# 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 to create a system to provide better driving training for their local DMV, so that less students fail their driver’s tests.

### 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 would like a system that can handle online tests and quizzes for their users, as well as scheduling for in-person training.
* The client would also like for there to be admins who can modify user account information, and download and modify data surrounding training.
* The system should be a web application, with its data stored on the cloud, with mobile compatibility.

### 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 user (or a secretary) should be able to:
  + Enter their information and sign up
  + Sign up through a Secretary
  + Change their password themself
  + Take online classes
  + Take practice tests
  + Reserve in-person training sessions, modify the reservations, and cancel the reservations.
    - Pick between different in-person training packages.
* The driver should be able to:
  + View reservations Users made with them.
  + Modify and cancel reservations users made for them.
* The administrator (Liam) should be able to:
  + Access and download data in a readable and editable form from desktop or mobile.
    - This data should include all of the edit history of a reservation, and the user and driver associated with the reservation. It should also include user statuses, drivers, cars, DMV access, and changes to the system.
  + Disable an in-person training package that he does not want customers to be able to sign up for.
  + Get notifications whenever rules, etc change at the DMV.
* IT (Ian) should be able to:
  + Access user accounts so he can modify passwords, or block accounts that are no longer in use.
* The Secretary should be able to:
  + Create user accounts, and sign Users up for training sessions.

## 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 accessible in both mobile and desktop environments.
* The system should be web-based, and on the cloud.
* The system needs to be able to handle user form submissions (submitting reservations, and multiple choice practice tests) and downloading data in a reasonable timeframe. Buffering time should be minimized to avoid frustration.
* The system needs to be updated every time the DMV has an update.

#### 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?*

* A database is required for this application, as it has user information, reservation information, and practice test information.
* No platform was mentioned in the interview, but the client expressed familiarity with Excel, so Windows may be a good option for hosting.

#### 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?*

* Each user can have a permissions field within the database, which would label them as either a User, Driver, Administrator, IT, or Secretary.
* Passwords should be case sensitive.
* Inputs like Driver names when a User is making a reservation could be done using dropdown menus, minimizing the possibility of errors. Practice tests could be multiple choice, which would prevent invalid inputs and make feedback easy.
* User registration would happen over a phone call, so errors in user information could be prevented by the employee talking to the User.

#### 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?*

* IT needs to be able to modify Users without changing the code.
* The Administrator needs to be able to download anything from the database and disable packages.
* If the system is web-based, there may need to be manual CSS changes if standard monitor sizes change.
* Due to the platform being for a local service, system updates can happen at odd hours where it is unlikely that there will be anyone using 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 should log in with a username and password.
* Sign in should be locked temporarily if the incorrect password is entered more than 3 times.
* If a user forgets their password, they can receive a text with a temporary password to log in, and then be prompted to enter a new one.

### 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 permit users with various permissions to log in and sign up.
* The system shall validate user credentials when logging in.
* The system shall block logins temporarily if a password is entered incorrectly three times.
* The system shall permit users to change their passwords.
* The system shall supply temporary passwords by phone to users who need help logging in, and then prompt users to set a new password once they use it.
* The system shall permit IT and secretaries to add and change user information.
* The system shall allow the Administrator to download all of the data from the database in a readable format.
* The system shall allow Users to take online classes.
* The system shall allow Users to take practice tests.
* The system shall allow Users to view their practice test results.
* The system shall allow Users to reserve training sessions.
* The system shall provide three different packages for training sessions.
* The system shall allow the Administrator to disable packages that are no longer in use.
* The system shall allow drivers to see reservations made by Users for their lessons.
* The system shall allow drivers to change or delete reservations made by Users for their lessons.
* The system shall notify the Administrator when a change is made at the DMV.

### 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 desktop, mobile, and tablet compatible for every type of user.
* Users can be Users, Secretaries, IT, Drivers, or Administrators.
* Users need to be able to sign up, login, take online classes, take practice tests, view their information (training record, practice test scores, etc) and sign up for training.
* Drivers need to be able to view their schedule, and modify or delete training sessions.
* Secretaries need to be able to make appointments for users, and sign users up.
* The Administrator needs to be able to download everything from the database in a readable format, disable training packages, and get notifications from the DMV.
* IT needs to be able to modify User information.

### 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?*

* I am assuming that every User will have access to a mobile device, tablet, or computer that can run web applications that use JavaScript. I am making the same assumption about other parties, like Drivers and Administrators.

### 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?*

* DriverPass is a small company (it has only 10 drivers available). The budget will not be enormous.
* Adding packages will require a developer, which might be frustrating for the Administrator.
* The practice test format does not allow for longer format answers.

### 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.*

A screenshot of a computer

AI-generated content may be incorrect.