# CS 255 System Design Document

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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

*Diagram

Description automatically generated*

### UML Activity Diagrams

*Diagram

Description automatically generated*

### UML Sequence Diagram

*Graphical user interface, application

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### PlantUML

*@startuml*

*actor Administrator #red*

*participant SecurityManager*

*database SecurityDB*

*participant CustomerManager*

*database CustomerDB*

*participant LessonManager*

*database LessonDB*

*Administrator -> SecurityManager: Authentication Request*

*SecurityManager -> SecurityDB: username/hashed password*

*SecurityDB -> SecurityManager: boolean*

*SecurityManager -> Administrator: Authentication Response*

*Administrator -> CustomerManager: CreateCustomer*

*CustomerManager -> CustomerDB: customer record*

*CustomerDB -> CustomerManager: customer record with PK*

*CustomerManager -> Administrator: Customer*

*Administrator -> LessonManager: ScheduleLesson request*

*activate LessonManager*

*LessonManager -> Administrator: lesson object*

*Administrator -> LessonManager: availabledriver request*

*LessonManager -> Administrator: available drivers*

*Administrator -> LessonManager: assign driver request*

*LessonManager -> LessonDB: lesson record*

*LessonDB -> LessonManager: lesson record w PK*

*LessonManager --> AlertManager : notify customer*

*LessonManager --> AlertManager : notify driver*

*LessonManager -> Administrator: void*

*destroy LessonManager*

*@enduml*

### UML Class Diagram

Diagram

Description automatically generated

## Technical Requirements

*This solution targets a single server running a Java compliant webserver, PostgreSQL with 3 databases, and the java application code.*

*Initial deployment of the server shall be Linux Debian, with Intel i9 and 64 GB RAM, and 1 TB of RAID 5 SSD storage.*