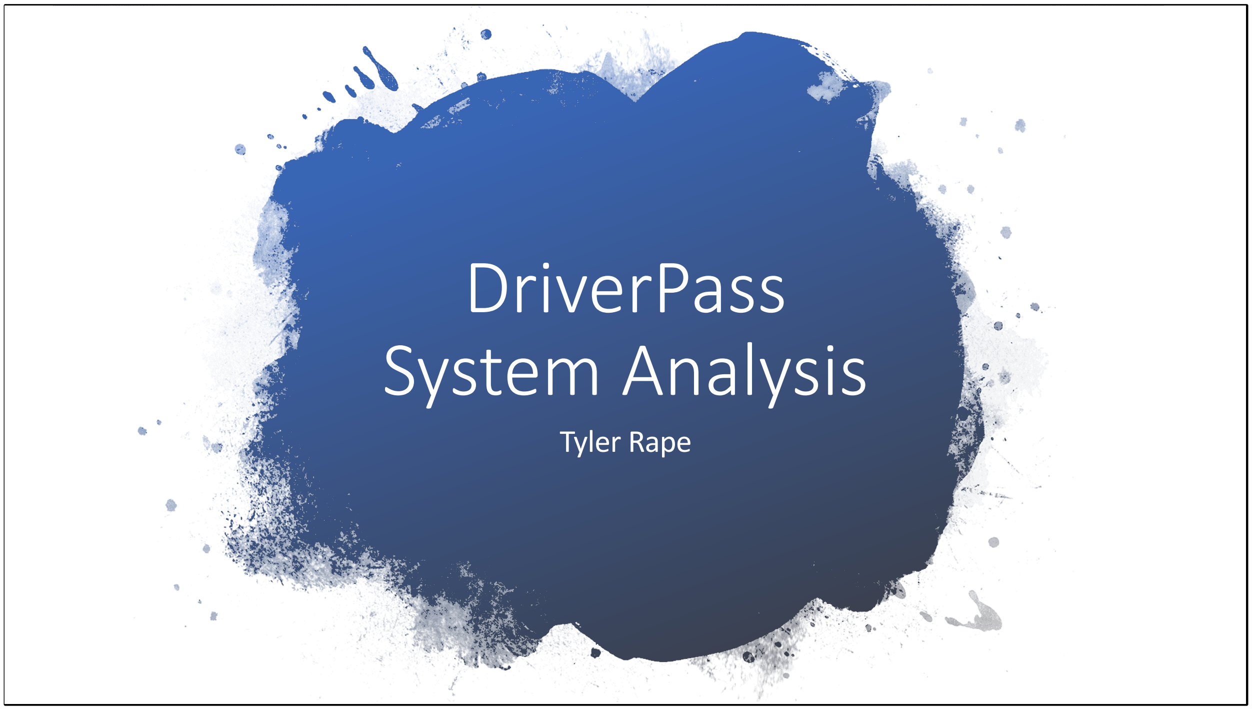
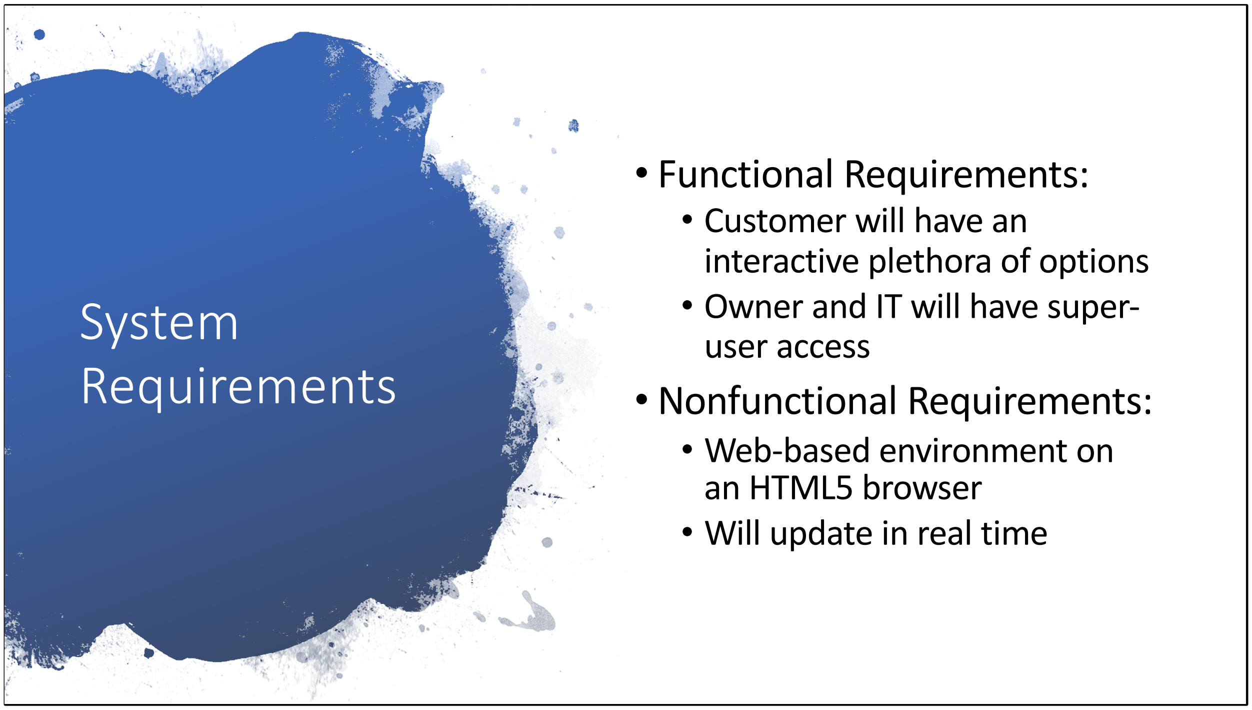


DriverPass System Analysis

Tyler Rape

[No speaker notes required for this slide.]

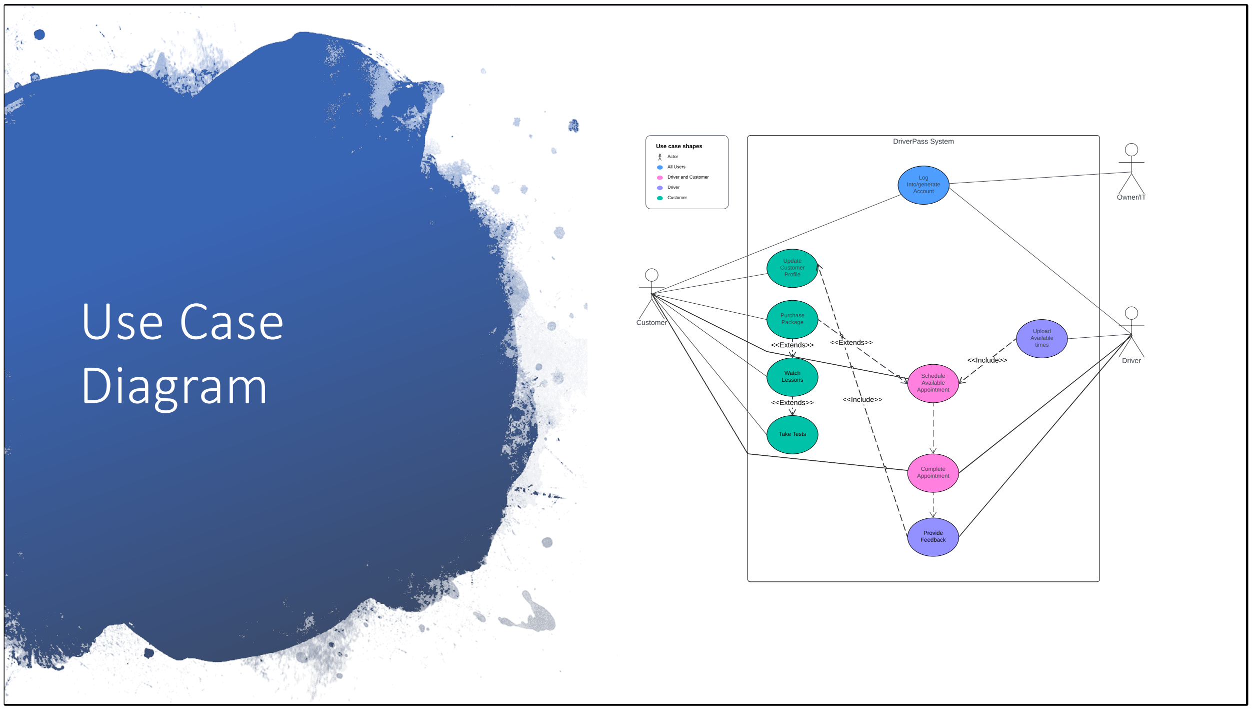


System Requirements

- Functional Requirements:
  - Customer will have an interactive plethora of options
  - Owner and IT will have super-user access
- Nonfunctional Requirements:
  - Web-based environment on an HTML5 browser
  - Will update in real time

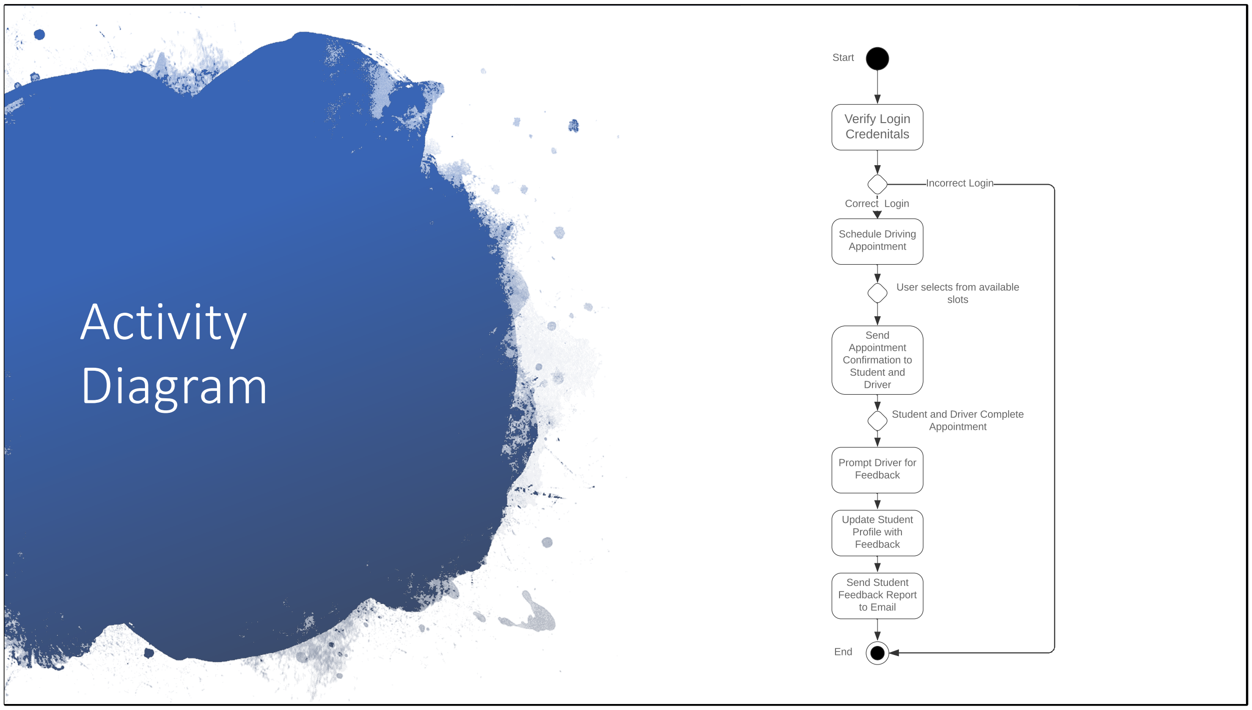
As far as Functional Requirements, the system will allow customers to register a customer profile, purchase packages, schedule time with professional drivers, and review their progress It will also allow the owner to administer profiles, including resetting passwords, and pull reports.

For Nonfunctional Requirements, the system will run in a web-based environment as these are easier to setup, maintain, and access. This would also be more accessible forgoing operating system requirements. The system will also update instantaneously. Any updates from customers, drivers, admin, or the DMV should push instantly to the program.



Use Case Diagram

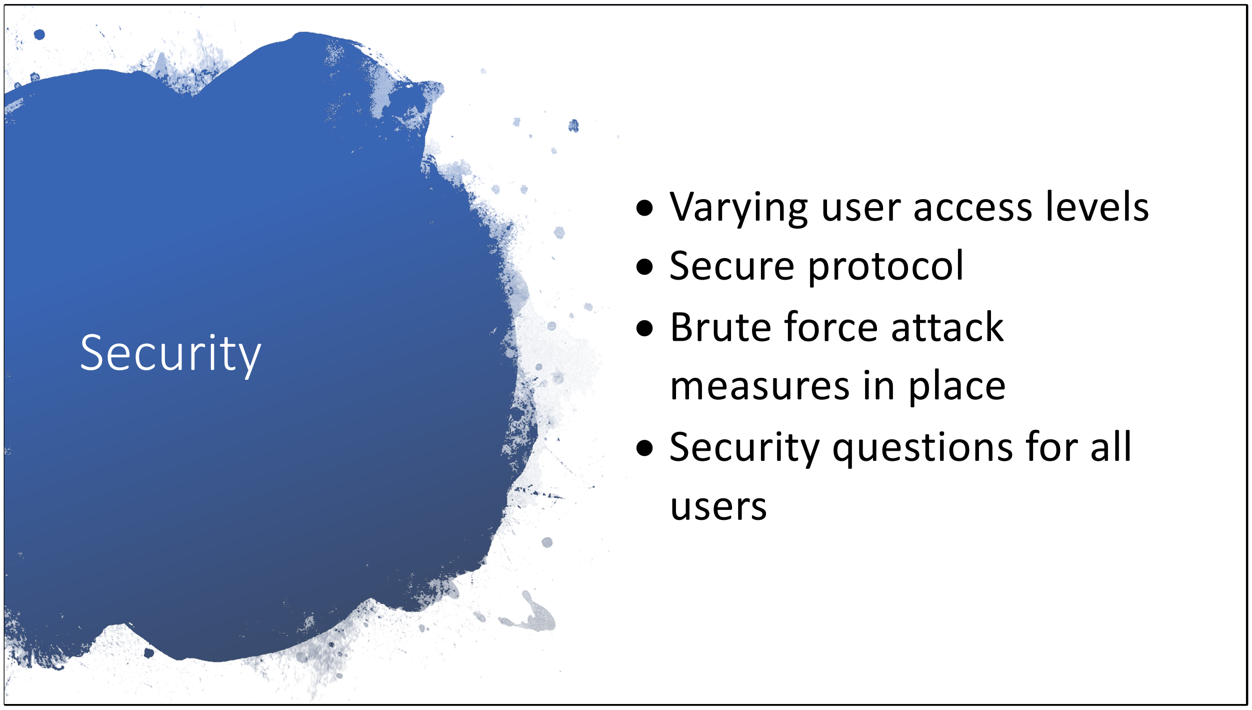
In our Use Case Diagram, users are the customer, Owner/IT, and the driver. These folks each play a different part but feed into different aspects of the diagram. As you can see, each user logs into the system, and that is the only commonality that they share. We demonstrate that the customer creates/updates their user profile. This is not only where their information is stored, like their address, and credit card information, but it is also what will be updated based on their driving performance. We have also demonstrated their ability to purchase packages, watch lessons, and take tests. The driver uploads their availability, which allows those times to update the schedule. The customer can then book time with the driver based on this. Once they both complete the appointment, the driver is signaled to complete feedback on the customer, which in turn will update their customer profile.



Activity Diagram

Start
Verify Login Credenitals
Incorrect Login
Correct Login
Schedule Driving Appointment
User selects from available slots
Send Appointment Confirmation to Student and Driver
Student and Driver Complete Appointment
Prompt Driver for Feedback
Update Student Profile with Feedback
Send Student Feedback Report to Email
End

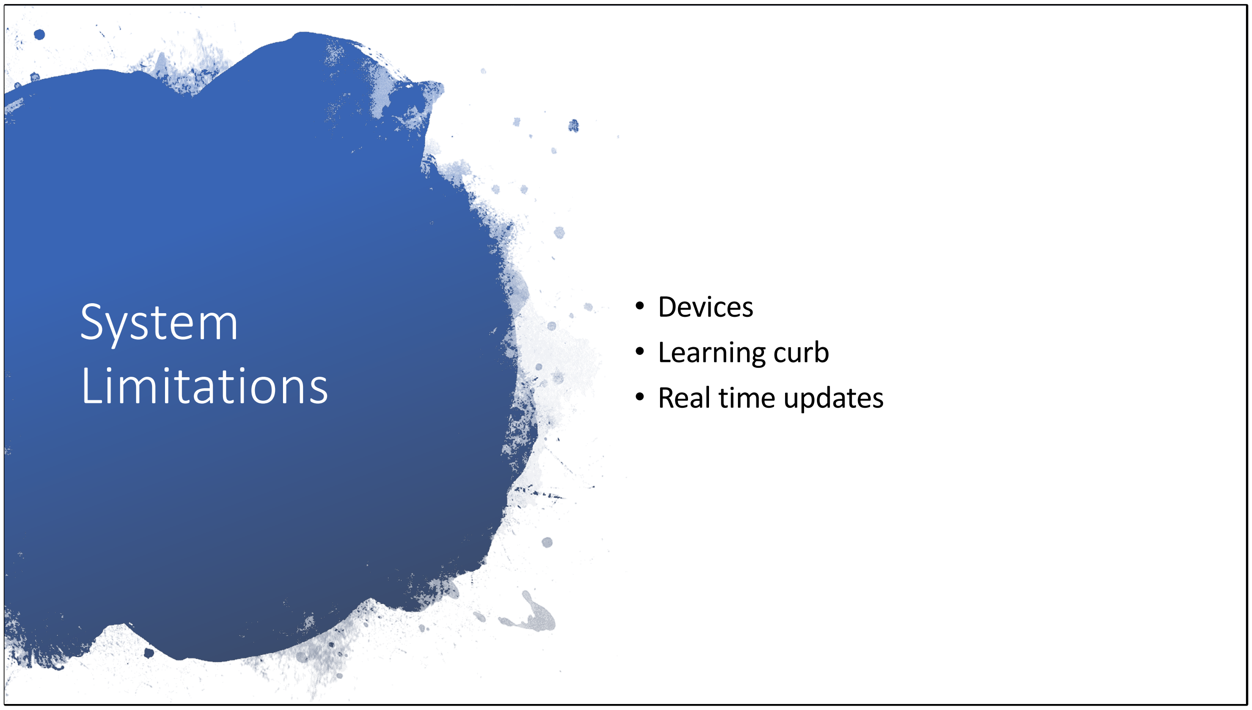
In the displayed activity diagram, we are demonstrating a customer scheduling and completing a driving lesson. In the diagram, the customer logs into the DriverPass system. If they do so incorrectly, the process ends. After a correct login, the customer schedules a driving appointment. This action sends a notification to the driver and the student via email. Following the scheduled time, the system will prompt the driver for feedback on the customer. After the feedback is given, the customer's profile is updated, and the student is also emailed their feedback directly.



Security

- Varying user access levels
- Secure protocol
- Brute force attack measures in place
- Security questions for all users

The user must give their username and password to login. The user access level will be set based on their role assigned. Ian, the super user, will have the most access and from there each role will have varying access. To secure the connection or data exchange between client and server, HTTPS protocol would be necessary. While this sounds very technical, just know that it is an industry standard at keeping things secure. If a brute force hacking attempt happens, the profile will be locked after three incorrect password attempts. The account will have to be unlocked by a user with a high enough profile clearance, like Ian or IT. If a user forgets their password, they will have to use the “forgot password” feature, which will ask them a security question they setup when creating their profile. If they successfully supply this data, they will be emailed a temporary password.



System Limitations

- Devices
- Learning curb
- Real time updates

The web browser will be a limitation for a few of the users. They will need to have a somewhat current device capable of using an HTML5 browser. The system will likely have a learning curb for the owner, drivers, and possibly customers. While updates from our internal system should work flawlessly, we might expect some delay from drivers not updating their feedback forms in a timely manner. There also could be issues with the DMV updating their standards and policies to our platform in real time.