# 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 purpose of this project is to create a system that allows individuals wishing to take online classes and practice tests to better help people with their driver’s license test. The system also will provide on-the-road training that users can sign-up for. DriverPass, the new client, wishes for this system to help students studying and training for their drivers test at their local DMV because there are too many students who fail or scrape by due to a lack of practice and studies prior.

### 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 this system to be able to help students better prepare for their driving tests. The system will allow students to take online classes and tests. They will also be able select various packages to help them practice driving with an instructor and provided vehicle. This system should help reduce the number of students who are struggling to pass their local DMV driver’s tests. This system will need a user interface, online classes, online tests, and the ability to track their progress. They will need to let staff have their own levels of access from registering new first time students to changing their passwords if they forget. The system should be used on the cloud to allow for an easier online and offline use without the client needing to worry about backing up files and the system themselves.

### 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?*

* Once this system is completed the students will have access to whichever package they purchased to allow them to take online classes that are updated as frequently as the DMV updates theirs. The students will be able to pick drop-off and pick up locations by their instructors. Once completed the system will show the users:
  + Online Test Progress, Student Information, Driver Notes, Special needs, and Drive and student photos
  + Online Test progress will show not taken, in-progress, passed, failed
  + Ability to work online and download documents for offline sue from any computer or mobile device
  + Track which driver and car is match to which students
  + Ability to reset passwords instantly if forgotten
  + Create and disable current packages being offered
  + Create, cancel, and modify appointments online

## 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 should be web-based
* Website should run at a fairly fast speed to ensure requests from client and user sides can communicate quickly
* Website should have routine updates and maintenance conducted to fix any errors, bugs, or glitches that the system may encounter over time. Maintenance should not be conducted during peak use times and be as quickly as possible to avoid inconveniencing users
* DMV guidelines and updates should reflect onto the website as quickly as 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?*

* The website should be able to run on most desktop OS and window browers. Chrome, I.E., Firefox, Safari, Edge
* User Interface (UI) should be able to adapt to mobile browsers with ease
* The backend will require a database to store any and all 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?*

* Session cookies should be utilized to differentiate between users
* System should be able to differentiate between users email and user password.
* User passwords will be case-sensitive; other inputs should not (unless specifically required)
* System admins should be notified of excessive invalid login attempts or critical errors encountered

#### 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?*

* The system should allow for modification to the users, add/remove/modify, on the backend without changing any of the code
* The web application will need to remain up-to-date with any updates the browsers will encounter
* IT admins will need basically a full access. To the database, servers, users accounts, and employee accounts

#### 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?*

* User logon will require email and password. Optional 2FA via SMS, email, or authenticator app
* Use of HTTP to ensure data exchange between the client and the servers are secured
* Admin should be notified of a “brute force” hacking attempt and user account locked after 3 failed attempts
* If the user has forgotten their password, they can prompt the “forgot password” option to have a temporary password sent to their registered email
* Lock accounts require users to contact admins

### 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 the users email and passwords when logging in
* The system shall prompt and verify 2FA methods if enabled
* The system shall lock user accounts after the failed number of login attempts have been met (3)
* The system shall allow users to reset and change their passwords
* The system shall confirm user account details: First and last name, address, payment information, phone number
* The system shall confirm which type of user is logging on: Admin, Instructor, Student
* The system shall display the various packages the client wished to offer
* The system shall allow the client to disable, modify, or change the packages being offered
* The system shall track available and unavailable appointment times, dates, and driving instructors
* The system shall track student test progressions
* The system shall notify administrators of any updates or changes to DMV rules and regulations

### 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.)?*

* UI will need to be web-based and have the ability to adapt to mobile and desktop/laptop environments
* Students will have access to their homepage, grades, exams, purchase history, driver reservations
* Administrators will be able to access student account modifications, addition, or deletion.
* Admins will be able to alter packages and deals being offered and be able to access the schedules for drivers and students

### 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?*

* We can assume that most users will have access to the internet and some form of desktop or mobile technology to access the website
* We can assume that DMV regulations will be updated immediately or automatically if changed
* We cam assume that students will have their own email and access to it

### 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?*

* The system will require internet to accurately update user information and progress system wide
* 15 weeks and 3 days to complete the project
* Clients budget for the project
* Only 10 drivers and cars initially

### 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.*

