# 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 client is DriverPass, and the owner Liam would like to create a new system that will make driver training easier for students. He would like the system to provide online driver courses and practices test. His company is also able to provide on the road training, and he would like the system to be able to handle this.

### 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?*

* Liam noticed that there is a need for better driver training because people kept failing their driving tests at the DMV. They want an online program that will be able to help solve this problem by providing people with multiple resources that will allow them to be better prepared for the driver test. Other than study materials they would like to be able to set up a reservation system that will track when certain driver teachers are out or if they are free.
* On the logistical side Liam would like to be able to access data online from his computer or mobile device. He would also like to download reports and files from the online server on to a local system. Also, the IT officer Ian would like to have full access to the system so he can help employees and customers with technical issues.

### 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?*

* When completed the drivers should be able to sign up for classes and they should be able to choose from three different packages of how intently they would like to study. The reservation system should be clear and concise on what teachers are available for certain times and what teachers are currently reserved. They would also like a working report card for the drivers that the teachers will be able to mark up and change based on the students’ performance.

## 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 cloud should be utilized to create a website for their web-based application.
* The system should be fast enough to allow users to access tests, profiles, and the reservation portal with no complications. Also, admin and IT personnel need to be able to go in and manage the website without complications.
* For updates there should be a schedule to inform the staff when new practice tests, and other course materials come in. Then we can conduct updates and inform employees and students when these dates and times will be so they can prepare.

#### 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 platform that should be utilized is Linux. We are using the cloud to manage things like security and databases for the back end to support this application.

#### 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 need to be able to create a username and password when they first access the website also giving them the ability to create a profile. The inputs should be case sensitive, which will make usernames and passwords harder to guess for attackers. For additional security we can implement a multi-factor authentication system.
* Admin should be informed immediately if there are any problems so that the downtime for the application is as short as possible. Most systems have 24-hour IT professionals that will be able to handle any problems as they arise.

#### 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 admin to make modifications and remove users without changing the code of the application.
* The owner would like to access information from the website on their mobile device, which still can be done without a mobile device application, but in the future, we could create one.
* The IT administration should have the power to modify employees and deny access to any employees that have been fired or left the company.

#### 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 log in will require username and password (case sensitive). There can also be a multi-factor authorization for employees and users for extra security protocols.
* The cloud will handle all data exchange in client/server transactions, which is secure when using a reliable company to handle the cloud exchanges.
* To prevent brute force attacks like password spraying, the website will incorporate a “disable” function after 3-4 attempts of a single user.
* The website will also include password retrieval for users that forget their password. An email can be sent to the user that will prompt them with either security questions or a one-time password to log in.

### 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 allow users to book reservations for on-the-road driving courses.
* The system shall provide practice test, live classes, and course materials.
* The system shall show the user which driver they have booked
* The system shall offer three different driving packages for customers.
* The system shall run efficiently and fast enough for easy user function.
* The system shall provide custom access based on the user and their privileges.
* The system shall show the tests and work the user has already completed.

### 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 must provide the customer the option to make reservations for driving appointments, take practice tests, and access course materials based on package purchased.
* The interface must allow DriverPass employees to access the website and make modifications.
* The user should be able to interact with the interface from a mobile phone, computer, and/or any device that has access to the internet.

### 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?*

* In the interview we never discussed a budget. Without this information we are making assumptions that everything that they require to create this web-based application will be within their budget. This also includes the Linux database environment.
* We also assume that their company will have access to the most updated technology to access and manage the website as needed.

### 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?*

* They did not give us much time to develop a brand-new web-based application. This could put us behind on deadlines that they want our company to meet.
* For a project this size created from scratch, a limitation we face is the number of employees we currently have. Since the deadline is close, we may need to hire more employees to help
* The best approach we have is to create the software with the Agile method.

### 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.*

