# 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 purpose of this project is to provide the client with a system that will fulfill their need in training students. The client, DriverPass, wants their system to help students train for the driving test.

### 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 problem DriverPass wants to fix is the lack of training available to students to help them achieve passing the driver test. DriverPass wants to offer as a solution, a system to provide online classes, practice tests, and on the road training with driving instructors. The system will need an interface, database, and application.

### 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 should allow users to take practice tests and see their progress on the interface. The interface should provide statuses of completed tests and tests currently in progress. The interface should provide a feedback section from the driving instructor. Students should be able to make a reservation for on the road driving instruction. The system should allow different packages to be selected for the reservation. These packages should have the ability to be disabled. The system should track each reservation by date, time, student, instructor, and vehicle. The system should track any new, changes to, or modifications to reservations by what was done and who did it. The system should have different roles and rights for different users. The system should run on the cloud and provide access to download reports. The system should provide notifications when the DMV has updated their information.
* Measurable Tasks:
  + Building case diagrams and activity diagrams
  + Researching user interface designs
  + Creating class diagrams
  + Create the interface
  + Build the database
  + Link database to the interface
  + Create the roles and rights for users

## 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?*

* Environments – Web-based
* The system should run without significant time between interactions. The system should not slow down as the number of users increases.
* The system will be updated weekly if applicable.

#### 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?*

* Platforms – The system needs to allow multiple operating systems to connect to the web-based system
* Tools – A database will be required to store customer information. An interface will be used for the users to interact with the system.

#### 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?*

* Users will have unique case sensitive usernames and passwords to login into the system
* The system should lockout users after a certain number of failed attempts and inform the system administrators
  + System administrators should be informed if multiple attempts are made

#### 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?*

* Users need to be able to be added, removed, and modified without having to change code.
* The system needs to keep adapting as platforms are updated so they can still run and connect
* The IT needs to be able to make changes to users, databases, and 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?*

* The user needs to have a password to login
* The connection needs to use an asymmetric algorithm like RSA as well as certificates
* The account should lock after a certain amount of unsuccessful login attempts
* There should be a forgot password to allow users to change their password if they forgot it

### 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 authenticate users when logging in
* The system shall allow users to book appointments
* The system shall allow users to take practice tests
* The system shall keep track of user’s progress
* The system shall allow feedback from driving instructors
* The system shall allow different packages to be selected for the appointments
* The system shall update appointments if they are modified
* The system shall have different roles and rights for users
* The system shall allow reports to be downloaded

### 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 will need to show user’s progress, show feedback from instructors, allow access for reservations, and allow users to modify reservations
* There will be client users, admin users, instructor users, and IT users
* Clients – Will need to be able to see their progress of completed tests and tests currently in progress. They will see any feedback from instructors and will be able to make reservations. Clients will be able to modify reservations.
* Admin – can use the interface to see currently scheduled appointments, modify appointments, and access reports
* Instructors – they will need to access their current reservations that are booked
* IT – can access customer support problems
* The interface is accessible from a browser and offers mobile support

### 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?*

* Budget, security wants, and databases were not addressed above
* We are assuming that the users do not have a very old system
* We are assuming users will have internet access

### 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?*

* I do not believe all of the functionality needed is listed
* Security is not fully covered
* Budget is not mentioned
* Timeframe is approximately 4 months
* Technology (cloud) will depend on budget

### 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.*

