# A

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# CS 255 Business Requirements Document Template

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 product's purpose is to train customers to help them pass their driving tests. The client is Liam, owner of DriverPass, and his IT officer, Ian.

### 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 system should be able to allow users to take online classes and practice tests. They also want it to be used to schedule reservations for driving lessons. The problem it’s trying to fix is the void in the market when it comes to training students for the driving test at their local DMV.
* The system must offer tests, practices, and options to reserve in-person driving lessons. Liam also wants to access data online from any computer or mobile device while offline.

### 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 allow users to navigate the app or site to access online classes. It should also allow them to schedule in-person lessons by going to a section that will enable them to choose the date, time, and instructor they want. For the PO it should allow for them to have access to who can update and be on the app as well as taking off those that have been fired. Data should also be able to be accessed online as well as offline.

## 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?*

* Web-based environment
* Load times should be an average of 1-2 seconds
* The system should be updated often to ensure any bugs or breaches are fixed.

#### 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 platforms the system should run with are Internet Explorer, Chrome, Firefox, Safari, Etc.
* The back end requires a database to store information for the user and system.
* The back end requires a web server to process and manage all requests and responses.
* If the site can be accessed on a mobile device, it should be able to fit the screen to make it more viewable and usable.

#### 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?*

* The system can distinguish between afferent users by their email and password.
* Case sensitivity is a must for user protection regarding their passwords.
* If the user is encountering a issue/problem the admin can be notified of the problem automatically by the number of times the error occurred, also by the user requesting help through a troubleshooting/help button.

#### 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?*

* System users should be able to create, add accounts, and modify their information. This feature should be available to customers and staff.
* Users can also delete/remove accounts as needed.
* Any code needed to make sure these changes can be made should already be part of the system code.
* Any updates to users' browsers will not affect back-end code but if this does happen, patches/updates can be sent out to rectify any issues.
* The IT admin team will need full access to the systems to make updates and fix any bugs. Also, IT can help with updating passwords and unlocking 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?*

* Users must have unique usernames that can’t be duplicated with unique passwords.
* Network requests process through HTTPS, making it a secure connection and communication.
* Implementing cryptography to protect sensitive information given to start an account.
* Limiting unsuccessful logins to (5) would lock the account, preventing hacking based on password guessing. Once the account is locked, IT will be informed so that the following steps can be taken to unlock it.
* Reset requests can be done by the user to change the password. To protect the account and user information passing a set of verification is required.

### 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 require user authentication and authorization. Verifying user credentials at login helps prevent information from being taken.
* The system shall provide reporting to the IT team on system performance.
* The system shall allow for user password resets.
* The system shall provide users with dates and times for in-person instruction.
* The system shall display grades for exams and tests and provide feedback.
* The system shall display instructor feedback from in-person lessons.
* The system shall have a mailbox only to allow for contact from instructors and admin.
* The system shall ask the user for personal information to start the account upon registration.
* The system shall also ask for payment information to pay for lessons and packages.
* The system shall track all reservations for instructor-led driving lessons to set reminders and cancellations.

### 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.)?*

* For the interface, it will include the following,
  + Main Page with business info
  + Account sign-up/sign-in page
  + One-on-one driving lesson reservation sign-up and calendar
  + Course material/course evaluation page
  + Student Information page
    - This page will have test grades and progress, personal contact information, instructor notes, and payment information.
    - When selecting the Test Tracker page, the information on this page will include the test name, when it was taken and finished, the test score, and whether it was completed.
    - The instructor notes page would contain a calendar with start and end times on the dates selected for lessons and comments on those days for the students on their driving.
  + DriverPass contact page
* The interface users and system access levels:
  + DriverPass owner – complete access over all accounts and sight
  + DriverPass IT officer – complete access over all accounts and sight
  + Customers/Students – access to create personal accounts, access to learning modules, access to schedule, cancel, and modify driving lessons with instructors.
* The system is web-based, so the interface will occur through a browser on a desktop or mobile/tablet.

### 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?*

* The system will be available every day so that exam grades and scheduled driving lessons can be recorded.
* The DMV guidelines will be updated constantly and change if anything new happens.
* The users, being younger, will have the latest technology and most likely use their phones to access the site. Eventually, the call for an app will be heard.

### 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 is needed to run the application. Without connection, data and content like study material, reviews, and lesson reservations cannot be created or updated.
* Electricity is an obvious one that would keep the user and staff from accessing.
* Budget and staffing limitations will determine if the system updates can be done promptly.
* Limitation when it comes to keeping the system up-to-date with DVM guidelines. Changes might not be able to be updated quickly when change on the DMV side.

### 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.*

