# 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

**UML Use Case Diagram:**

Diagram

Description automatically generated

### UML Activity Diagrams

**Use Case – Registration Process:**

Chart, diagram, box and whisker chart

Description automatically generated

**Use Case – Reservation Process:**

Diagram

Description automatically generated

### UML Sequence Diagram

**UML Sequence Diagram – Registration Process:**

Diagram

Description automatically generated

### UML Class Diagram

**UML Class Diagram:**

Diagram

Description automatically generated

## Technical Requirements

**Hardware:** Four or eight virtual processors assigned to the VM (Virtual Machine), 12 GB (gigabyte) or RAM (Random-Access Memory) assigned to the VM, and 80 GB of disk space for installation of VM image and system data. These hardware requirements are needed to deploy an on-premises gateway for AWS(Amazon Web Services) infrastructure (Mueller, 2017, p. 1).

**Software:** Windows Operating System, Java, AWS Cloud9, Amazon DynamoDB, AWS CodeStar, Microsoft Office, IaaS (Infrastructure as a Service), and SaaS (Software as a Service) (Amazon, 2022, p. 1);(Amazon, 2022, p. 1).

**Tools:** Eclipse, AWS SDK for Java, (Software Development Kit), AWS Management Console, AWS CLI, AWS Cloud9, and LMS (eLearning Industry, 2022, p. 1);(Mueller, 2017, p. 1).

**Infrastructure:** Amazon Cluster (AWS Elastic Load Balancing), Storage (Amazon S3), Databases (DynamoDB), Management and Security (CloudWatch), Networks (Amazon Virtual Private Cloud), Analytics (Elastic MapReduce), Application Services (Amazon Simple Queue Service), Implementation and Management (Elastic Beanstalk, CloudFormation), and Mobile Services (Amazon Cognito, Mobile Analytics) (Besant Technologies, 2019, p. 1).

## References

Amazon, A. (2022, August 1). *AWS CodeStar – quickly develop, build, and deploy applications on AWS*. AWS CodeStar. from [https://aws.amazon.com/codestar/](https://aws.amazon.com/codestar/%20)

Amazon, A. (2022, September 1). *Database*. Amazon. from [htretritps://docs.aws.amazon.com/whitepapers/latest/aws-overview/database.html](https://docs.aws.amazon.com/whitepapers/latest/aws-overview/database.html%20)

Besant Technologies, B. T. (2019, April 26). *What are the key components of AWS: Core Components of AWS*. Best Placement IT Training Institute in Tambaram Chennai | Besant technologies Tambaram. from [https://www.trainingintambaram.in/key-components-of-aws](https://www.trainingintambaram.in/key-components-of-aws%20)

Conn, M. (2021, September 1). *AWS Cloud Essentials*. Amazon. from [https://aws.amazon.com/getting-started/cloud-essentials/](https://aws.amazon.com/getting-started/cloud-essentials/%20)

eLearning Industry, (2022, July 2). *Learning Management Systems Archives*. Learning Management Systems. from [https://elearningindustry.com/directory/software-categories/learning-management-systems](https://elearningindustry.com/directory/software-categories/learning-management-systems%20)

Lucidchart, L. (2017, July 21). *UML class diagram tutorial*. YouTube. from [https://www.youtube.com/watch?v=UI6lqHOVHic&ab\_channel=LucidSoftware](https://www.youtube.com/watch?v=UI6lqHOVHic&ab_channel=LucidSoftware%20)

Mueller, J. (2017, November 10). *Hardware requirements for AWS developers*. Hardware Requirements for AWS Developers. from [https://www.dummies.com/article/technology/information-technology/networking/cloud-computing/hardware-requirements-aws-developers-246477](https://www.dummies.com/article/technology/information-technology/networking/cloud-computing/hardware-requirements-aws-developers-246477/)/

Nalimov, C. (2021, June 1). *Diagram maker for developers*. Gleek. from [https://www.gleek.io/blog/login-sequence-diagram.html](https://www.gleek.io/blog/login-sequence-diagram.html%20)

Software, L. (2018, February 7). *UML use case diagram tutorial*. YouTube. from [https://www.youtube.com/watch?v=zid-MVo7M-E&ab\_channel=LucidSoftware](https://www.youtube.com/watch?v=zid-MVo7M-E&ab_channel=LucidSoftware%20)

Southern New Hampshire University, S. N. H. U. (2022, September 8). UML Activity and Sequence Diagrams. from <https://learn.snhu.edu/content/enforced/1159992-CS-255-H7577-OL-TRAD-UG.22EW1/course_documents/CS%20255%20Module%20Six%20Assignment%20UML%20Activity%20and%20Sequence%20Diagrams%20With%20Alternative%20Text.pdf?_&d2lSessionVal=SvJZs4iK6RL6Z40PRA2YAJVLz&ou=1159992>

Southern New Hampshire University, S. N. H. U. (2022, September 8). *CS 255 Module Four Online Shopping Cart Object Diagram with Alternative Text*. Southern New Hampshire University. from [https://learn.snhu.edu/content/enforced/1159992-CS-255-H7577-OL-TRAD-UG.22EW1/course\_documents/CS%20255%20Module%20Four%20Online%20Shopping%20Cart%20Object%20Diagram%20With%20Alternative%20Text.pdf?\_&d2lSessionVal=HyWnocVFDaHmb36mODsEvSmtj&ou=1159992](https://learn.snhu.edu/content/enforced/1159992-CS-255-H7577-OL-TRAD-UG.22EW1/course_documents/CS%20255%20Module%20Four%20Online%20Shopping%20Cart%20Object%20Diagram%20With%20Alternative%20Text.pdf?_&d2lSessionVal=HyWnocVFDaHmb36mODsEvSmtj&ou=1159992%20)

Valacich, J. S., & George, J. F. (2019). Modern Systems Analysis and Design (9th ed.). Pearson Education (US). <https://mbsdirect.vitalsource.com/books/9780135172827>