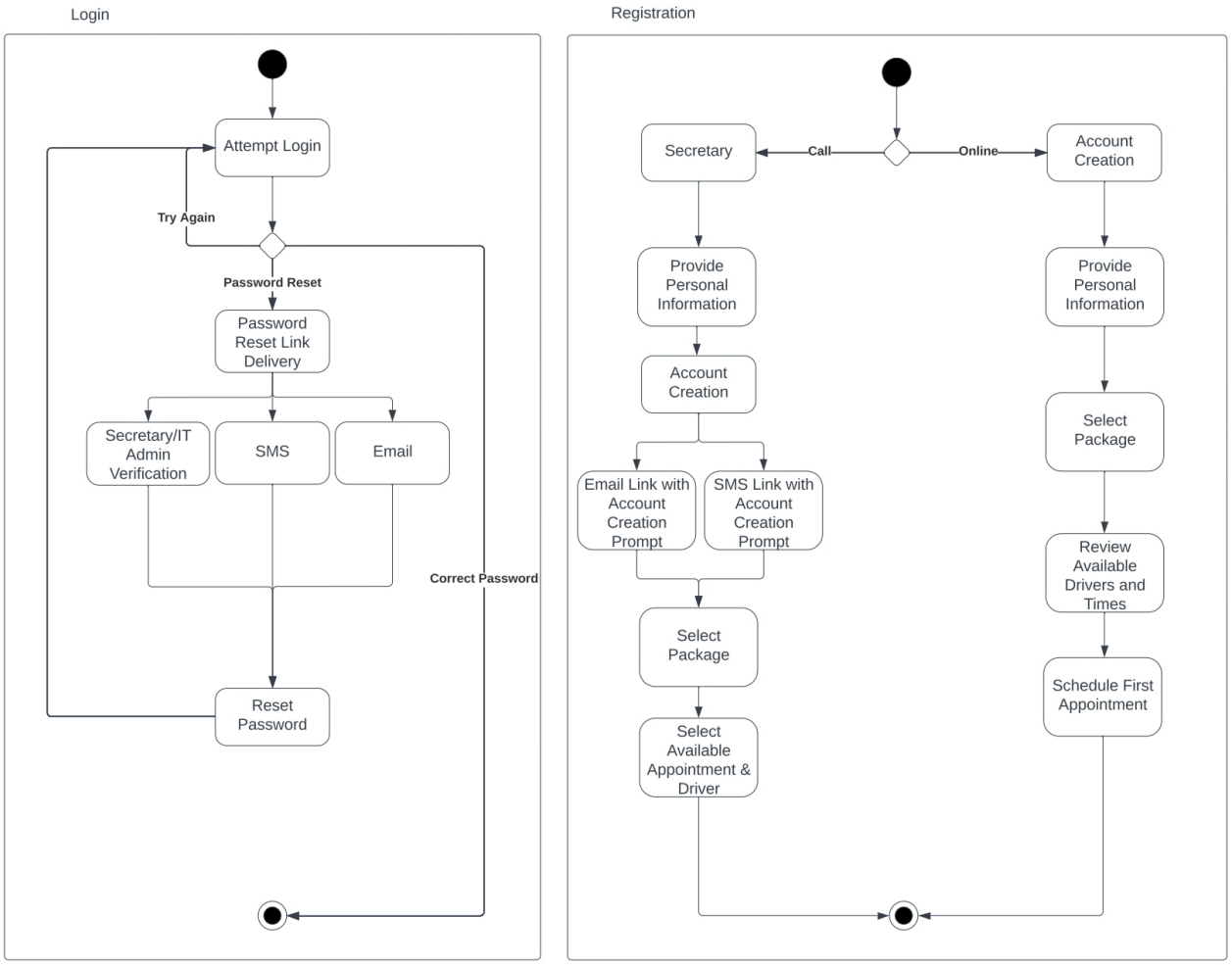
This template lays out all the different sections that you need to complete for Project Two. Each section has guidance to prompt your thinking. You will need to continually reference the interview transcript as you work to make sure that you are addressing your client's needs. There is no required length 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

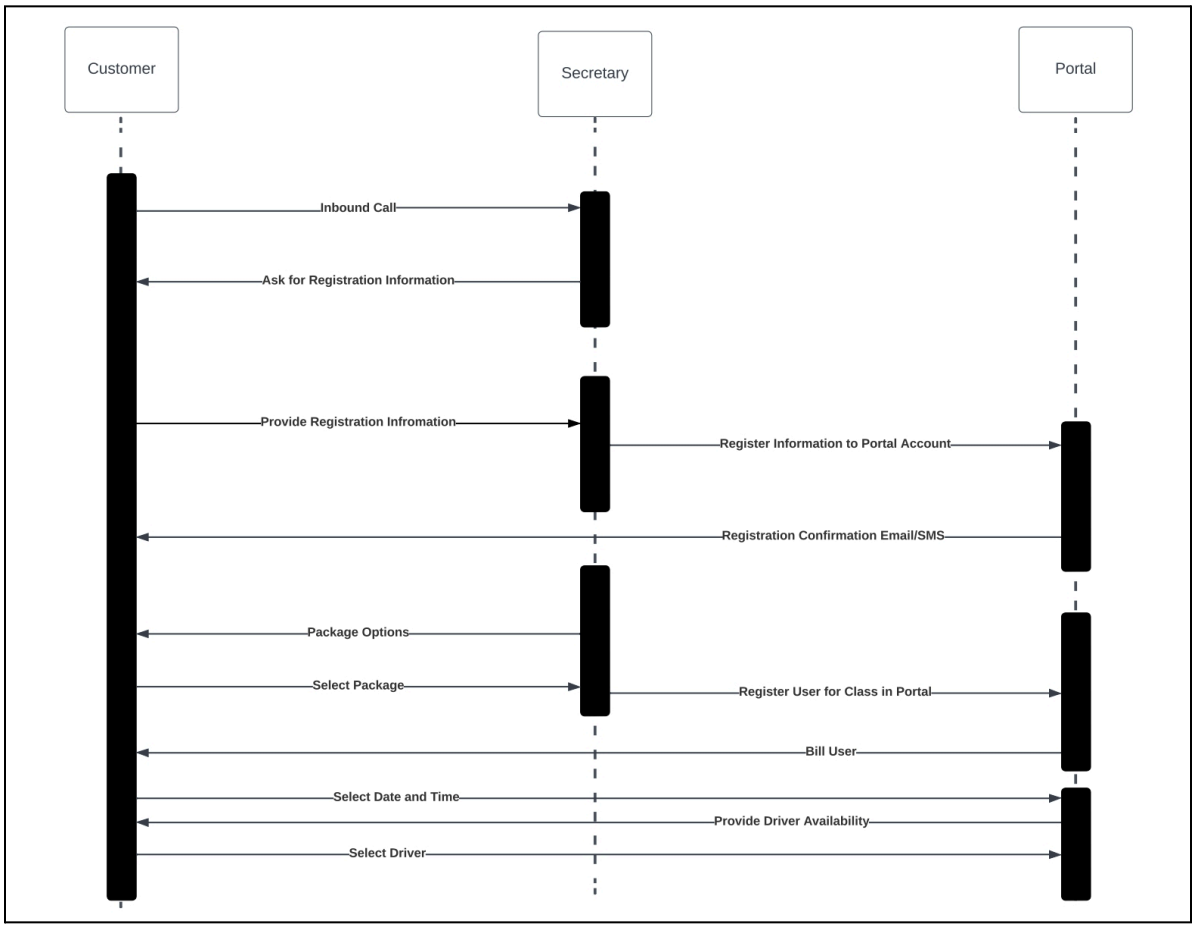


UML Activity Diagrams

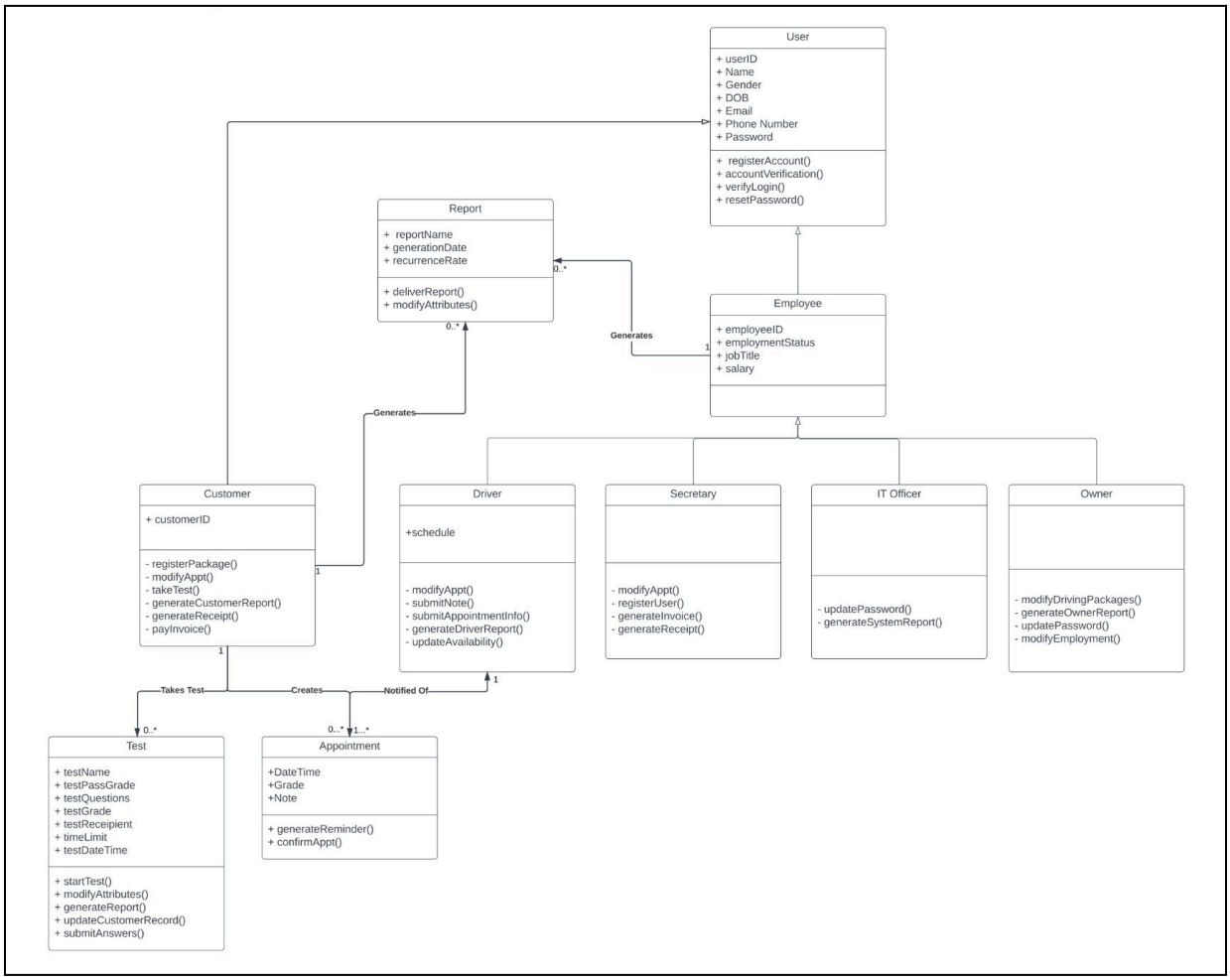


UML Sequence Diagram

Registration Sequence Diagram - Secretary Class



UML Class Diagram



Technical Requirements

1. Hardware:
    - A server infrastructure to host the web application, database, and related services, either on-premises or on a cloud-based platform.
    - Client devices, such as computers, smartphones, or tablets, for accessing the system by employees and customers.

- Reliable internet connectivity for online data access, updates, and synchronization.

2. Software:
    - A web application framework for developing the system's frontend and backend, such as Django, Flask, Ruby on Rails, or Node.js.
    - A database management system for storing and managing data, such as PostgreSQL, MySQL, or Microsoft SQL Server.
    - An API or integration with the DMV to receive updates on rules, policies, and sample questions.
    - Security software, such as SSL/TLS encryption and user authentication mechanisms, to protect sensitive data and ensure secure access to the system.
3. Tools:
    - Integrated development environment (IDE) for coding, such as Visual Studio Code, or PyCharm.
    - Project management and collaboration tools, like Jira or Trello, to track project progress, task assignments, and team communication.
    - Testing and quality assurance tools, such as Selenium or JUnit, for ensuring the system functions correctly and meets requirements.
4. Infrastructure:
    - A cloud-based platform, like Amazon Web Services (AWS), Google Cloud Platform (GCP), or Microsoft Azure, for hosting the application, database, and other required services. This will help address the client's preference for a web-based, cloud-hosted solution that handles backup and security.
    - Continuous integration and deployment (CI/CD) pipelines for efficient development, testing, and deployment of the system.