# 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, would like to implement an online and in person driving aid to help prospective new drivers prepare for their drivers test. This aid will be in the form of practice tests, information, and in person driving lessons that take place through a web based program.

### 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?*

* The DriverPass program should be accessed online from anywhere.
* Online classes, tests, and in person driver tests should be provided through the program.
* The client wants a reservation system in place to book one of currently three available packages as well as being able to schedule driving tests.
* The system needs to provide the ability to add, remove, and modify the available packages.
* Role access will need to be implemented so all the users of the program are only allowed the minimum amount necessary to complete their job tasks.
* User account management will need to be available so things like forgotten passwords can be handled.
* The program needs to be able to access the DMV to obtain new rules, policies, and sample questions/tests to keep the program up to date with any changes.
* Test progress, personal information, driver information, student and driver photos, will all need to be accessed.
* Test progress will need to be displayed as pass, failed, not taken, as well as the time the test was taken and the progress of completion.
* Driver matching and traceability need to be available to show which driver is teaching which student on specific days and to prevent double booking of drivers.
* The system needs to be cloud based so that storage and security can be handled outside of the organization.

### 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 program should provide online classes, practice tests, and driving instructor scheduling to users.
* Practice test and online classes should provide progress tracking to display which of them have been completed, started, passed, or failed.
* Users need to have the ability to schedule and change class times/dates.
* Employees will need to be able to schedule drivers to students.
* The packages offered need to be able to be added to and or modified.
* Driver notes need to be viewed by employees and students.
* System changes need to be tracked and only changed online to prevent information redundancy.

## 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 project should be in a web-based environment per their request.
* Will have to update frequently to combat bugs, potential security breaches, and update the system with the most current DMV guidelines.
* The system should run quick enough to handle multiple user requests, test taking/grading, and video playback.

#### 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?*

* Since the platform is web-based, any platform will be able to run it.
* The back end will need a database to store student information, driver information, appointments, test scores, tests, and learning material.
* The back end will be handled with a cloud service to handle backup and security.

#### 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 be identified by their login credentials, likely an email address and their password.
* The inputs will need to be case sensitive to handle all types of email addresses as well as enhance security measures.
* An admin should be notified in the instances of too many login attempts.

#### 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?*

* Adding, removing, and modifying a user should have the ability to be done without changing code. The admin should be able to adjust these quickly and easily.
* User will need to have the ability to make changes to their own account information.
* With the system being web-based, platform updates won’t be an issue. System level updates will be handled by the programmers with patches and updates per the clients requests.
* The IT admin will need full access in order to have the ability to add/remove accounts of employees.

#### 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 user will need a username/email address and a password to log in.
* HTTPS will be utilized to ensure a secure connection between the student and the system.
* Brute force type attacks will be handled with a failed attempts procedure where an account will be locked and the administrator will be contacted after a predetermined amount of unsuccessful login attempts.
* If a user forgets their password, a “forgot my password?” option will be available for a student to reset their password. The reset password link will be sent to the email address provided upon account creation.

### 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 authenticate and authorize login attempts/requests.
* The system shall be web-based
* The system shall provide instructional material downloads for offline use.
* The system shall track student activity such as reservation creation, modification, or cancellation.
* The system shall display three course packages. Future updates will allow the modification and removal of these packages.
* The system shall display the most up-to-date DMV requirements and information.
* The system shall confirm student details such as:
  + First and last name
  + Address
  + Email address
  + Phone number
  + Payment information
* The system shall show exam progress and scores.
* The system shall allow the addition and removal of practice exams and learning material.
* The system shall allow password resets.
* The system shall display instructor feedback.
* The system shall allow students to be contacted by administrators and instructors.

### 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 should have a homepage with links to practice exams, learning material, driving instructor information and reservation, an account registration , account information , DriverPass contact.
* The DriverPass owner and IT officer will need full access to maintain user accounts and passwords. The secretary will need access to the drivers and their schedules and have the ability to add, cancel, or modify appointments. Students will need to create and access their account, access learning materials and practice exams, make, cancel, or modify a driving reservations.
* With the system being web-based, any user will be able to interact with the interface despite the device they choose to access it with.

### 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?*

* DriverPass will be able to be accessed any time of day and anywhere.
* An application will be developed.
* DMV requirements and guidelines are current.

### 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?*

* Network connectivity; a user may not be able to access DriverPass on the go if they aren’t getting good reception.
* DMV guidelines and requirements not being updated in a timely manner.
* Budget. One wasn’t outlined in the interview but, it will surely cause limitations.

### 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.*

