# 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 is from the company DriverPass. They want a system that allows users to setup training plans to get ready for their Driving Tests. This involves scheduling appointments and keeping track of overall progress.

### 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 the system to allow users to sign up for different training packages, schedule in person driving lessons, and manage progress. It will also allow the company employees to be tracked in regards to who they are out with providing lessons and allow the secretary to schedule driving lessons as well. This system will hold user data, show progress in the online practice tests, show notes that the company driver has, as well as special needs for the student.

### 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?*

* This system will be able to allow users to sign up for different training packages, schedule driving lessons, and complete online training. It will allow company employees to setup appointments, add notes about a user they are training, and check progress of the students/users. Some measurable tasks will be research and basic planning, building the interface, linking the database to the interface, adding the logic to run it all, then testing before release.

## 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?*

* This system will be web based with the ability to download reports and information to work offline. Data within the system can only be updated when connected to the internet. It will be connected within a cloud system so all backups and redundancy are abstracted away from the DriverPass system. It will run as fast as the internet of the user can handle, but it is not mission critical to have the best performance possible.

#### 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?*

* This should be able to run in most web browsers, with mobile compatibility built in. The backend should have a database to hold user accounts as well as the appointment schedules. There should also be a connection to the DMV system in order to keep all information within our system up to date.

#### 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 will have a permissions tag to distinguish who they are and what access they should have. This will be separated into company admin, IT personnel, secretary personnel, drivers, and students. The system should inform the admin of a problem if there are multiple attempts to access accounts, when there are suspicious attempts to access accounts, or if there was major changes to DMV guidelines that the system is not built to automatically handle. The online test taking should be accurate as to the progress the user is making. It shouldn’t make them retake sections unless they did not do well or they choose to go back.

#### 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?*

* Right now changes to package types are limited to enabling or disabling the three built in packages. There are plans to add a system to add or remove those in a future release. There should also be the ability to have the learning system connected to the DMV’s networks for updated driving rules. This should handle most changes but if there are major changes the admin should be notified. The system should update seamlessly, with possible downtime in off hours if needed. This will prevent any unintended behaviors when updating. The IT admin should be able to enable or disable packages, monitor accounts for security issues, and reset passwords for anyone. They should also be able to remove old user accounts from the database.

#### 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 just needs an email as the username and a password to sign in. The connection for the data exchange between the client and server will be on an https connection, with data encrypted on each end as to never send plain-text between the client and server. If there is a brute force attack on any account, the admin and IT admin should be notified, and the account should be locked until the user calls our support. The account should lock after 5 attempts to get into it. If a user forgets their password, they need to have the ability to click forgot password which should send an email to the email on file and have them answer a security question. If this does not work, they need to be able to call us and verify themselves. There should also be a marker on each reservation that keeps track of all modifications to it and who did those changes when. This needs to be printable.

### 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 each user when they log in
* The system shall let users modify or create appointments for driving lessons.
* The system shall allow the instructors to add notes to each reservation.
* The system shall allow the secretary to make appointments for users. They should be able to modify them as well.
* The system shall let users take online lessons and track their progress.
* The system shall have the ability to upload photos for the user accounts.
* The system shall track when drivers are out with students.

### 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 have a main landing page that will show differently based on the type of user you are. If the user is the admin they should have the ability to see every user account, the test progress within each user’s account, the times they are scheduled to have driving lessons and the reports of each drive with an instructor. All of these features will have subpages to keep the main screen less cluttered.
* The instructor landing page will have a list of who they are scheduled to drive with and when they are going out. It should also have a subpage to allow them to add comments and record start and finish times.
* Secretaries should have a landing page that allows them to check user accounts and add user accounts. The subpage to add a new account should show fields to enter all the correct information needed, then a space that shows a calendar to schedule driving times if needed at that time. The subpage for all user accounts will have a search for a certain user, and should have space for the secretary to make changes the user might request along with scheduling driving appointments if needed.
* The users should have a landing page showing the progress they are making through the online test, their information, any upcoming appointments, and any notes from previous appointments. There should be a subpage to take the test, a subpage to review learning materials, a page to edit their information, and a page to make or modify their appointments.

### 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?*

* Some assumptions made are how to address certain security concerns. These are addressed by have a cloud system might operate and track user authentication. Another assumption is that the cloud system used is reliable. This can be tracked based on their SLAs (Service Level agreements) but assumptions need to be made. Some design assumptions are what some subpages might contain. We are also assuming that users have compatible devices and browsers. We can create this for most people but there could be users with outdated hardware or uncommon browsers.

### 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?*

* Some limitations are the fact we can’t design this for every web browser and device that exists. We can create this for the common web browsers like google chrome, safari, firefox, and Microsoft edge but some features might not work if the user is using a different than these. We also assumed that the user is on a more updated system. We cannot have full compatibly for all systems based on our 14 week time constraints.

### Gantt Chart

*Timeline

Description automatically generated*