# Alexa Szlykowicz

CS 255

# CS 255 Business Requirements Document

Complete this template by replacing the bracketed text with the relevant information.

This template lays out all the different sections that you need to complete for Project One. Each section has guiding questions to prompt your thinking. These questions are meant to guide your initial responses to each area. You are encouraged to go beyond these questions using what you have learned in your readings. You will need to continually reference the interview transcript as you work to make sure that you are addressing your client’s needs. There is no required length for the final document. Instead, the goal is to complete each section based on your client’s needs.

**Tip:** You should respond in a bulleted list for each section. This will make your thoughts easier to reference when you move into the design phase for Project Two. One starter bullet has been provided for you in each section, but you will need to add more.

## System Components and Design

### Purpose

*What is the purpose of this project? Who is the client and what do they want their system to be able to do?*

* The name of the client is DriverPass.
* DriverPass wants to take advantage of a void in the market for driver’s training.
* The purpose of this project is to help student drivers pass their driver’s exam.
* The client wants users to be able to register for a package. The package determines what services and features the user can access.

### System Background

*What does DriverPass want the system to do? What is the problem they want to fix? What are the different components needed for this system?*

* There will be different components working in tandem. The IT will be maintaining the whole system. It will oversee resetting accounts if users have forgotten their login credentials. IT may also block users if necessary.
* There will also be the need for tracking. The client wants to know when there is a change in the user’s records.

### Objectives and Goals

*What should this system be able to do when it is completed? What measurable tasks need to be included in the system design to achieve this?*

* The user can access their information online and offline. The application can be accessed from a computer or mobile device.
* The user can make purchase one of three packages.
* The user can make reservations to schedule time behind the wheel with a trainer
* The client wants users to be able to see the status on practice tests for the driver’s exam.
* When a user registers, they will be promoted for their basic personal information and pick-up and drop-off location for the trainer.
* The user interface will display reservation start time, end time, and comments from the driver trainer.

## Requirements

### Nonfunctional Requirements

*In this section, you will detail the different nonfunctional requirements for the DriverPass system. You will need to think about the different things that the system needs to function properly.*

#### Performance Requirements

*What environments (web-based, application, etc.) does this system need to run in? How fast should the system run? How often should the system be updated?*

* This application would need to run on a cloud service. This could be AWS, Azure, or Google Cloud Platform.
* The system should run very fast to support security features.
* The system would need to be updated when there are new laws or DMV policies have changed.

#### Platform Constraints

*What platforms (Windows, Unix, etc.) should the system run on? Does the back end require any tools, such as a database, to support this application?*

* DriverPass wants to make its application available on all platforms whether it be a computer or mobile device. Therefore, the application must run on multiple platforms (Windows, Unix, Android, iOS, etc.)
* The backend will require a database. The application will need to access the database. The database would contain information like scheduled appointments, practice tests, and a list of on-the-road driving instructors.

#### Accuracy and Precision

*How will you distinguish between different users?* *Is the input case-sensitive? When should the system inform the admin of a problem?*

* Each user must have a unique username. If ASzlykowicz already exists, then the user must use a different name. The user will be notified if the name already exists. I would not recommend usernames being case sensitive. If aSzlykowicz has the same password as ASzlykowicz. aszlykowicz, aszlyKowicz, etc., there is the potential of being able to access another user’s information.
* The system will notify the admin when the system comes to a halt (denial of service attack) or if there is a system hijacking.

#### Adaptability

*Can you make changes to the user (add/remove/modify) without changing code? How will the system adapt to platform updates? What type of access does the IT admin need?*

* Changes could be made to the user without changing code. Libraries would be updated and added to the system. The update would be applied to the entire system.
* IT admin would need to be able to access the application’s xml file to add new dependencies, add new plugins, or update the version.

#### Security

* Security features include using the Advanced Encryption Standard or (AES) to protect information such as card information, address, name, etc.

*What is required for the user to log in? How can you secure the connection or the data exchange between the client and the server? What should happen to the account if there is a “brute force” hacking attempt? What happens if the user forgets their password?*

* The user must enter the correct username and correct password.
* The best way to secure the connection or data exchange is to create a restful API that will check for authentication, authorization, and variable validation to secure http requests.
* If there is a “brute force” hacking attempt, the system will temporarily disable log in after 3-5 failed login attempts.
* If the user forgets their password, a link to reset the password will be sent to the email the user registered with.

### Functional Requirements

*Using the information from the scenario, think about the different functions the system needs to provide. Each of your bullets should start with “The system shall . . .” For example, one functional requirement might be, “The system shall validate user credentials when logging in.”*

* The system shall process package purchases from the user.
* The system shall let the user schedule on-the-road lessons with a driver.
* The system shall allow the user to upload a picture of themselves.
* The system shall save users personal information such as name, address, and card information.
* The system shall allow users to start and complete practice tests.

### User Interface

*What are the needs of the interface? Who are the different users for this interface? What will each user need to be able to do through the interface? How will the user interact with the interface (mobile, browser, etc.)?*

* The interface must display online progress (in progress, completed, and not started).
* The interface must display user information (first name, last name, city, state, etc.).
* Only the student will be the user in this scenario.
* The user will be able to select which practice test they would like to start or continue.

### Assumptions

*What things were not specifically addressed in your design above? What assumptions are you making in your design about the users or the technology they have?*

* User will want to be able to cancel or reschedule on-the-road lessons.
* Application adheres to current DMV policies and standards.
* User can upgrade their current package.

### Limitations

*Any system you build will naturally have limitations. What limitations do you see in your system design? What limitations do you have as far as resources, time, budget, or technology?*

* The user can only book one on-the-road lesson per day.
* User cannot exceed on-the-road lessons or practice tests that the current purchased package allows.
* User cannot register more than one account with the same email.
* The user cannot purchase more than one type of package.

### Gantt Chart

*Please include a screenshot of the GANTT chart that you created with Lucidchart. Be sure to check that it meets the plan described by the characters in the interview.*

