# CS 255 System Design Document

## UML Diagrams

### UML Use Case Diagram

A diagram of a person's process

Description automatically generated

In this Use case Diagram Unified Modeling Language (UML) is commonly used in software engineering to show the functionalities or feature of a system from a user’s perspective. In the above Diagram it show that the sequence of interactions between the system and the actors to achieve specific goal.

### UML Activity Diagrams

A diagram of a computer program

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The above diagram is a use case represents a specific interaction or functionality provided by the system. Here we need to identify the use cases from the system requirements and create user case diagram based on the provided activity diagram for logging in and booking an appointment, The above use cases include Login book an appointment and logout.

### UML Sequence Diagram

*A diagram of a software

Description automatically generated*

The above UML sequence diagram illustrates the “Log in” use case, depicting the interaction between a user and the system components involved in the authentication process. The above components include the User, login Interface, authentication services, and Dashboard. While talking about the key interactions and flow when user inputs their username and password, login interface forwards the credentials to the authentication services for validation, In next step when it is success fully validate the username and password is correct it authorized to access the dashboard. The user can now use the service available on the dashboard or choose to logout.

### UML Class Diagram

A screenshot of a computer

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As a conclusion, the purposed DrivePass system solution integrates robust user authentication and route optimization features, hence effectively meeting both functional and non-functional requirements. The utilization of UML diagram enhances communication clarity and addresses security concerns. The acknowledgement of system limitation and the provision of a comprehensive overview cater to the needs of stakeholders.

***Technical Requirements:***

To state the hardware software and tools required based on the needs of the system. In hardware, a virtual server which is preferably hosted in the cloud where information will be kept and booking made over the internet. Where as, a software is the system that include front end likely involving HTML CSS and Javascript as well as server side technology such as Python, Java, or PHP. The Implementation of security such as encryption, defining user roles and logging activities to protect data and to monitor the usage the system. Specify any constraints of the system, such as the necessity for later modification or upgrades, depending on the DMV policies.