# 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?*

* The purpose of the project is to provide DriverPass with a new system that they believe will fill a void in the market.
* This system will be able to do many things, and the clients proposed solution includes taking online practice tests and online classes, and schedule on the road training.
* The client wants to provide a comprehensive package that offers all the assistance and training needed for customers to prepare for driving tests.

### 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?*

* The system needs to be able to handle a variety of tasks including take online practice tests and online classes, and schedule on the road training.
* The problem that needs fixing is mainly that people are struggling with driving tests and failing them. DriverPass wants to help people study and perform better in these areas.
* The components needed are the previously mentioned systems, and additionally there needs to be activity logs kept, access controls and monitoring, the ability disable a package, DMV compliance, and the possibility for potential future releases.

### 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?*

* Some clear objectives are a user/customer being able to pick one of three packages.
* Users need to be able to make reservations online, over the phone, or in person.
* Security must feature access control with different right sand roles for different employees.
* Tracking must be present so it is known who made a reservation, who cancelled or modified it, and an activity report should be viewable and then printable.
* Other measurable goals include matching the customer with the driver as there are multiple cars and drivers.
* This should all be accessible via mobile or standard PC, and then reports should be printable.
* DriverPass also provided specifics for the UI and prefers the system to be on the cloud.

## 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?*

* System resources are to be very minimal. A phone, or low end PC/laptop should be able to use the LMS. Most everything should be self-sufficient, no third party software should be required outside of specific use cases where it is required by external parties such as accessing textbooks. These environments being primarily web-based and application for now, but in the future perhaps DriverPass may want more options. The system should be fast and updated often as new customers/data/information are entered into the system.

#### 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?*

* Users should be able to access the LMS from any platform ideally. PC, Mac, Linux, mobile(android, IOS). The backend will require tools such as a database, ideally multiple, to support the application. A database for users/customers, a database for business contacts like DMVs and other partners, etc.

#### 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?*

* Different users will have unique login information, username/password/email and other pertinent information like contact information and what classes/tests/drivers they are signed up for, time slots of said things, etc. The input can and should be case-sensitive for maximum accuracy and precision. The system should inform the admin of problems such as

#### 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?*

* The system needs to be adaptable in that it must be possible to change user information and update things without getting into the code. Platform updates should be fast and planned out, leaving little to no downtime. It will be important for IT admins to be able to have more access to the system than your standard user. Advanced privileges for admins is imperative.

#### 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?*

* Should have single sign on, two factor authentication and or Oauth authentication protocol. The system should be extremely difficult for bad actors to access. These measures will be required for the user to log in and will secure the connection/data exchange between the client and server. If there is a brute force hacking attempt, the account server side will lock the account, and access will be denied for a time period, and the user will be contacted via email about what occurred and prompted to change login information as needed. If the user forgets their password, they must follow the reset/forgot password prompt to prove they are the actual user and create a new password to regain access.

### 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.”*

* Login/User Registration - Students must be able to create or be given by admin unique user/password combination to access the LMS.
* Course/Class Delivery - Instructors need to be linked to courses for specific class sections. Course materials then need to be connected to a specific class and schedule for students.
* Notifications/Messages - Admins/Instructors need to be notified of submitted assignments, messages, discussion posts, etc. Students need to be notified of course requirements, announcements, replies to discussions, etc.
* Content Management - Course content needs to be stored and managed. It is also important that content be downloadable/printable for offline access.
* Administration - The LMS has to support the access, control, security and functionality for various persons such as students, instructors, admins, and directors.
* Student Portal - Students need to be able to view enrolled courses, assignments, related materials, grades, calendar and any other pertinent information.

### 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 needs of the interface involve accessibility and design outlined by DriverPass. As stated in the interview “the online test progress should show the tests the customer took. It should show what’s in progress and the ones that the customer completed. So, it would say something like test name, time taken, score, and status. The status could be not taken, in progress, failed, or passed. In the driver notes, I need to show any comments the driver left as well as the times for the lessons.” The different users are customers/those taking lessons, admins, internal users for drivers/employees. The user will interact primarily through browser, and they will be able to do the previously mentioned functions.

### 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?*

* Student engagement - Ideally the LMS has students engaged in the courses, and they interact with fellow students and instructors to foster a better learning environment.
* Server stability - Servers will be up to date, managed by an experienced and talented team, and not encounter any unexpected issues.

### 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?*

* Instructor to student ratio - There may be courses that have many students and only one instructor. In this case less attention and care can be provided to each student by the instructor. This puts more of the burden on the LMS to handle the student's needs.
* Budget - There is a set budget and if development is proving more costly sacrifices will have to be made that may affect quality and outcome of 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.*

