# CS 255 System Design Document Template

This template lays out all the different sections that you need to complete for Project Two. Each section has guidance to prompt your thinking. You will need to continually reference the interview transcript as you work to make sure that you are addressing your client’s needs. There is no required length for the final document. Instead the goal is to complete each section based on what your client’s needs are. Remove this note when you are finished, and replace all bracketed text with the relevant information.

## UML Diagrams

### UML Use Case Diagram

A diagram of a company

Description automatically generated

### UML Activity Diagrams

A diagram of a work flow

Description automatically generatedA diagram of a software system

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### UML Sequence Diagram

A diagram of a software system

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### UML Class Diagram

A screenshot of a computer

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## Technical Requirements

**Hardware Requirements**

Servers – High availability servers for backup and redundancy.

Workstations – Computers for employees with adequate storage and performance.

Networking Equipment – Reliable network hardware, along with physical ethernet connections to reduce data packet snooping.

Peripheral Devices – All modern peripheral devices as well as scanners and printers.

**Software Requirements**

Operating Systems – Linux OS for servers, commercial options for workstations

Database Management System – Modern transactional database management and NoSQL tools.

Web Server – Software to handle web traffic requests (nginX, Apache)

Development Frameworks – Backend frameworks for business logic, frontend frameworks for UX.

Security Software – Firewalls, anti-virus, spam and social engineering e-mail filter tools.

Utilities – Other various utilities such as version control, project management, and CI/ID.

**Infrastructure Requirements**

Internet – High speed reliable Internet connectivity.

Cloud Services – Hosting, scaling, database, and storage solutions.

Backup and Disaster Recovery – Regular (Hourly/Daily/Weekly/Monthly) for recovery from disaster. Off-site cold storage for longer term backups.

On-Prem Infrastructure – Secure physical location with restricted keycard-type access to secure hardware from intrusion.

**Compliance**

Data protection – GDPR, HIPAA, etc.. compliance for handling user data and transactions.

Software Development – Adhering to strict coding standards.

Accessibility – Compliance with accessibility standards to ensure the system is usable by everyone.