# 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?*

* This project focuses on the development of a system for DriverPass that seeks to introduce students to online practice exams and on-road training to increase their prospects of passing driving tests.
* Client, DriverPass, was looking for comprehensive and engaging learning opportunities for increasing success rates for students’ license passing tests.

### 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 found that more than 65% of students fail driving exams because they study only past test questions without practical experience. The system should bridge these gaps in both theoretical and practical solutions: online practice exams and on-road training, respectively.
* System requirements:
  + online exam platform for theory-based questions
  + management portal for instructors and admin staff to track student progress
  + scheduling and booking system for practical on-the-road training
  + a student portal to access practice exams, training scheduling, and progress tracking

### 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 permit students to take the practice exam online, track their progress based on their performance in these exams, arrange and manage on-road training with instructors.
* The system should permit instructors to manage profiles of students in terms of progress and altering student schedules, provide feedback about students who have taken practice exams, and on-road training.
* The system should permit administrative staff to configure the setting system wife user access.

## 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 accessible both via web-based platforms and mobile applications.
* The response time to access either practice exams or book sessions should not exceed 3 seconds. It allows updates of new practice exams and training sessions on a weekly basis.

#### 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 is to be compatible with such operating systems as Windows and macOS for desktops, Android, and iOS for mobile use.
* The back-end shall use a relational database such as MySQL or PostgreSQL for user data storage, exam results, and training schedules.

#### 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 should log in all user data accurately, including exam results and training progress.
* Credentials entered by a user, particularly passwords, should be case-sensitive.  
  The system should notify the admin of any unusual activity or errors such as incorrect attempts at logging in.

#### 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 be flexible to let the user profiles be modified without much ado, for instance, addition or removal of students/instructors.  
  It should be easy to adapt the system for future platform updates-eg, iOS or Android versions.
* IT administrators should be granted the ability to modify the system, including user permissions and database management.

#### 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?*

* The user should log in with a secure username and password. Multi-factor authentication should be implemented in the system for enhanced security.
* Data exchanged between the client - user and server should be over HTTPS.  
  It should lock the account after five failed login attempts and send a notification to the admin.
* The system should allow one to securely reset a forgotten password, either through e-mail or SMS verification.

### 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 authenticate user credentials upon login.
* The system shall enable students to undertake online practice exams.
* The system should provide real-time tracking of student performance on practice exams.
* The system should allow students to book and reschedule on-the-road practical training.
* The system will allow instructors to view student progress and provide feedback.
* The system should provide admin staff with the facility to generate reports on student performance and system usage.

### 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 system's interface should be web-based and accessible to students, instructors, and administrative staff via web browsers.
* Students will interact with the system through a mobile app or web portal for taking practice exams and booking training sessions.
* Instructors will monitor progress and give feedback through a web portal.
* Admin staff will access a backend portal to manage users, system settings, and reports.

### 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 users will have access to the internet and will use modern web browsers or mobile devices to interact with the system.
* Students, instructors, and administrators use basic online interfaces and can easily navigate the system.

### 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 not include real-time GPS tracking for training on the road; this can be considered in future phases.
* The project may be bound by time, for example, to deliver the first phase of the system, that is, online exams and basic scheduling, within three months.

### 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.*

