# 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, DriverPass, wants a system with an enterprise access model that is able to manage two-hour block reservation packages either through customers’ online accounts, in-person or over the phone with the secretary.
* The client wants a cloud-based system that allows for online and offline data access and reporting, as well as tracking changes made by each employee, and identifying driving instructors and their cars, along with the time.
* Client wants an interface that provides online learning access that shows user progress, score, status, a table with driver notes, an input and contact form, and connection to the DMV for compliance purposes.

### 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?*

* Many people fail driving tests at the DMV, and DriverPass wants to provide better driver training for customers through online and on-the-road learning.
* Client wants the system to to be able to manage reservation packages, through self-service or employee access.
* Components that will be needed for system:
  + Front-End - Provides applications and interfaces that are required for cloud-based service. Consists of hardware and software components such as data storage, servers, virtualization, etc. Also provides Graphical User Interface (GUI) for end users to perform respective tasks.
  + Back-End - Responsible for monitoring all the programs that run the application on the front end. Contains large number of data storage systems and servers.
    - Includes application, service, storage, management, and security.

Network - Connects the front end to the back end

### 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?*

* Allows for offline and online data access, online data modification and data reporting.
* Enterprise Access Modeling.
* Reservation and Employee activity tracking.
  + Reservation package disabling/enabling.
* Customer self-service reservations and password reset.
* Effectively identifying driver instructor information: type of vehicle, customer match, and time.
* Concrete registration process.
* Automatic notification of updates in policy, rules, sample questions from DMV.
* Cloud-based/web-based system.
* User interface shows test progress/completion, test name, time taken, score and status (not taken, in progress, failed or passed).
* Driver Notes table showing driver comments and times.
* Input form for customer/secretary to fill in and contact page.

## 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.*

* The system must support various mobile devices and all current and all current and all supported previous supported versions of common web browsers.
* Data security protocols to to ensure company information is safe (including data backup and recovery solutions. The system must provide configurable role-based authentication.
* System must accept course material in various file types and maintain logs of user transactions and detailed reporting.
* System must have the ability to import core system records, update fields through import process, have unique course numbers, relate a set of courses that belong together in a series with a unique identifier and track course interest.
* System must be a public cloud-based environment. The system must meet international, governmental, or corporate compliance and/or policy guidelines with features built in to streamline this process: scheduled notifications, certificate delivery and reporting.
* Planned system downtime should be scheduled in advance, the system must allow failovers to occur without system disruption. The system must have the ability to store and retrieve learning history and have the ability to expand capacity as users increase.

#### 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 web-based in the form of a cloud based environment. The system should be able to respond to requests within seconds and be able to run tasks simultaneously, allowing users to access the platform without any problems or complications.

#### 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?*

* Due to its open-source distributions, the client will benefit from a Linux-based platform since it can easily be reprogrammed/reconfigured to meet the needs of the client in specific areas and tasks, since the client looks to make tweaks in the future. Databases will be hosted in the cloud service providers data centers, which eliminates the need for additional tools.

#### 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?*

* The system must allow users to register a user name and password on the platform which can be assigned different rights and roles. The system should allow case-sensitive input to increase security. The system should inform the admin of a problem when action is required. The alert should also provide the proper context to guide the action.

#### 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?*

* Yes.Someone will have access to reset passwords and block access to accounts if necessary. When the need for new features increases, updates will be released. The IT admin will require administrator access.

#### 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?*

* A unique username and password combination will be required for login. Data in transit will be encrypted to and from the cloud provider. To block “brute force” attacks, accounts should be locked out after a defined number of incorrect password attempts. The lockouts can last a specific duration or remain locked until unlocked by an administrator. If a user forgets their password, there can be a self service password reset implemented or persons with access can reset passwords.

### 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 allow users to manage reservation packages online.
* The system shall allow for online and offline data access, reporting and tracking.
* The system shall provide online learning access that shows test name, user progress, score, status and driver notes.
* The system shall be connected to the DMV for compliance.
* The system shall identify driver instructors and customer pairings.
* The system shall have an input form and contact page.
* The system shall be web-based.
* The system shall have enterprise access modeling.
* The system shall support feature and system upgrades.
* The system shall have data security protocols in place to ensure company information is safe.
* The system shall provide service that is free of disruptions.

### 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 be web-based, preferably cloud based, with backup and security being handled so that there are minimal technical problems. The interface needs to show the tests the customer took, tests that are in progress and tests that are completed. There should be a table for drivers, including lesson time and driver comments. There needs to be an input form where the secretary or the student fills in the student information, as well as a contact page.
* Users need to be able to register an account and make reservations online. The secretary and other related staff need to be able to fill in student information. Drivers need to be able to write driver notes for each lesson.
* Users will interact with the web-based platform using any computer or mobile device.

### 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?*

* We assume that just because we find something easy to navigate on an interface, that users will be able to as well.
* We assume that users will use the system under the ideal conditions, we need to make sure that we maintain legibility for those in less than ideal lighting on mobile devices.

### 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?*

This design could eventually become inflexible, due to its increasing complexity. Time is a resource that there seems to be a lack of when it comes to this project, as well as the absence of a large enough team to work this 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.*



