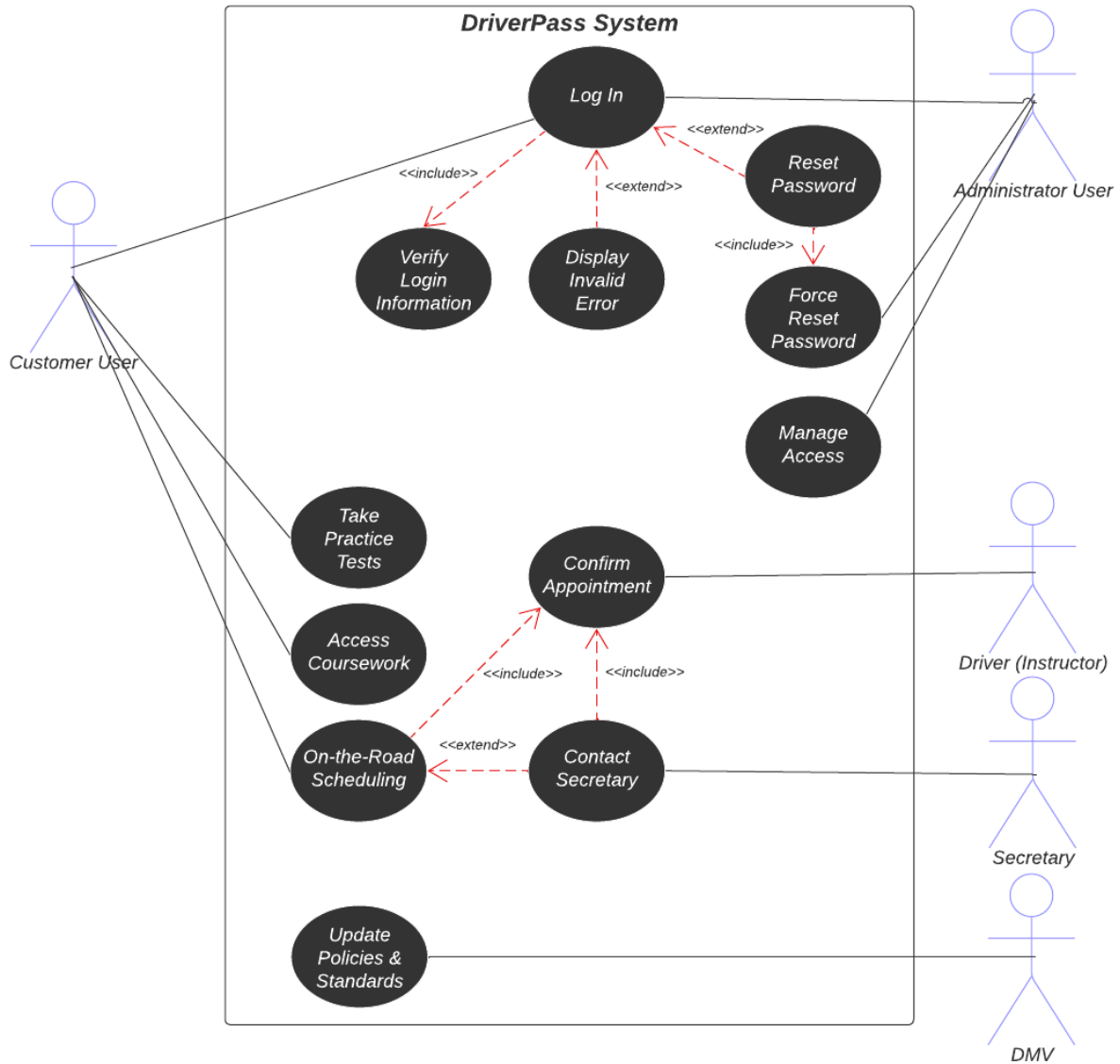


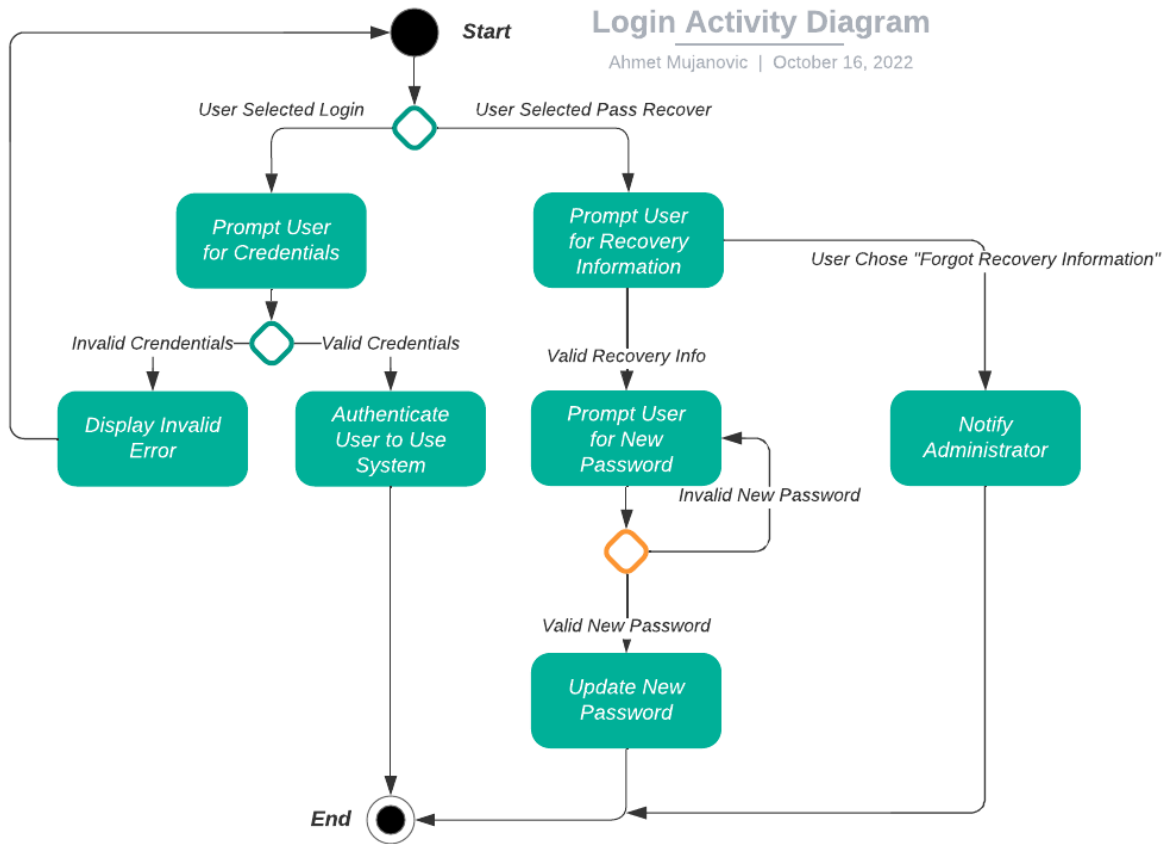
# System Design Document

## UML Diagrams

### UML Use Case Diagram

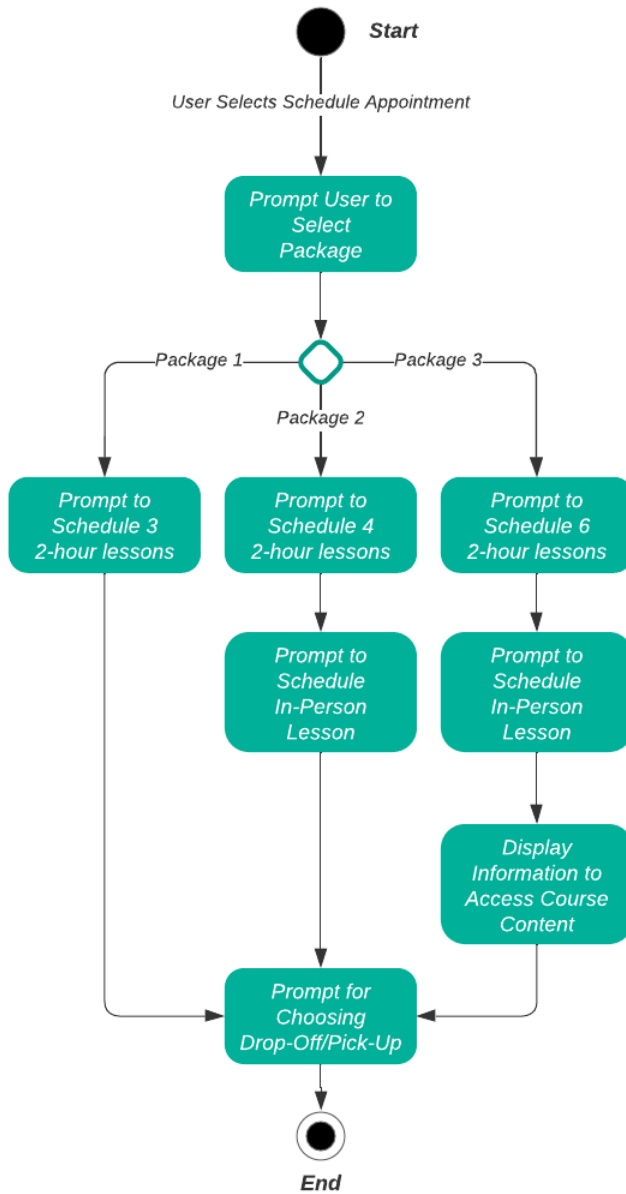


## UML Activity Diagrams

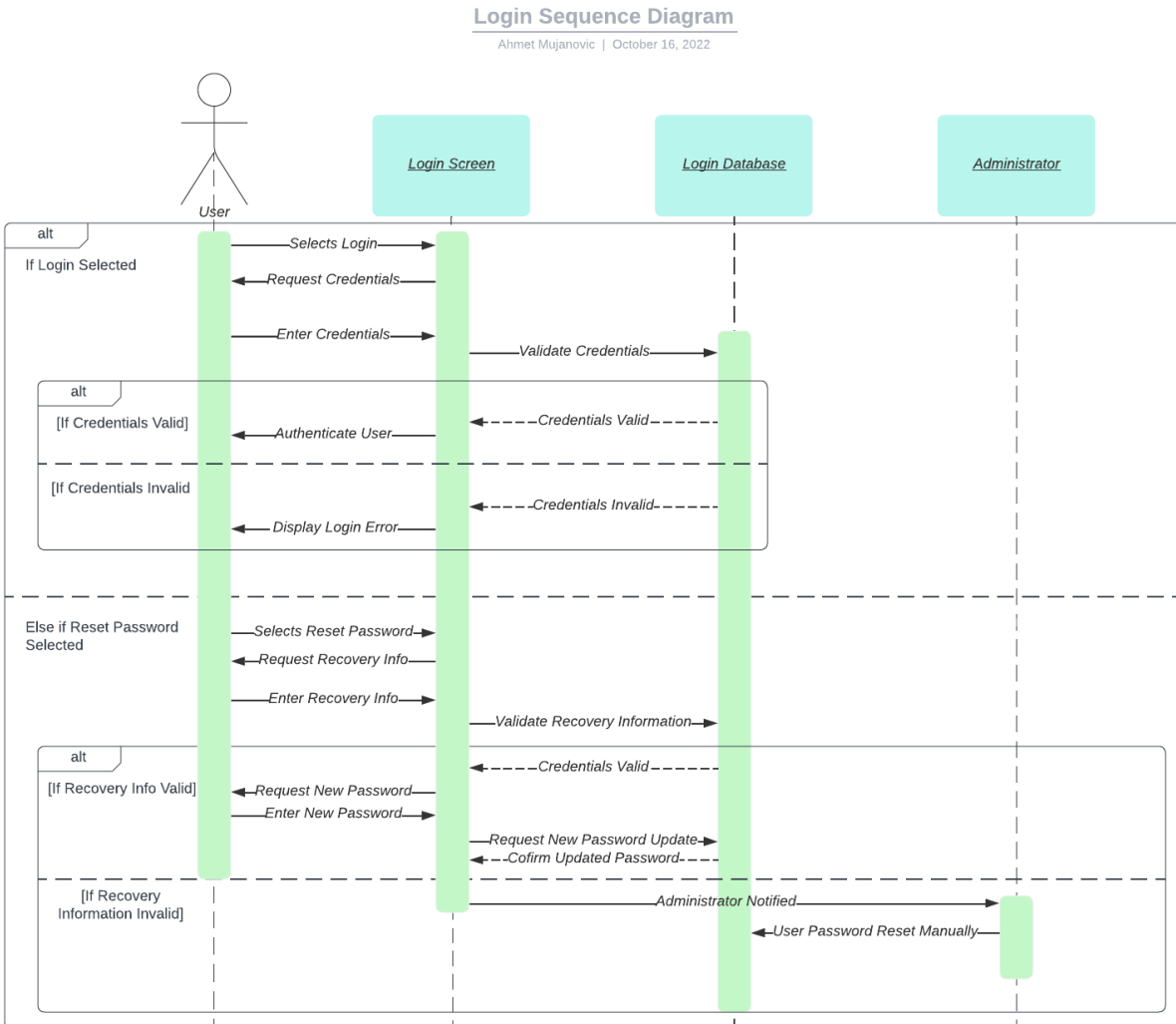


## Schedule Activity Diagram

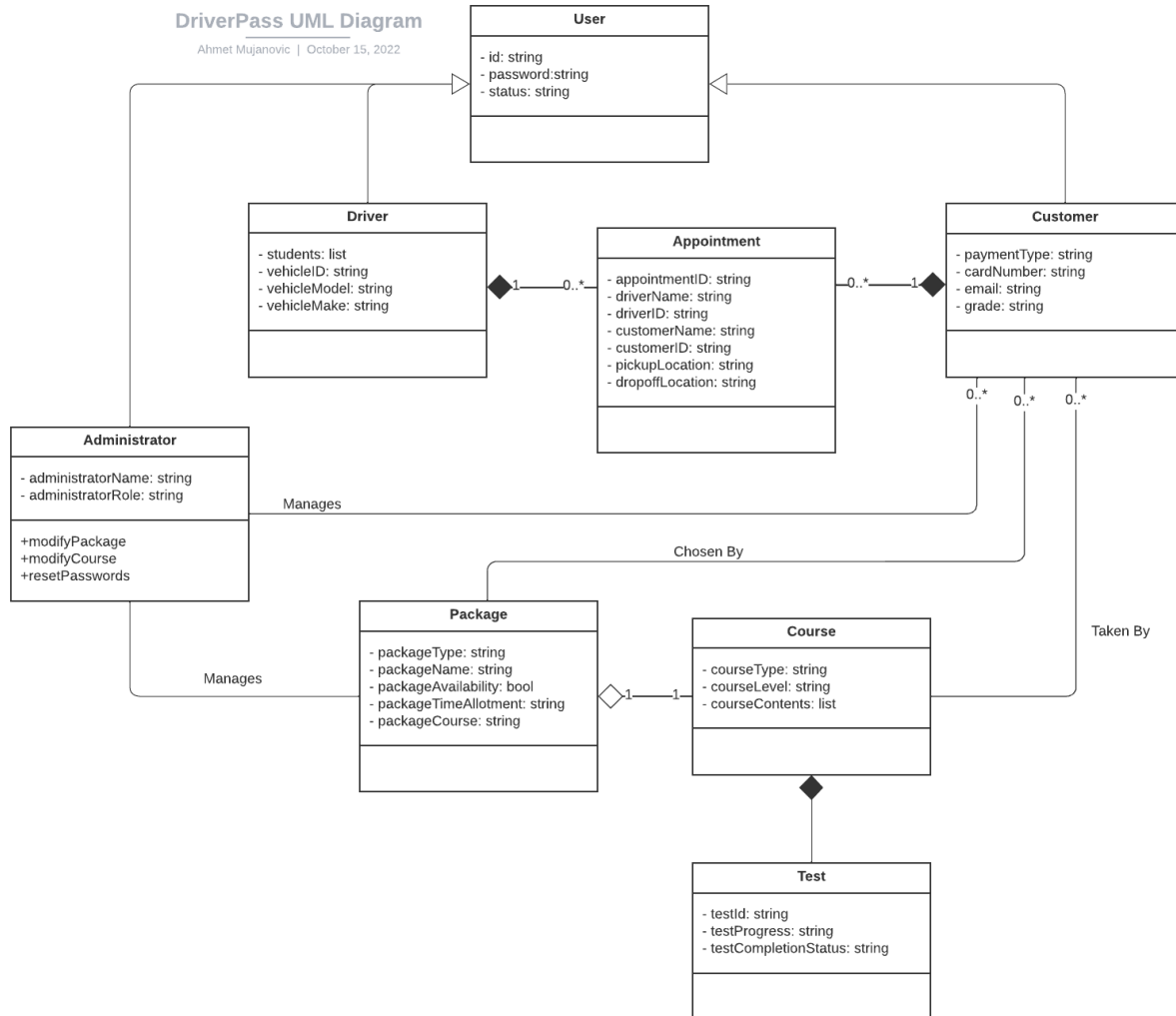
Ahmet Mujanovic | October 16, 2022



## UML Sequence Diagram



## UML Class Diagram



## Technical Requirements

### Hardware

- *Because the DriverPass system is to be hosted in a cloud-based architecture, the cloud provider is to handle procuring and utilizing the necessary hardware for the system to function. This could include:*
  - *Servers to handle web resources and databases*
    - *Components may include appropriate server grade hardware such as processors to manage load, storage devices, and error-correcting random-access memory*
    - *Potentially a server rack to hold physical hardware*
  - *Proper networking infrastructure like routers and networking cables to host the system and manage incoming connections*
- *GPS devices to manage company vehicles while on the road.*

### Software

- *Server operating system on each server device to host all appropriate data. Linux is a sensible option due to its open source nature and no propriety hardware requirement.*
- *Database management software to store and manipulate all user data.*
- *An HTTP server application to handle HTTP requests from users.*
- *Scripting languages to support server side scripting development.*
- *Proper security measures such a traffic encryption and password hashing in databases.*

### Location Related

- *Application needs an API to handle location data for customer drop-off/pick-ups, as well as to manage where drivers are on their routes with the company vehicles.*
- *Servers should be located in appropriate environments conducive to efficient operation such as close to DriverPass area of operations and in temperature controlled rooms.*