**CS 255 System Design Document Template**

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## UML Diagrams

### UML Use Case Diagram

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### UML Activity Diagrams

A diagram of a bank

Description automatically generated

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### UML Sequence Diag

### UML Class Diagram

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## Technical Requirements

***Hardware Requirements:***

* ***Servers:*** *A reliable server to host the application, store user data, appointments, and administrative records. This can be a cloud based server (e.g., AWS, Azure, or Google Cloud) or an on premises server depending on DriverPass’s needs.*
* ***User Devices****: Standard computers, laptops, tablets, or smartphones with internet access for students, admins, and secretaries to interact with the system.*
* ***Network****: A stable internet connection for real-time access and updates.*

***Software Requirements:***

* ***Operating System****: The system will run on widely supported operating systems such as Windows, macOS, or Linux for servers and devices.*
* ***Web Server Software****: Software like Apache, Nginx, or IIS to host the system and handle incoming requests.*
* ***Database Management****: A relational database (e.g., MySQL, PostgreSQL, or SQL Server) to store user data, appointments, and DMV rules.*
* ***Application Framework****: Development frameworks like React or Angular for the frontend and Node.js, Python (Django/Flask), or Java (Spring Boot) for the backend.*
* ***Email Integration****: Tools like SMTP or third party services (e.g., SendGrid) to send appointment confirmations and notifications.*

***Tools and Infrastructure:***

* ***Development Tools****: Integrated Development Environments (IDEs) such as Visual Studio Code, IntelliJ, or PyCharm for system development.*
* ***Version Control****: Tools like Git and platforms like GitHub or GitLab to manage code changes and collaboration.*
* ***Testing Tools****: Tools for testing the system’s functionality and reliability, such as Selenium, JUnit, or Postman for API testing.*
* ***Hosting Infrastructure****: Cloud platforms (e.g., AWS, Azure, or Google Cloud) to host the application securely, enabling scalability and accessibility.*