# DriverPass System Design Document

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CS-255: System Analysis and Design

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## UML Diagrams

### UML Use Case DiagramDiagram Description automatically generated with low confidence

### UML Activity Diagrams

Diagram, Teams

Description automatically generated

Graphical user interface, application, Teams

Description automatically generated

### UML Sequence Diagram

Diagram

Description automatically generated with low confidence

### UML Class Diagram

Letter

Description automatically generated with medium confidence

## Technical Requirements

**Hardware**

The front end of the DriverPass system will need the following hardware:

* A modern PC, Mac, or smart device,
* A display with at least a 720p pixel resolution,
* A mouse and keyboard if using a device other than a smartphone,
* And a broadband internet connection with compatible modem and/or router.

The back end of the DriverPass system will require the following hardware:

* High-capacity, scalable storage servers,
* CPU and GPU that supports x64 architecture,
* 32GB of RAM,
* And gigabit ethernet connections.

**Software**

The front end of DriverPass will require the following software:

* Windows 7 ESU or newer operating system,
* MacOS 10.13 or newer operating system,
* Android 4.4 or newer mobile operating system,
* iOS 14 or newer mobile operating system,
* And Microsoft Edge, Safari, Firefox, or Chrome internet browsers.

The back end of DriverPass will require the following software:

* Windows Server 2022 operating system,
* Microsoft Azure SQL DB,
* Microsoft .NET Framework 4.5 and newer,
* And IIS Express 8 and newer.

**Tools**

DriverPass development will require the following tools:

* Modern development PC’s with Visual Studio Code,
* Microsoft ASP .NET SDK,
* Microsoft ASP .NET Core,
* Azure DevOps Services,
* Azure App Services,
* And Azure authentication and encryption services.

**Infrastructure**

DriverPass will require the following infrastructure:

* Microsoft Azure cloud provider to host the web app,
* Redundant backup for data,
* A payment service provider,
* Many vehicles for the driver reservations,
* Adequate garage capacity to store the unused vehicles,
* And insurance for the vehicles.