



Southern New Hampshire University

CS 255 Business Requirements Document

System Components and Design

Purpose

The purpose project is about building a driver training system. The client is DriverPass, who wants an online platform with online classes, practice tests, and real-world training to improve success in DMV tests. The goal is to develop user-friendly functions like online/offline data access, role-based user privileges, reservation management, and compliance with DMV updates. The goal is to create an efficient and straightforward driver training solution.

System Background

DriverPass goal is to affect the high failure rate in DMV driving tests by developing a advanced training system. Some key features to aid this include online classes, on-the-road training, and compliance with DMV updates. The training system aims to provide a user-friendly experience, to enable customers to schedule and modify appointments, access data online and offline, and receive up-to-date training content.

Objectives and Goals

As an end goal the completed DriverPass product would offer an advanced driver training program through online classes, on-the-road sessions, with a user-friendly reservation system for customer convenience. Some measurable tasks include implementing Liam's specific interface design, establishing role-based access control, and integrating a tracking feature for user activity.

Requirements

Nonfunctional Requirements

Performance Requirements

- DriverPass needs to run in a web-based environment, giving accessibility from any device with an internet connection. The system should run efficiently to handle various tasks such as data access and user interaction. Updates should be performed periodically to ensure compliance with DMV rules and policies, as well as to incorporate any necessary enhancements or improvements.

Platform Constraints

- The DriverPass system, being web-based, should ideally be multi-platform, capable of running on various platforms including Windows, Unix, and others. For backend, the system requires a robust database for storing user data, and scheduling information.
- User authentication usernames and passwords would distinguish between different users, implementing case-sensitive input for security. The system should immediately notify the admin of irregularities, prioritizing critical problems like security breaches or service disruptions.

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Adaptability

- User management functionalities should be built into the system to allow adding, removing, or modifying users without code changes, to allow scalability and flexibility. Platform updates, regular maintenance and testing procedures should be used to address compatibility issues and facilitate integration with new technologies.

Security

- Users log in by providing a username and password, which are authenticated against stored credentials. To secure the connection encryption protocols like HTTPS encrypt transmitted data, and account lockout mechanisms stop brute force attacks, and password recovery processes enable users to regain access if they forget their password.

Functional Requirements

- The system shall provide online classes and practice tests for driver training.
- The system shall allow users to schedule driving lessons online, specifying the day, time, and preferred driver.
- The system shall implement user authentication to ensure secure access to user accounts.
- The system shall track user activities, including reservations, modifications, and cancellations, for accountability and auditing purposes.
- The system shall notify administrators of critical issues, such as security breaches or system failures, in a timely manner.

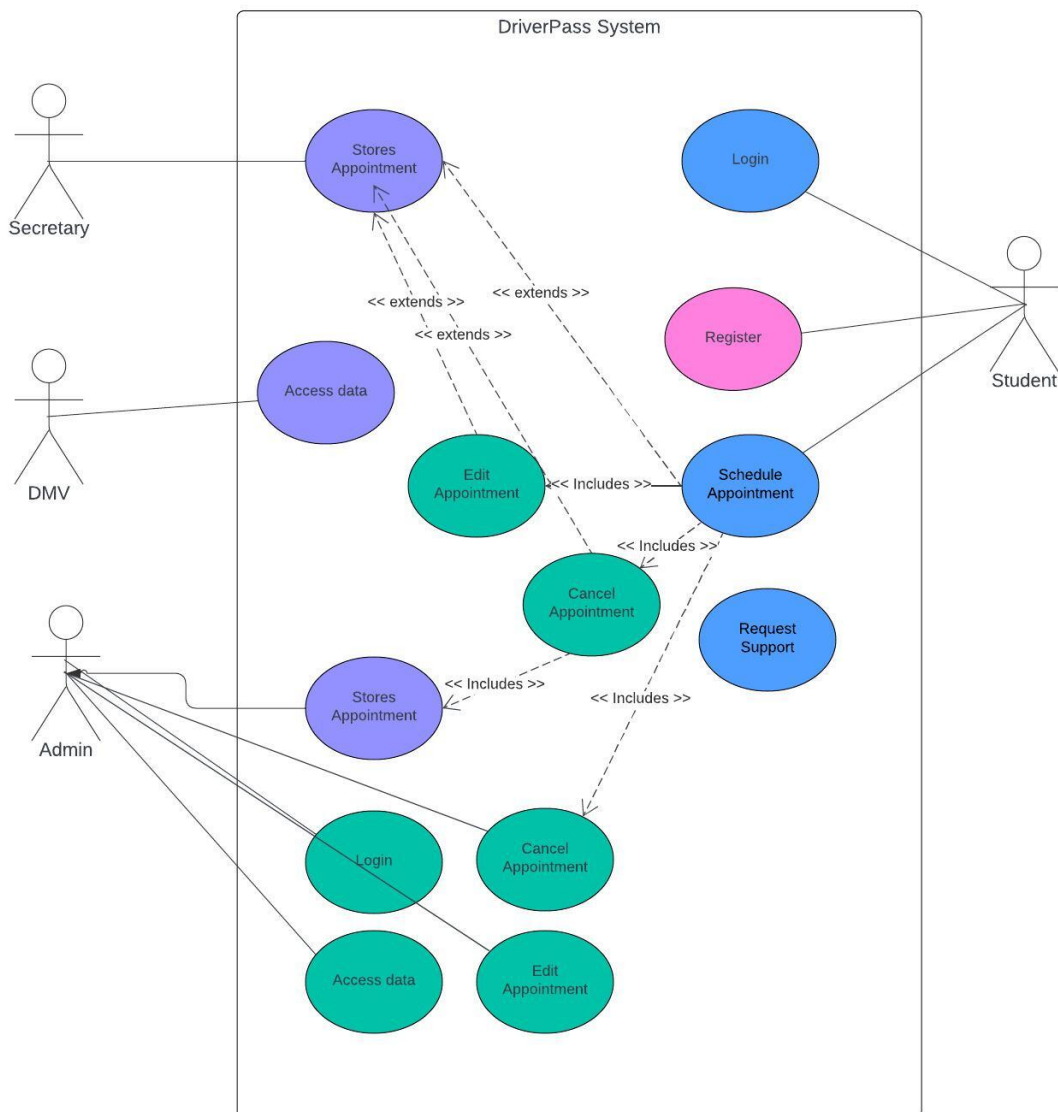
User Interface

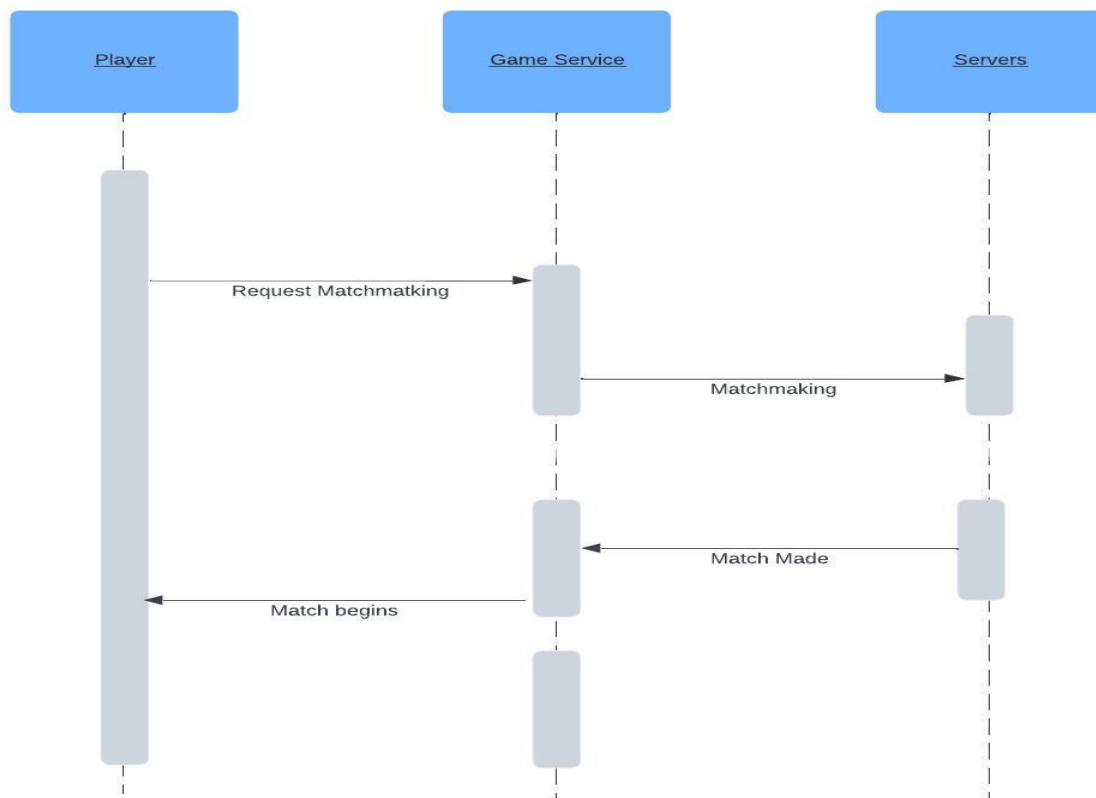
The interface serves administrators, instructors, and students, enabling tasks such as managing user accounts, scheduling lessons, and accessing course materials. Users will interact with the interface through web browsers, ensuring accessibility across various devices such as desktops, laptops, tablets, and mobile phones.

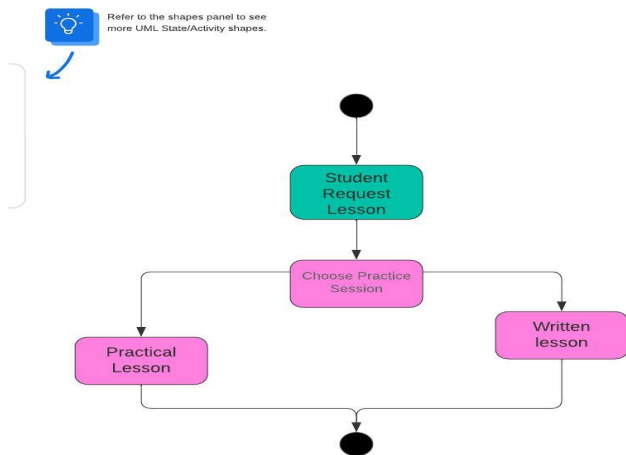
Assumptions

The design is missing details on visual presentation and user experience of the interface, as well as detailed functionalities for instructors and students. Assumptions include user familiarity with basic web navigation and access to devices with internet connectivity.

UML







Limitations

Limitations include scalability challenges with growing user base and potential security vulnerabilities if not addressed. Resource limitations such as time, budget constraints, and technological capabilities could also impact the system's development and functionality.

Gantt Chart

