# CS 255 System Design Document Template

## UML Diagrams

### UML Use Case Diagram

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### UML Activity Diagrams





### UML Sequence Diagram

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### UML Class Diagram



## Technical Requirements

The hardware required is as follows: a database server that stores the information for the client in a client server model, running on Microsoft software. This would be an online container to utilize Microsoft cloud-based platform. A computer for the secretary, student, IT person, and admin to access the software / server from a browser-based platform.

The system would maintain an availability of 98%. And maintained time between failures greater than 100 days. The browser must load the page in less than one second. System must be able to handle 50 users at a time while meeting these performance objectives. For security standards, authentication with authorization would comply with modern standards of encryption and token session authorization. This would include standard coding practices that limits access to certain constructors or variables with use of private. The database privacy, will use encryption to protect the students and employees information. Any system errors would throw exceptions should be documented in an incident database for the administration to view. Only persons authorized for escalated privileges would be able to use certain aspects of the database, for instance the IT or administrator will use an SSH key to do so and change passwords ext... The secretary will be able to generate sales manually and create users as needed, with a higher privilege than the student. The system should work on any major browser with current technology. The main technology will have the website revolving around the student dashboard, where the student can proceed and maintain their learning. Most information gets pushed from the database to the student dashboard, second to that should be the authentication login for the escalated privileges of the different users. Finally, the database that controls what the student learns and what is sold and is updated by the DMV.

## References

Requirements network (2021, Aug.). Business Requirements vs Functional Requirements. *Requirements network.* Retrieved from  
http://www.requirementsnetwork.com/business-functional.htm

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