# 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

*[In Module Six, you were asked to complete a use case diagram based on your system design. If you would like to make any adjustments to your diagram, please do so. Please insert your use case diagram here. Check to make sure that you included appropriate components and symbols and that your design meets the client’s needs.]*

*A diagram of a driver pass

Description automatically generated*

### UML Activity Diagrams

*[You were asked to choose* ***two*** *use cases and create* ***two*** *activity diagrams, one for each use case. Please insert* ***both*** *of your activity diagrams here. Check to make sure that you included appropriate components and symbols and that your design meets the client’s needs.]*

*A diagram of a computer program

Description automatically generated*

*A diagram of a lesson

Description automatically generated*

### UML Sequence Diagram

*[You were asked to create a sequence diagram based on* ***one*** *of the use cases you chose. Please insert your sequence diagram here. Check to make sure that you included appropriate components and symbols and that your design meets the client’s needs.]*

A diagram of a computer program

Description automatically generated

### UML Class Diagram

*[You were asked to create a class diagram based on the different classes and attributes needed for your system design. You are* ***not*** *required to include methods, but you may if you wish. Please insert your class diagram here. Check to make sure that you included appropriate components and symbols and that your design meets the client’s requirements.]*

A diagram of a computer generated data

Description automatically generated with medium confidence

## Technical Requirements

*[Based on the diagrams you have created, describe the technical requirements of your system. These requirements should address the required hardware, software, tools, and infrastructure necessary for your system design.]*

The system needs specific hardware, software, tools, and infrastructure to work properly. **For the host (the main server)**, you’ll need at least one physical server, networking cables, a monitor, keyboard, mouse, power sources, and an internet connection. **On the client side (user’s devices)**, a desktop or laptop computer, a Wi-Fi router or ethernet cable, power sources, and an internet connection are required. **Software on the host** should include Windows Server, DriverPass software, Docker for managing virtual machines, and security software to protect against hacking. **Clients** need a web browser (like Firefox or Chrome), an operating system (such as Mac, Linux, or Windows), and security software to keep their information safe. **For development**, you’ll need computers with programming tools like Visual Studio or Eclipse, an internet connection to upload to the server, and network monitoring tools to watch for suspicious activity. **Infrastructure** can be either a physical location for the server or a cloud provider like AWS or Azure. The server itself should have powerful processors, at least 16 GB of memory (upgradable to 64 GB), and fast storage with at least 500 GB capacity. Development software includes tools for programming and managing the system. Web and application servers need software like Apache or Nginx to handle web traffic, with added security through SSL/TLS certificates. Cloud services (if used) will provide additional resources and security features.