# 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?*

* Our client DriverPass wants our company to design and build a system to train student drivers online, schedule and track on-the-road training sessions, and to allow access to system information to authorized users.

### 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 is looking to fill a void when it comes to training students for their driving tests at their local DMVs. The intend to do this by offering online classes and practice tests via their website as well as schedule and provide on-the-road training with trained drivers.

### 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?*

* Create Account – To include first name, last name, address, phone number, state, create/reset password, and credit card information (card number, expiration date, and security code) which will be displayed in Information section of interface. This can be done by user or secretary. First, we need to collect requirements. Then we can create use case and activity design diagrams to identify attributes and operations.
* User Interface – User can track online testing with Name, Time taken, Score and Status (Not taken, In Progress, Failed, Passed); Display Driver Notes including lesson times, start and end times, and Driver comments; Display user Information from profile; & display photos of user and driver. To complete this, we must collect requirements and researching user interface designs. Then we can build the interface, link the database to the interface, build the business logic, and test the system.
* Manage Security – Set privileges and account authorizations for users and secretary, company president Liam (to access all online data for reporting) and IT officer Ian (full access to add, manage, and block users). To do this, we need to collect requirements from the client. Then we can create use case and activity diagrams to define processes and build class diagrams to define our data. We then need to build our security requirements into our business logic for functionality. Finally, we test the system to verify it functions as intended.
* Manage In-Person Reservations – Users and secretary can create, modify, and cancel reservations including choosing one of three packages, set/modify date and time, schedule driver, choose car, set pick-up and drop-off locations. President wants option to disable packages at any time. After we have collected requirements, we can create our use case, activity, and class diagrams to model the processes and data as expected. We need to ensure the interface is designed and built to easily input this information from a user and the business logic tracks and maintains this data. Finally, we will need to test this function before we deliver the system.
* Compliance – Be able to connect to the DMV system to have up-to-date information about test requirements and practices, policies, rules, and sample questions. Implement system to receive notifications when update occurs. Since we collected these requirements at the outset, we then create our use case, activity, and class diagrams to model functionality and attributes, set up in the interface and in creating the business logic when we get alerts to updates from the DMVs, and then we test this function out during testing.

## 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?*

* DriverPass would like us to build a web-based environment that can also be accessed via mobile device. The system should run in real-time (or near real time) to capture and record customer data. The system will need to be updated as soon as changes to DMV policies occur and when a record is changed in the system.

#### 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?*

* DriverPass requests that the system be cloud-based. We will need databases to manage customer information, to build reports using information collected by the system, to manage the cars and drivers available for driving reservations.

#### 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 users will be identified by first and last names with the first letter of each name capitalized. Users will create passwords that will be case-sensitive to further differentiate users. The admin wants to know when a user forgets their password. The admin also would like to know when a record is changed and by whom.

#### 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?*

* Based on the requirements from the client, changes can be made to the user without the need to change code. The client also wants the ability to add and remove packages/modules in the future, so the code needs to be modular. IT needs full access to the system’s accounts to reset passwords or block 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?*

* To login in, the user will need to provide their first and last name along with a security code to confirm the user has proper credentials. The user will also be able to set a password and can reset it through their account automatically. IT will have access to block accounts as needed in case of a hacking attempt.

### 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 a user to reset their password automatically if forgotten.
* The system shall allow the user to set up an account with first name, last name, address, payment information, security code, and phone number.
* The system shall allow users to take online tests and track their progress.
* The system shall allow users to make and modify driving appointments by choosing a package, a time slot, a driver, and pick up/drop off locations.
* The system shall allow the administrator to track information in the system through reports.

### 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 functional for both web-based and mobile-based environments. The client has asked our company to take care of backup and security for the system. The different users will include students, drivers, the secretary, the IT officer, and the owner. The interface will show students’ progress for online testing, display their account information, display notes from their driving instructor, any special needs or accommodations of the student, and photos of both the student and the driver.

### 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?*

* The user will remember their login information.
* The system will be connected to the Internet 24/7.
* The system’s experience will be consistent whether web-based or mobile-based.
* The client understands how to make and modify appointments online.

### 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?*

* Building a cloud-based system will be more expensive.
* Developing the system for both web and mobile will take more time and require more resources and expertise, and thus increase cost.
* Backup and security will likely be taken care of through cloud vendor. This will increase costs and those systems will be dependent on the vendor’s servers being up and running.

### 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.*

Chart

Description automatically generated