# CS 255 System Design Document Template

## UML Diagrams

### UML Use Case DiagramDiagram Description automatically generated

### UML Activity Diagram

Diagram

Description automatically generated

Diagram

Description automatically generated

### UML Sequence Diagram

*Diagram, schematic

Description automatically generated*

### UML Class Diagram

Diagram, schematic

Description automatically generated

## Technical Requirements

Hardware

The client DriverPass needs proper equipment to allow their team to access their own system. This would include individual equipment and devices for each team member who needs access to this system with varying capabilities according to the level of their involvement Depending on preference and budget (regarding the brand of the hardware), the team should be outfitted with personal computers. These outfits would include all the necessary equipment to run these computers, such as but not limited to wiring and input devices (mouse, keyboard, headset). Regarding varying capabilities, the IT Administrator may need higher quality devices than the secretary. The use of multiple screens for employees is dependent on budget as well.

The company should also have its own backup server along with physical hard drives capable of backing up their data. They also need to choose a reliable ISP (internet service provider) so that they can maintain connection to their system with as much uptime as possible at the fastest speeds (budget, preference, and geographical location restricted variables). This will allow customers to access their system any time of day year-round.

Software and Tools

Software and Tools are also subject to client preference and budget. Every single one of the employer personal computer setups needs to be equipped with software regarding their brand of choice, such as Windows, or Mac OS. For this web-based application system, the program would be on a remote server, serviced through a third-party cloud services provider. A list of cloud service providers includes Amazon Web Service, ServerSpace, Microsoft Azure, Google Cloud Platform, etc. The cost of this service is based on usage, so the cost varies.

Because this system is meant to reach as many users as possible across all different types of platforms, if the IT Administrator desires to make changes, he may have to contact the service provider to make these changes. If the changes are made in house the then the proper tools would need to be used to apply these changes correctly. Some cross-platform frameworks are React Native, Xamarin, and many others. These tools allow developers to create code that is easily transferrable to a multitude of platforms. This eliminates having to write code for each individual platform. Creating repositories and saving code within tools such as Visual Studios, Atom, and other IDEs allows developers to reference, maintain, and create new code to test their systems.

Infrastructure

The infrastructure for this system would involve all the variables within the systems software and hardware along with physical locations far all physical parts included in the system. This would involve the building where the business operates. How people use this facility such as desks, bathrooms, power supplies, wiring, parking lots etc. Maintaining current policies, regulations, vehicles, insurance, and standards according to the state. There are also specific software infrastructure services such as Amazon EC2, Hostwinds, and Google Compute Engine. These services can help maintain data integrity.