**CS 255 Dalton's System Design Document**

**UML Diagrams**

**UML Use Case Diagram**



**UML Activity Diagrams**





**UML Sequence Diagram**



**UML Class Diagram**



**Technical Requirements**

*Hardware Requirements*

*Servers: Cloud-based hosting to manage user data, appointments, and security.*

*Client Devices: Compatible with desktop computers, tablets, and smartphones.*

*Network: Reliable internet connection for real-time appointment scheduling and data updates.*

*Software Requirements*

*Operating System: Web-based system accessible through Windows, macOS, and mobile devices.*

*Database: MySQL or PostgreSQL for structured storage of user, appointment, and test data.*

*Web Server: Apache or Nginx for hosting the web application.*

*Programming Languages: Python/Django or Node.js for backend, and React.js for frontend development.*

*Tools and Infrastructure*

*Cloud Hosting: AWS, Azure, or Google Cloud for scalability and security.*

*Security Protocols: HTTPS encryption, user authentication (OAuth, JWT), and role-based access control.*

*Backup System: Automated daily backups to prevent data loss.*

*External Integration: DMV system API integration for rule updates.*