# CS 255 Business Requirements Document

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 objective of DriverPass is to establish a comprehensive online system that offers users access to driver education services and resources. The system's objective is to facilitate the efficient preparation of students for driving exams by means of online learning modules, practice tests, and on-road instruction. The ultimate objective is to offer exhaustive driving test preparation in order to increase the number of students who successfully complete their exams. DriverPass requires secure, role-specific access to the system from a diverse array of devices.

### 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' objective is to address the high failure rates for driving exams by closing a market void in driving instruction through the development of an effective training program. The proposed system will enable users to register, schedule driving sessions, access instructional materials, and track their learning progress. The system's components consist of databases that store user and lesson data, user interfaces for both staff and students, and security elements that control access and safeguard private data. The necessity of a cloud-based solution will ensure the system's scalability and flexibility.

### 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?*

• Users will be able to register, securely log in, and access instructional resources and services through the system.  
• Provide assistance to a diverse array of user responsibilities, including administrators, secretaries, IT officers, and clients (students).  
• Provide clients with the opportunity to select and purchase training programs, schedule driving instruction, and take practice exams.  
• Provide secretaries with the ability to rescind and modify appointments in person or by phone.  
• Enable administrators to supervise lesson plans, monitor user activity, and generate reports.  
• Guarantee that IT officers are responsible for overseeing system-wide access controls, password resets, and data security.  
• Make sure to update the team on any changes to state DMV requirements.

## 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 DriverPass system is accessible online in real time via PCs, tablets, and cellphones. The system must maintain its rapid response time, namely the ability to address user inquiries in less than two seconds. We should implement biannual system updates to improve security, performance, and features in response to user feedback and changing requirements.

#### 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 program must be compatible with the most widely used web browsers (Chrome, Firefox, and Safari) and mobile operating systems (iOS and Android). Scalability requires the incorporation of secure databases for user and training data, as well as a cloud-based backend. In order to enable deployment across a variety of operating systems and devices, the system's foundation should be based on platform-agnostic technology.

#### 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 must accurately differentiate between a variety of user roles, including administrators, secretaries, customers, and IT officers. All input fields, especially those used for user-specific data entry and authentication, must adhere to case sensitivity. The administrator should be notified by the system through notification alerts and error records in the event of illegal access to sensitive regions, unsuccessful login attempts, or inconsistent data.

#### 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 must allow administrators to modify course schedules, modify training materials, and temporarily suspend services without necessitating code modifications. It must be adaptable enough to accommodate system enhancements and software upgrades without compromising data integrity or requiring substantial redesigns. The IT administrator will have access to all of the system's components for maintenance and troubleshooting, which will simplify the process of data administration and user role changes.

#### 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?*

• All users will be required to log in to the DriverPass system using secure credentials, and we will enforce rigorous password regulations. In order to guarantee the encryption of data exchanges between the client and server, the system will implement secure HTTPS connections. In order to prevent brute force assaults, the system will lock accounts after multiple unsuccessful password attempts. Email authentication will enable users to reset their credentials in a secure manner.

### 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 must securely verify the user's credentials upon login.  
• Clients will have the ability to schedule, modify, and terminate classes online through their personal accounts as a result of the technology.  
• The technology would enable users to monitor their progress over time and take online practice assessments.  
• The system will allow secretaries to manually record in-person or phone reservations.  
• This system will enable IT officials to reset passwords, unlock accounts, and modify user duties.  
• The system is required to maintain a record of all reservations, cancellations, and modifications for the purpose of auditing and reporting.

### 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 web-based system interface will be convenient for users to navigate, as it is compatible with a variety of devices. The navigation should be user-friendly for customers to schedule sessions, obtain training materials, and monitor their progress. Dashboards enable administrators to oversee appointments, generate reports, and manage packages. Secretaries will have access to customer data and booking tools, while IT officials will have a distinct panel for managing user roles and permissions. The interface's straightforward and responsive design should facilitate effortless navigation for both desktop and mobile users.

### 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?*

• In order to engage with the system, customers must possess an internet-connected device.  
• We expect the majority of the system to be cloud-based, which will simplify access and require less infrastructure maintenance.  
• A minimal level of technological literacy is necessary for consumers to effectively utilize the web-based platform.

### 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?*

• Development support may be necessary for the introduction of wholly new features, and the system will be subject to limitations in terms of customization. Funding constraints may impede the implementation of state-of-the-art technologies for system functions. The first release may not be able to include all of the proposed features due to time constraints, which would require gradual improvements.

### 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.*