# 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 intends to host an original/modern means of educating new drivers within a flexible environment, dynamic to suit their schedules, to prepare for DMV testing. This education will be hybrid, scheduling drive time coupled with online learning, optimized, and updated per DMV current rules and regulations.

### 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 noticed a substantial failure rate in DMV testing and plans to address this through a modernized, flexible education for new drivers. They would like the application to function through a cloud-based server. The information needs to be amendable online from anywhere, but securely downloadable for Admins to push/pull information to work on from home. The system must support a variety of users with different access permissions from admins to students.

### 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 application should be cloud-based and must support a variety of users with different levels of permission. The application must also support intake, payment, and scheduling. Intake includes adding users with the correct permissions, tracking their progress within the learning material, and allowing them to interact with the driving calendar to schedule drive times within the availability of their selected package. The site must support three packages, which may be expanded upon in future iterations.

## 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?*

* The system needs to run across a web-based model, accessible to any user with internet connection.
* The system needs to be able to warn the user when a duplicate (invalid) schedule request is made.

#### 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?*

* The system will be web-based, running from browsers accessible across a number of OS.
* Databasing should be run through a cloud-based model, linked to the site. AWS is a hosting option for both the database and the site.
* The database will store a variety of user info, payment info, account credentials, scheduled driving hours, and completion/course grades.

#### 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?*

* Admin accounts will link to a case sensitive userID, with elevated credentials across the site.
* Admin accounts will have associated means of contact, including a primary means of contact, for the system to reach out in case of potential threat, overdue payment, or other flagged issues.
* Admin accounts will have various accessibility depending on permissions allowed/assigned under the instanced admin’s object’s private variables.

#### 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?*

* Object methods will be implemented to the student class, which will extend the user class. Some of these methods will include the ability to create a new user, remove existing user, or modify user information. These will be in the form of public methods, similar to getters, setters, and constructors.

#### 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?*

* Credentials include a userID and password.
* After three invalid sign on attempts, the user is prompted for an MFA, by means of chosen contact, to sign into their account.
* If the user is unable to sign in within the allotted attempts, the account will be locked until the password is reset by the user or an admin.

### 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 prompt the user for sign on information, providing fields for a userID and password.
* The system shall validate the user signing on, allowing three attempts before prompting for an MFA log in or locking.
* The system shall open to a landing page, displaying a logo, online test progress, user information, driver notes, special needs, a driver photo, and a student photo.
* The system shall provide linked pages to the following sections of the home screen: online test progress, user information, driver notes, and special needs – each linking to their respective pages.
* The system shall allow the user to schedule open drive time available in the dive time calendar.
* The system shall launch the course material from current progress mark when directing the test progress page.
* The system shall allow a user to pick one of three driving packages, each with its respective cost and features.

### 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.)?*

* All users must see the same sign on page, prompting for userID and password credentials for validation.
* Upon entering the site, students, instructors, and admin should all have different views.
* The intended end user is the student. The student will have access/visibility to a handful of pages and components, including: homepage displaying course progression, drive time, user info, etc., driving calendar displaying available drive times and instructor info, a user info page where they can edit their profile and payment info, and course page to continue test progression.
* The drivers will only have access to user info pages and driving calendar. They will have full view of the calendar, with the ability to adjust their available working hours. The driver will also have the ability to edit information in the user info page.
* The admin must have a list view of all users, scheduled times, and the calendar. The admin should have full access within the calendar to edit drive times and availability. The admin also must have the ability add/remove new users from the list view. The admin must also be able to download a .pdf of the calendar, to make adjustments offline.

### 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?*

* All users have browser/internet connection to access the site.
* AWS (or whoever is hosting the site and databases) is up and running, without outages.
* Admins views/accessibility will be limited by assigned permissions within their class creation.

### 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?*

* Hosting services price and support.
* Internet connectivity/accessibility
* Course material must be consistent with current driving laws.
* Scheduling must be up to date for all users (avoiding colliding drive times)
* Session time outs while test taking within course components
* Failure to properly update progression

### 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.*

