# 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?*

* Create a better Drivers Education course to help train students for their tests at the DMV
* Online training courses, practice tests, and requestable on-the-road training

### 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 their system to be accessible online and offline.
* The team is worried about duplicate entries and changes from offline work. The cloud was suggested to mediate this issue
* Security is important, and the owner wants to have full control over access, with different rights and roles for users.
* Client wants tracked data changes. When the data is modified, it tracks who has changed it, and what was changed.
* Create reservations identifying the customer, driver, vehicle, and time.

### 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 system should be able to show;
  + Online test progress
  + Student information; first and last name, address, city, state, zip, phone, email
  + Driver comments and notes
  + Any special needs and requirements
  + Driver photo and Student Photo
* System should be accessible offline and online
* System should stay up-to-date on;
  + Current test progress
  + Schedules
* Allow students to choose from packages, and allow for the owner to disable packages
* Students can take tests online, and the system will keep their progress up to date, and show what they have completed;
  + Test Name
  + Time Taken
  + Grade
  + Status
    - Passed, Failed, In-Progress, or Not Taken

## 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 web-based, preferably run over the cloud
* The system needs to be fast, and responsive, seeing appointments, available drivers, and test scores in real time.
* The system should be functional on all current web applications
* The system should be updated when needed, with scheduled downtimes.

#### 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?*

* Flexible System UI for desktop or mobile access
* System will run on Windows, and utilize cloud services
* Web front end is supported on current, popular browsers
* Backend requires a database to store user information and system logs

#### 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?*

* System uses roles to differentiate students, drivers, staff, or admins.
* Passwords must be case-sensitive
* System will send an error report daily, and notify administrators of any critical errors immediately

#### 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?*

* Web application be kept up to date with updating browsers
* Administrators need to be able to access and modify 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?*

* Users require their email and their corresponding case-sensitive password required for user login
* Multi-factor authentication can be used for secured data exchange
* Accounts suspected of being “brute forced” will be locked after multiple unsuccessful login attempts, and require a password reset.
* Users need the option to reset their passwords through email linked to the account

### 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 validate multifactor authentication after login has been validated.
* The system shall lock customer accounts after multiple incorrect login attempts, and then require the user to reset their password.
* The system shall update backend order information based on user inputs.
* The system shall track both available and scheduled appointments to avoid duplicate bookings.
* The system shall schedule appointments in response to customer orders.
* The system shall allow administrators to remove users.
* The system shall allow the student to take driving knowledge tests and report the test results of the tests taken.
* The system shall allow the student to make appointments to drive with instructors.
* The system shall allow the driver to leave feedback and notes for the 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 user interface must be flexible, and change based on the format of the device (desktop or mobile)
* The interface must have space for a logo, test progress, user information, driver notes, special requirements, driver photo, and student photo
* Customers should be able to access and edit their account information, view their tests, orders, appointments, and package information.
* Administrators require access to scheduling and appointment making, and be able to view edit history, add and remove users, edit profiles, as well as all other user tasks.
* The users will interact with the interface through a web browser.

### 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 have access to internet and an email account.
* Assumption of a secondary device able for multifactor authentication.
* Knowledge of internet navigation and accessing websites.
* API to connect with any changes DMV may make to requirements.

### 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?*

* Time: 15 weeks
* Frontend design must be compatible with all popular web browsers
* Browsers and DMV guidelines may be updated/changed at any time

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