# 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?*

* *DriverPass is a company that is working to help students prepare for their driver’s test.*
* *They wish to create a system that provides online practice exams and schedule in person driving lessons.*

### 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 noted there was a high failure rate new drivers taking their driving test and have come up with a new solution to lower the failure rate.*
* *Ability to create/modify/post/un-post practice exams and lesson packages.*
* *Creation of user accounts and creation of an administrative back-end.*
* *Payment Processing*
* *Scheduling of in person driving lessons.*
* *Progress tracking for students for instructors.*

### 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?*

* *DriverPass aims to have this system assist with lowering the failure rates of the driving test.*
* *They aim to have this system have a user friendly interface where students can easily schedule driving lessons, complete their online practice exams, and view their progress.*
* *This system will need to be robust with as few major bugs as possible as well as provide strong security measures to protect user data.*
* *This system will need to be scalable in order to accommodate for future growth and new features.*

## 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 need to be web based and and should be compatible with various popular web browsers such as Chrome, Edge, Safari, Firefox, and the mobile versions of these browsers as well.*
* *The response times for this system should be reasonably quick loading pages and completing operations within just a few seconds.*
* *The system should be updated on regularly scheduled intervals, but also should incorporate as needed updates for bugs fixes and Security updates.*

#### 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 system should be compatible with all of the major operating systems such as Windows, MacOS, Linux, and Chrome OS. The differences between different operating systems should be negligible.*
* *The system will need to be hosted on a reliable web server such as Apache and a server side scripting language such as Python.*
* *The most ideal way to host the system should be utilizing a cloud platform such as Microsoft Azure which will allow for easier data management and assist with scalability.*

#### 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 will distinguish between different users by utilizing email addresses that need to be verified and require unique, case sensitive, complex passwords.
* The system should notify the admin of any failed login attempts, system issues, system connectivity issues, and any general unusual activity such as an unusually large increase of traffic.

#### 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 the IT admin to add, remove, and modify user accounts through an interface only admins can access.
* The IT admin should have the ability to create/modify user roles and assign user roles.
* The IT admin should have ability to complete backups of the system to be able to revert back to in case of any issues.
* The system should be scalable in order to ensure compatibility with new updates and allow for new features to be added as needed.

#### 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 should be able to authenticate using a username and password.
* A multi-factor authentication system should also be implemented such as sending a text message to the user’s phone an entering a unique code.
* Encryption of user data using SSL or TLS to protect stored user data.
* If there is a brute force hacking attempt, there should be an operation in place to lock the user account and notify the IT admin of the activity.
* If the user forgets their password, there should be an operation in place to send a verification code to the user’s phone via text message or sent to the user account’s email.

### 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 should validate user credentials when logging in*
* *The system should allow for users to create and manage their accounts*
* *The system should allow for users to make payments*
* *The system should allow for the IT admin to add/modify/remove user accounts and roles*
* *The system should allow for offline access to training materials and tests.*
* *The system should provide access control based on the user role*
* *The system should integrate with the DMV for new policy updates*
* *The system should allow for instructors to post grades and track their trainee’s progress*
* *The system should allow for the user to view their progress*
* *The system should allow for the creation/management of different packages*
* *The system should notify the IT admin for any system issues*
* *The system should allow for the downloading of various reports*

### 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 should be able to be usable on both desktop and mobile devices*
* *The user interface should be user friendly and easy to use*
* *The user interface should be visually appealing*
* *There should be different user interfaces based on the user’s role*
* *The student should have access to view/manage their account, access their training materials and practice tests, and should have access to to view their progress.*
* *The instructor should have access to input grades and reviews for the students.*
* *The IT admin should have access to modify user roles, complete backups, perform updates, modify user account, and modify training packages.*

### 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?*

* It was not addressed how the system would actually be integrated with the DMV but I am assuming that I will have access to APIs that will allow for this integration.
* It’s assumed that all users will have access to fast modern hardware such as newer desktops/laptops or mobile phones/tablets when this may not be the case.
* It’s assumed that every user will have at least a basic level of computer literacy to navigate the website.

### 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?*

* *A limited budget can affect the development time, what is able to be completed, and quality of the work.*
* *There may not be enough time to complete all of the desired components within the required timeframe.*

### 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.*

[Insert chart]