# CS 255 Business Requirements Document Template

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?*

* DriverPass is a company that wants to fill a void in the market to train students for their drivers test by providing online courses and tests, and on-the-road training.

### 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?*

* DriverPass wants the system to be able to take online courses and practice tests and make reservations for on-the-road training.
* The problem DriverPass wants to fix is people failing their driving test because they lack the training. They believe that this system will succeed in bridging that gap.
* There are appointment packages, student test and driving progress, and basic user registration and information configuration.

### 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 system needs to run on the cloud, DriverPass wants to avoid spending time on backup and security issues.
* The system needs to send notifications to the administrators and developers on updates from the DMV.
* The system needs to prompt for basic user registration, with the ability for the user to change their password and their pickup/drop-off locations.
* The system allows users to choose from various appointment packages.
* The system allows users the day and time for their appointment, tracking which driver and car is being used during the appointment.

## 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?*

* DriverPass is a web-based system.
* DriverPass wants for this system to run on the cloud.
* Driver pass wants the system to be accessible from desktop or mobile devices.
* The system must be capable of displaying training videos and other material for students.
* There must be frequent updates for the availability of driving appointments based on when an appointment is scheduled or canceled.
* Allow administrators to add, edit, and delete learning modules.

#### 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?*

* Windows systems are largely integrated into the business world and offer many tools for developers to build their applications.
* DriverPass wants a cloud-based system, this outsources the server space to a third party instead of DriverPass building out their own server space.
* There is need for a database to store: student, driver, appointment, and progress information.
* The system must be accessible on both desktop and mobile devices.
* Must recognize what device a user is accessing the system, to ensure the appropriate UI is presented.

#### 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?*

* The difference between users is distinguished upon login into the system.
* Login credentials are case-sensitive. Two-factor authentifcation would be needed for users to verify logins, reset passwords, and remember forgotten usernames.
* Role-based access-control (RBAC) would be needed to ensure that students, drivers, and administrators have the appropriate levels of access to information and actions permitted.
* Administrator needs to receive notifications of updates from the DMV and other relevant organizations to stay within compliance with the offered training.

#### 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?*

* Through access control, the user may modify permitted personal information such as their address or credit card information. Other information would be immutable after registration like date-of-birth.
* The system would allow administrators to add, remove, and modify training material on the modules for future developments or to stay within regulatory compliance.
* Administrators would have full access to user accounts; the ability to change user information and block or allow access to the system.

#### Security

*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?*

* User registers with first name, last name, address, phone number, and credit card information.
* Recommend users registering with a unique username and a password that meets a security criterion.
* Two-factor authentication would be needed to safeguard against unwarranted login attempts.
* An HTTPS web protocol would be needed to ensure a secure connection between the client and server.
* There should be a low maximum of login attempts allowed per day (3-5) before a user is blocked from attempting logins into the system.
* Two factor authentication can allow a user to reset their password. They click a link “forgot password”, enter their username, receive a security code over to their phone number, enter the security code on the system, then reset their password.

### 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 allow users to register for a new account.
* The system shall validate registration information like the user’s phone number, address, and credit card information.
* The system shall validate user credentials when logging in.
* The system shall allow users to change personal information such as their address and credit card information.
* The system shall allow users to view training videos and other materials in the modules.
* The system shall allow users to schedule and cancel in person driving appointments with an instructor.
* The system shall allow drivers to input their notes from driving appointments with their students in their progress reports.
* The system shall allow administrators to have full access to user accounts; the ability to change user information and block or allow access to the system.

### 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 needs to display the company logo, online test progress, user information, driver notes, special needs, driver photo, and student photo.
* The different users in the system are the students, the drivers, and the administrators.
* The students will be able to reset their password, schedule or cancel appointments, view training materials, and change certain user information.
* The drivers will be able to have the same abilities as the students, including the ability to add notes to a student’s progress report.
* The administrators will be able to have full access to user accounts; the ability to change user information and block or allow access to the system.

### 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?*

* I have made many recommendations throughout the various sections that were not mentioned in the DriverPass interview.
* The biggest assumption I have made is the access control of the students and the drivers. I have assumed that drivers would have the same abilities as the students, including the ability to add notes to a student’s progress report.
* The appointment part of access control would need further consideration, such as limitations on a student’s ability to schedule appointments and availability schedules for drivers.
* Another assumption is the interface handling desktop and mobile devices, there will be considerable development in this area to ensure a pleasant UI.
* Another assumption is the interface running on a cloud-based system, we cannot guarantee all issues such as security and updates could be avoided with this integration.

### 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 main limitation would be the scope of the features and training materials offered on the system.
* The system should allow developers to build out training modules and add new ones in the future to build out their training platform.
* Another limitation would be the degree of communication with regulatory and compliance organizations. There could be challenges with students and drivers meeting vehicle standards in some states.
* Resources, time, and budget are all constraints on how much can be achieved from the system. All of the necessary technology and personnel can be meet for this project.

### 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.*

*A diagram with several steps

Description automatically generated with medium confidence*