# 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?*

* Enter a mostly empty market for driver training.
* Train and provide lessons to help customers learn to drive, pass DMV driving tests and generally making roads safer.
* Ensure the site has the most updated training and policies.
* Link with the local DMV for incorporation of future changes.

### 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 wants a system for customers to take online tests and road tests.
* Be accessible from anywhere online and make reservations by phone call or online.
* Identify driving instructor and customer, displaying driving instructor photo and student photo.
* Display the following: Online test progress, special needs if required, driving instructor notes and student information.

### 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?*

* Be downloadable for offline use.
* Updates the driving instructor reservations status.
* Push notifications to the instructor and the customer.
* Show test progress, score, status (passed/fail/in progress) and times taken.
* Input where the student/secretary fill in their general information. (name, address, payment)

## 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?*

* Should be compatible with Web-Browsers. (Edge, Safari, Chrome)
* Should be compatible with Mobile Platforms. (iOS, Android)
* Should be compatible with PC based OS’s (Windows, Mac)
* Speed must be fast enough to process updated information and display it to the user via Web-Browser or Mobile Platform.
* System updates need to happen as needed. (Security updates, Crash fixes)
* Product updates need to happen as new regulations/laws that effect the drivers are enacted.

#### 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?*

* Initial offline setup should be setup for most popular OSs to keep complexity and cost down. (Windows: C++/kernel is in C, Mac: Objective C/kernel is in C)
* Possible future expansion to other OSs (Unix, Linux)
* Setup for Mobile Platforms (iOS: Objective-C/Swift, Android: Java)
* Back end can set be up for all the data to be on the web browser.
* Mobile Platforms and PC Applications can pull the information from the web browser and port it into the 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?*

* After payment is received and processed, users are given a specific password and choose their own username.
* Users will have to log in with their username and password before gaining access. (case-sensitive)
* Possible use of two factor authentication. (email/text of a code for user to enter)
* After a predetermined number of failed attempts of signing in the system will inform the administration, answer security questions and request a password reset sent through users stored email.

#### 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?*

* Administration will be given ability to make changes to user accounts via database. (add, update, remove, delete accounts)
* Platform specific updates will have to be “rolled out” per the OS. (Windows, iOS, Android, Mac)
* Product updates “rolled out” as changes made to DMV laws/regulations.
* Any substantial updates or equipment repair, requiring system down time, must be done expediently and during non peak hours.
* IT Administration will need access to source code. (Modifications, addition of new features, addition of DMV laws/regulations)

#### 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?*

* System should perform back ups daily
* Web Browser logins pages should be secured by digital certificates before login is attempted.
* Logins will be accomplished with user specific usernames and case-sensitive passwords.
* Possible use of two factor authentication. (email/text of a code for user to enter)
* After a predetermined number of failed attempts of signing in the system will inform the administration, answer security questions and request a password reset sent through users stored email.
* Notify user of unsecure connections.
* Notify IT Administration of suspicious or unusual activity. (account hacked, brute force attacks)
* Should an attack be detected the user will be logged out and account will be locked and possible server shut down if the attack is severe.

### 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 will verify and validate user credentials when logging in.
* The system will allow a reset of a password after security questions are answered correctly.
* The system will be updated with any new regulation or laws.
* The system will have documents and information updates between platforms.
* The system will allow information to be modified and shared between platform.
* The system will track the progress of the class and hours the user logged.
* The system will show and track online test progress.
* The system will display user information and notifications.
* The system will downloadable for off line use.
* The system will have a scheduling system for scheduling the driving instructor reservations.

### 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 display interface will provide relevant data to the user. (student information, special needs as needed, course and test progress, notes, instructor/student photo)
* Display interface should be as close to identical across all platforms as practical.
* User interface on Web-Browsers will use standard keyboard/mouse interface.
* User interface on Mobile Platforms will use touch screen based interface.

### 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?*

* Users will know how to operate the platform of their choosing. (know how to use an iPhone/iPad, Android based device, Windows)
* Users will know how to operate chosen platform peripherals. (keyboard, mouse, scanner, camera, printer)
* Users will have access to an internet connection as required for online portions.
* Users will more than likely fail to read the instructions or help messages. (make the interface as intuitive as possible)

### 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?*

* Mobile Platforms typically have less processing power than traditional PC’s so software will have to be optimized across platforms.
* Screen size of Mobile Platforms is typically smaller than traditional PC’s so displays will have to be optimized across platforms.
* Budget and Timeline do not account for any unforeseen setbacks, without this buffer project can fall behind schedule on over budget.

### 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.*

