# CS 255 System Design Document Template

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## UML Diagrams

### UML Use Case Diagram

*[A diagram of a driver pass

Description automatically generated.]*

### UML Activity Diagrams

*[A screenshot of a diagram

Description automatically generated.]*

### UML Sequence Diagram

*[A diagram of a diagram

Description automatically generated.]*

### UML Class Diagram

*[.A diagram of a software application

Description automatically generated with medium confidence]*

## Technical Requirements

*[The proposed system will require a robust server infrastructure to host the application and manage data storage. This includes cloud-based servers that can scale according to user demand ensuring high availability and performance. Each employee. Including the IT officer and secretary will need access to computers or mobile devices capable of running modern web browsers to interact with the system. Additionally, the system should include user authentication and authorization features to manage employee access and customer accounts securely. Development tools such as integrated development environments (IDEs) like Visual Studio Code or JetBrains will be essential for coding and debugging the application. Version control systems like Git will be necessary for managing code changes and collaboration among developers. For project management and tracking progress, tools like Jira or Tello can be utilized. Testing tools, including automated testing frameworks, will be required to ensure the application functions correctly and meets quality standards before deployment. The system should be hosted on a cloud platform such as Amazon Web Services (AWS). Microsoft Azure, or Google Cloud Platform (GCP) to provide scalability, reliability, and security. The infrastructure must include load balancers to distribute traffic evenly across servers, ensuring optimal performance during peak usage times. A content delivery network (CDN) may also be implemented to enhance the speed of content delivery to users. Additionally, the system should have a secure connection (SSL/TLS) to protect data transmitted between users and the server, ensuring compliance with data protection regulations. The management will be responsible for implementing security measures, including firewalls and intrusion detection systems.to safeguard the infrastructure.]*