# 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 this project is to provide future drivers with the proper tools to pass the DMV provided test, so that they may obtain their license. The client is DriverPass, and they are asking for a product which will provide practice tests and courses online and offline as well as provide the option for road tests. With the road tests, the client is asking for the product to keep a record of reservations for the driving instruction, which should be able to be made through their system. This will involve booking a day at a certain time, with the user’s info set to the day, such as name, age, type of vehicle, address, and credit card information. The user must also have the option to modify or cancel appointments.

### 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 run over the web and for it to be cloud based. They want the system to provide online courses and practice tests to future drivers, with an option to take in person driving lessons. They want an interface for the system which shows online test progress, above driver notes and to the left of the user’s information and photo. DriverPass would like to offer the user three distinct packages which are available to those who book an appointment to take the in person driving lessons. DriverPass would concurrently need a way to close off certain packages if bookings become full. The packages are as follows.

Package One: Six hours in a car with a trainer

• Package Two: Eight hours in a car with a trainer and an in-person lesson where we explain the DMV rules and policies

• Package Three: Twelve hours in a car with a trainer, an in-person lesson where we explain the DMV rules and policies—plus access to our online class with all the content and material. The online class also includes practice tests.

DriverPass would also like to have full access over all user accounts in case a user forgets their password and needs it to be reset. The system will require a few different components such as a user interface, and a database to store the information. Also, it will need some component of security to ensure that the user information is not going to be compromised.

### 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 be able to offer users an interactive interface which shows the user their progress through online courses and tests, with the linked drivers notes listed below the test display. Concurrently with this requirement, the system would also need to keep a database collection of every user and all information which is distinctive to them, such as name, age, credit card info, etc. Also, the system needs to able to be accessed through 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?*

* The system needs to be able to be run on multiple operating systems such as Mac, windows, and mobile devices such as android and IOS. In order to accomplish this a web-based application needs to be made to run on Mac and Windows.
* The system needs to run at speeds which can support multiple users accessing the system simultaneously.
* The system should be updated as often as possible, and when necessary. If the DMV updates their policies or changes the test, concurrently the tests which are made available at driver pass would also need to change. Also, if driving laws change, DriverPass must update their system to account for this. Finally, performance and new fixes should be released consistently to keep the system fresh and new.

#### 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?*

* I believe the system should be able to be run on Windows, Mac os, and Linux. If DriverPass opts to create a mobile application, the application should be able to run on android and IOS.
* A database will need to be created for the DriverPass application in order for it to run effectively. The information which is distinctive to the user which needs to be stored, such as name, age, address, credit card information, payment history, etc, will need to be stored in this database. Concurrently with this database SQL must be used in order to handle the database calls.

#### 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 differ from one another by their distinctive usernames which will be housed in the database. The input is case sensitive.
* Admin should be notified if there is a login error, if a known user is accessing the system from a new device and location, and if the system has been having errors.

#### 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?*

* Changes can be made to the user without needing to modify or remove code, due to the information being stored in a remote database.
* The IT department would need full access to virtually every aspect of an admin and user’s profile in order to solve their respective problems. A problem isn’t able to be solved if the IT department can’t gain access to it. An IT specialist should be able to update user information which requires them to have access to every aspect of the individual user portal.

#### 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?*

* In order for the user to log in they must enter the correct username and password pair which is stored in the database. Standards for acceptable usernames and passwords will be determined by DriverPass, such as length of password and the need for special characters.
* In order to ensure safe communication between the client and the server an SSl should be implemented. SSL, or secure socket layer, is important to encrypt data which is passed between the client and the server.
* If a user forgets their password, there will be a link which gives the user an option to reset their password. If the user incorrectly guesses the password too many times, they will be locked out and the only option available to them will be to reset their password. The password reset link will be sent to the email which is on file for that specific user. This in turn should prevent any brute force attacks by limiting the amount of guesses a user is allowed.

### 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 validate user credentials when logging in.
* The system shall offer users different packages for driving lessons and learning opportunities.
* The system shall offer users a two-factor authentication to ensure the user is genuine.
* The system shall store user information in the user profile. This will include data such as payment information, name, age, address, and testing progress. Driver’s notes should also be included.
* The system shall keep track of admin and driver profiles, along with the drivers availability.

### 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 user interface will need to validate the user’s login credentials. This aspect of the user interface is applicable to the admins, drivers, and customers. From here each interface divulges into distinct interfaces. For the Customer interface, information such as available packages, progress reports, and user profiles must be made available. For the Drivers, the interface should show scheduling for which days they are to instruct and who they are to instruct. A record of their notes should also be made available. For the Admin interface, they should be able to access every driver and customer profile. The interface will be able to be accessed through the web or through the mobile application.

### 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?*

* It is assumed each user will have access to a smart phone or pc.
* There were certain aspects of design that were not addressed such as color scheme and overall template.

### 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?*

* One major limitation will be the time it takes to create a completely new system. It is most likely going to take a large team, and if not the deadline may not be met.
* A budget has not yet been set for the DriverPass system, but that could be a limitation as well.

### 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.*

[Insert chart]