# CS 255 Business Requirements Document Template

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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?*

* Our client Liam is the owner of DriverPass, and he would like to take advantage of a void in the market when it comes to training students for the driving test at their local Department of Motor Vehicles (DMV). He wants us to design a system that enables students to study and take practice tests for their driving test as well as schedule road training tests through them.

### 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 owner would like to be able to download any reports or information he may need so that he can work on them at home offline.
* The system needs to have online classes, practice tests, and the ability to schedule any in-person driver training.
* A reservation system needs to be implemented that allows users to schedule road tests during specific times and days. They should be able to schedule online or through phone. The user should be able to view the vehicle and driving trainer that they are scheduled with.
* The owner would like the ability to track who has made, modified, or canceled a reservation as well as which user is paired with which car and trainer at what specific time.
* The owner needs the system to have authorization and authentication protocols for specific users so he or other employees can reset passwords or block access in case an employee is terminated.
* The owner needs access to restrict certain packages or stop certain reservations in the event it is overbooked.
* The system will need to monitor the DMV’s policies and send a notification to the owner so the system can update the information needed to be studied by users.
* The system needs to show the user's test progress, the time it was taken, the score of the test, and who took the test.
* There needs to be a section that shows users' personal information, any driver notes, and the photos of the user and his driving trainer.
* The owner would like to have this system function in the cloud, so security and backup are outsourced to another company therefore enhancing the time he has to focus on the business.

### 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?*

* Once completed, this system should be able to allow students to choose a package, read study material, take online practice tests, schedule driving tests, and see what car they are training in with a picture of them and their driver. Students should be able to cancel or modify their driving training as well.
* The owner and employees will have access to schedule walk-ins into the system and restrict access to certain packages if needed.
* The system as a whole will be based in the cloud with security and data storage outsourced.

## 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?*

* Based on our client's needs, our system would run in a web-based cloud environment. They would also like the speed of the system to be able to handle the needs of any user without complications or slowdowns with average load times of 2 seconds or less. This system would also need to be able to receive its updates automatically and notify the client when an update is going to happen or is needed.

#### 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 client's system should be able to run on multiple platforms and web browsers so that any potential user can utilize the service regardless of the preferred platform.
* The backend of the system would require a database so the client can store user information.

#### 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?*

* In order to distinguish between different users, the system will require unique usernames and passwords for each user.
* Each user's password would need to be case-sensitive and also require 2-factor or multi-factor authentication for increased security for the user.
* The system should inform the admin of any problems as soon as they happen.

#### 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 will allow changes to the user without the need to change or rewrite the code.
* Since the system will run in the cloud, platform updates should roll out without any issues.
* The IT admin would need administrator privileges to access the database or the web server so they can modify the system or user information.

#### 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?*

* The user is required to have a username and password to log in and if they have multi-factor authentication then they will need an additional requirement (text code, etc..) to gain access.
* After a given number of failed log-in attempts from a user or brute-force hacking attempt, the user would be locked out of their account until an admin unlocks it.
* If the user forgets their password, they will be able to click on a forgot password link which will email them a password reset link.

### 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 to enter their login credentials.
* The system shall allow users to create an account if they don’t have one.
* The system shall validate the user’s credentials.
* The system shall grant permissions based on admin status.
* The system shall let users reset their password if forgotten.
* The system shall lock the account if there are too many failed log-in attempts.
* The system shall allow the user to access the system from anywhere at any time.
* The system shall let users pick from various packages and make reservations.
* The system shall stay updated with DMV policies.
* The system shall display users' progress, personal information, and notes for them to track.
* The system shall allow admins to restrict access to packages that are full.
* The system shall display the photos of the user, their trainer, and the vehicle being used.
* The system shall display lesson information like start and end times.
* The system shall allow access to online learning resources.

### 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 allow users to view it on web browsers or mobile browsers regardless of platform.
* The users for this interface will be admins and customers.
* Admins will be able to view/modify customer information, packages, log-in details, and training information.
* Users should be able to access their chosen package, change passwords, view study materials, take tests, schedule driving courses, and take notes.

### 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?*

* Users know how to navigate the system.
* Users will be able to access the system at any time.

### 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?*

* Only five months to build the system.
* The client's budget has not been discussed.
* The client has not picked a cloud provider yet.

### 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 screenshot of a graph

Description automatically generated*