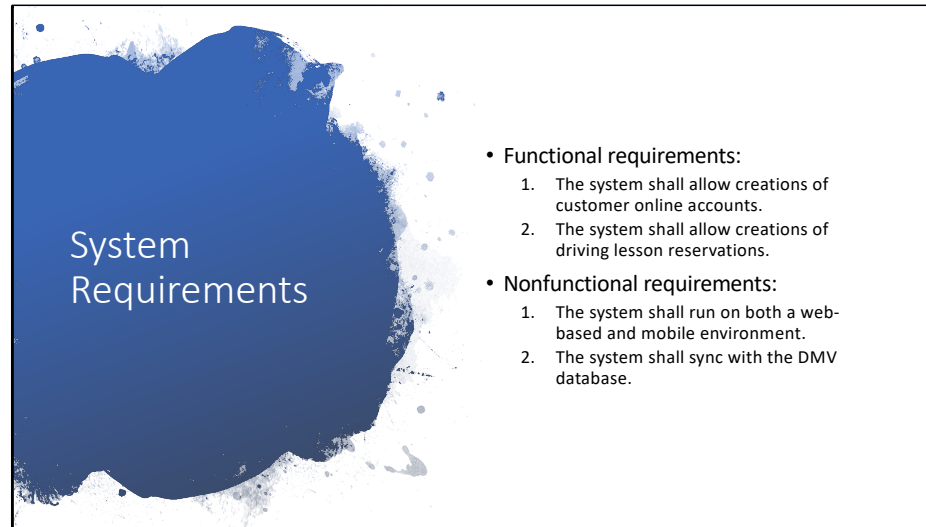


Note:

This presentation is to review the DriverPass system design.

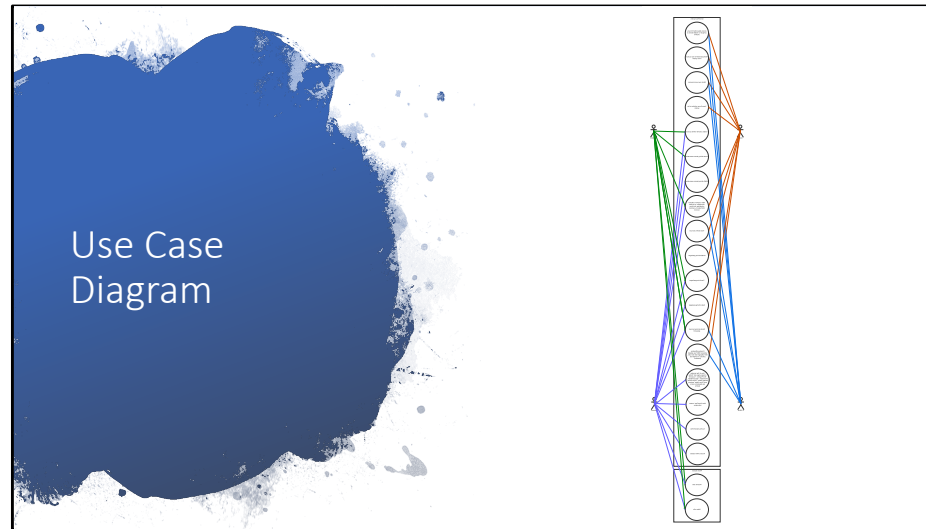


Notes:

- The two fundamental requirements determined for DriverPass's system are functional and nonfunctional requirements.
- Functional requirements are based on what the users of the system must be able to do with it.
- Nonfunctional requirements pertain to what are needed for the system to operate on the back-end, such as in regards to performance, operating platform, security, etc. These are the building blocks of the system that are not directly exposed to the users.
- There are two functional and nonfunction requirements selected for this presentation.
- The first functional requirement is "the system shall allow creations of customer online accounts". This fulfills DriverPass' requirement for a system that supports the creation of a customer online account either directly by the customer or through the help of DriverPass' secretary.
- The second functional requirement is "the system shall allow creations of driving lesson reservations". This fulfills the requirement of the system allowing the customer to make reservations for driving lessons online or

with the help of DriverPass' secretary.

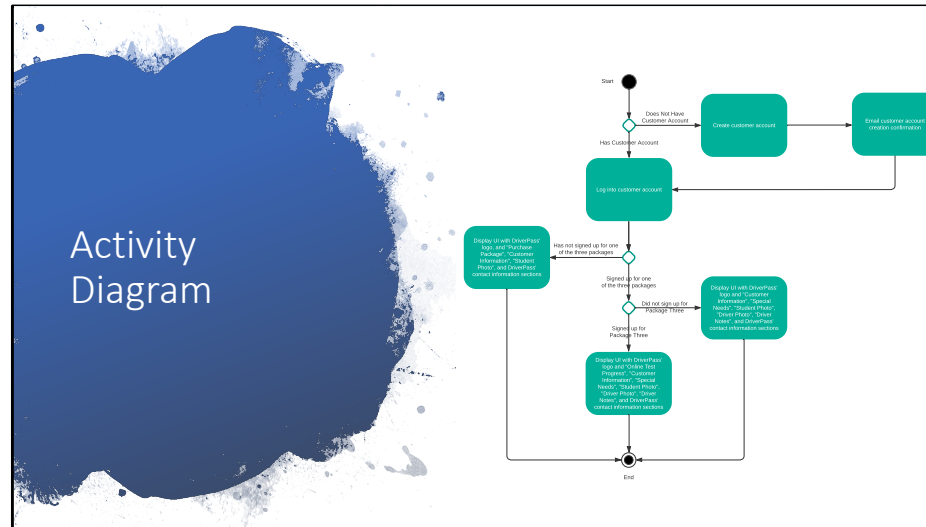
- The first non-functional requirement is “the system shall run on both a web-based and application or mobile environment”. This fulfills DriverPass' requirement of being able to access the system and data online from any computer or mobile device at anytime.
- The second non-functional requirement is “the system shall sync with the DMV database”. This gives the admin and IT officer accounts the ability to receive alerts when there are changes to the DMV's rules, policies, or sample questions.



Notes:

- This is called a use case diagram. The purpose of this diagram is to summarize the different users of the system and how they interact with it.
- The users of the system are the admin or owner, IT officer, secretary, and customer.
- I accounted for DriverPass's needs in my design by including the functionalities of the system that the company requested and depicted the users that must be able to utilize each functionality.
- The functionalities are:
  - The system shall allow access to data online from any computer or mobile device at anytime.
  - The system shall allow an admin or IT-access level to reset the password for any account in the system.
  - The system shall allow an admin or IT-access level to block any account from accessing the system.
  - The system shall allow an admin-access level to track user activities in the system.
  - The system shall allow creations of customer online accounts.
  - The system shall allow creations of driving lesson reservations.

- The system shall allow modifications of driving lesson reservations.
- The system shall display customer-collected information, up-to-date scheduling, and driver information in each customer's account.
- The system shall allow those with an admin or IT-access level to track drivers and cars.
- The system shall allow an admin-access level to disable driving packages.
- The system shall display driving packages.
- The system shall allow available driving packages to be selected.
- The system shall allow each user the ability to reset their own account password.
- The system shall provide notifications whenever DMV has updated their webpage with new rules, policies, or sample test questions.
- The system shall display the user display that includes the company logo and "Online Test Progress", "Customer Information", "Special Needs", "Student Photo", "Driver Photo", and "Driver Notes" sections (as depicted in Liam's sketch).
- The system shall display DriverPass' contact information to customers.
- The system shall provide online practice tests to customers.
- The system shall provide online classes to customers.



## Notes:

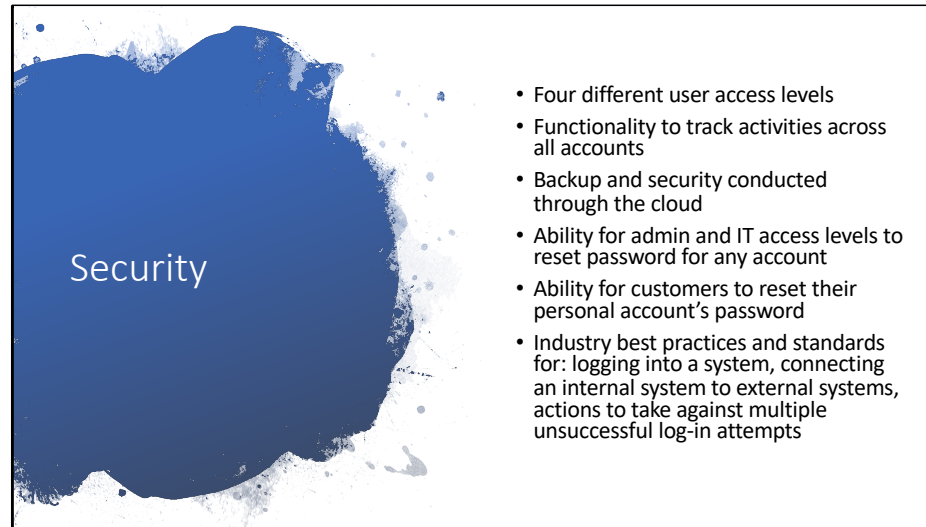
- This is an activity diagram to represent the functionality “the system shall display the user interface (UI) that includes company logo and “Online Test Progress”, "Customer Information", "Special Needs", "Student Photo", "Driver Photo", and "Driver Notes" sections”.
- An activity diagram breaks down the different steps the users of the system must take to accomplish a specific functionality of the system.
- A user interface or UI is the display that the user of the system can see when interacting with the system. The UI can be the font, color schemes, buttons, etc. of the user’s display.
- This design accounts for DriverPass’ need to have a UI or customer homepage that mirrors the sketch that Liam provided us.
- We also took the initiative to include two additional UI options for customers who have not signed up for a package and those who did not sign up for Package Three that contains the online class and practice tests.
- The diagram depicts the steps that a customer must take before the system can show the relevant UI to the

customer. These steps are:

- 1) The first step is to determine if the customer has an online account with DriverPass or not.
  - 1a) If the customer does not have an online account yet, then the customer must create an account before continuing.
    - Once the account has been created, the system will send the customer an email to confirm the account creation. The system will use the email address that the customer entered in the account creation form.
  - 1b) If the customer already has an online account, then the customer can continue onto the next step.
- 2) This next step is to have the customer log into the account. The customer must complete this step regardless of the path that they took in the previous step.
- 3) Once the customer has logged into their account, the system will determine if the customer has purchased a package yet.
  - 1) If the customer has not purchased a package, then they will be presented with a UI that contains the following:
    - DriverPass' logo at the top of the page.
    - A "Purchase Package" section on the top left side of the page underneath the logo.
    - A "DriverPass' Contact Information" section at the bottom left side of the page underneath the "Purchase Package" section.
    - A "Customer Information" section on the top right side of the page underneath the logo.
    - A "Student Photo" section on the bottom right side of the page underneath the "Customer Information" section.
  - 2) If the customer has purchased one of the three packages, then the system will take into consideration the type of package that the customer has purchased before determining which UI to display.
    - 2a) If the customer purchased Package Three, then the system will display a UI that exactly matches Liam's sketch. This UI will also contain a "DriverPass' Contact Information" section at the very bottom and in the middle of the page.
    - 2b) Otherwise, if the customer purchased Package One or Two, then the system will display a UI that contains the following:
      - DriverPass' logo at the top of the page.

- A "DriverPass' Contact Information" section on the top left side of the page underneath the logo.
- A "Driver Notes" section on the bottom left side of the page underneath the "DriverPass' Contact Information" section.
- A "Customer Information" section on the top right side of the page underneath the logo.
- A "Special Needs" section underneath the "Customer Information" section.
- A "Driver Photo" section underneath the "Special Needs" section and towards the left side of the page.
- A "Student Photo" section, also underneath the "Special Needs" section but towards the right side of the page.

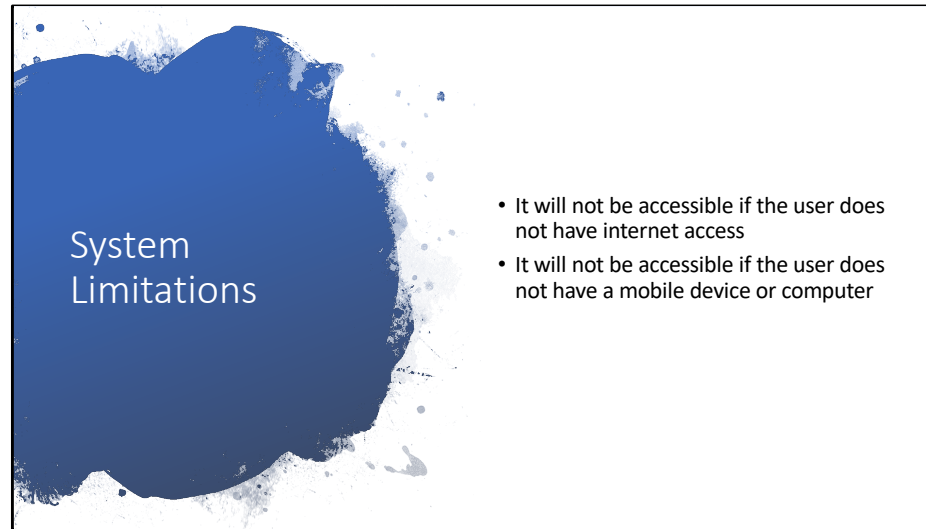




Notes:

- Security for the design was based on DriverPass' requests and industry best practices and standards.
- The DriverPass requests that we implemented into the design are:
  - Different access levels for the different users of the system. The system contains four access levels: admin, IT, secretarial, and customer. The admin-access level will be assigned to the owner, IT-access level will be assigned to the IT officer, and secretarial-access level will be assigned to the secretary. These three access levels will be assigned by our company and available to access the system at launch. The customer-access level will be automatically assigned to each customer account that is created in the system.
  - A functionality to track the activities of all accounts in the system.
  - Backup and security conducted through a cloud service.
  - The ability for an admin and IT access level to reset the password for any account in the system.
  - The ability for customers to reset their personal account's password.

- The industry standards that we took into consideration when designing the system are:
  - The need of a username and password for a user to log into the system.
  - Methods and best practices to secure the connection between the DriverPass system and external systems, such as that of the DMV and third-party cloud service.
  - Enabling the feature to block any user attempts from logging into the system for 30 minutes after three unsuccessful attempts within 30 minutes. The admin-user and IT-user will be informed whenever there are six unsuccessful log-in attempts coming from the same internet protocol (IP) address within a 24 hours timeframe. The IP address maps the geographical location where the log-in was attempted.
  - The only way that a user can get their account unlocked is to contact DriverPass. Only an admin or IT access level can unlock locked accounts.
  - The system will track and keep records of all hacking attempts in order to continuously update and protect the DriverPass system from known attacks in the future.



Notes:

There are two main limitations of the system design:

1. The system will not be accessible if the user does not have internet access.
2. The system will not be accessible if the user does not have a mobile device or computer.