# CS 255 System Design Document

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## UML Diagrams

### UML Use Case Diagram

A diagram of a person's diagram

Description automatically generated

### UML Activity Diagrams

A diagram of email address

Description automatically generated

A diagram of a process

Description automatically generated

### UML Sequence Diagram

A screenshot of a diagram

Description automatically generated

### UML Class Diagram

A diagram of a class

Description automatically generated

## Technical Requirements

**Hardware**

* **Server**: Dedicated server for hosting the website and database.
* **Network**: Reliable, high-speed internet connection for uninterrupted user access.
* **Storage**: Adequate storage capacity for database and website data.
* **User Devices**: Computers or mobile devices for accessing the website.
* **Security**: Firewall protection to secure website ports and block unauthorized access.

**Software**

* **Operating System**: Latest stable release of Windows Server (recommended).
* **Database Management**: SQL Server for robust and efficient database operations.
* **Backup Solution**: Software for regular backups of website and database data.
* **Web Server**: Apache or a similar web server for hosting the website.
* **Security Tools**: Software to protect against malware, intrusion attempts, and unauthorized access.

**Tools and Infrastructure**

* **Development Tools**: Visual Studio Code for coding and GitHub for version control.
* **Diagramming Tools**: Lucidchart or PlantUML for creating UML diagrams.
* **Monitoring Tools**: Tools like CloudWatch or Nagios for performance and system monitoring.
* **Hosting and Scaling**: Cloud-based infrastructure with automated scaling, load balancing, and reliable backup systems.
* **Data Management**: Secure storage solutions and automated backup systems to safeguard data.