# 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 scope of the project encompasses the design of a system for DriverPass that shall be used to book online practice exams and on-the-road training sessions with students. The primary objective is to increase the rate of student success in driving license exams, from which more than 65% presently fail due to limited pre-examination practice. DriverPass Company develops this system to provide their students with more comprehensive preparation and, in turn, enhance theoretical and practical learning. IT staff, management, and customers interacting with the system would be the major stakeholders for this project.

### 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 detected a big problem in how students presently would prepare for the driving exam. Many of them would study past exams in preparation. This is not full preparation at all. The system needs to cover this gap with practice exams-pointing as close to the real tests as possible-and combined training sessions on the road. The system will be designed with the following integral parts: user accounts assigned to students, instructors, and administrators; a database for test results and training schedules; and an intuitive interface for user interactions.

### 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 main purpose of the system is to let students practice for driving license exams online and book on-road training with instructors. The quantifiable goals in this project are: increase the pass rate of every driving student, comfort in working with the system for all its shareholders, tracking user progress by monitoring how well students perform in reaching their wanted outcome-special feedback will be given to them with the help of which they will be better prepared in such exams. Moreover, it will lighten the burden for both students and instructors during training sessions.

## 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?*

* It should be a web application, ensuring smooth running in different environments. In performance terms, the system ensures that no page takes more than 2 seconds to load, and real-time feedback after every practice exam taken. To be efficient and maintain user satisfaction, the system needs to be updated regularly. The platform should be operable with any operating system: Windows or Unix. This calls for backend support by a database to store critical user information and results.

#### 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 able to run on various platforms, both Windows and Unix. The system shall also be interfaced with a strong database that will store the information on students, examination results, and training schedules such that the system shall be able to handle multiple users and huge amounts of data without slowing down.

#### 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's users will include students, instructors, and administrators. Even the manner of access would differ among them. The input to the system should be case insensitive to make the system capable and user-friendly for the students. The system also needs to accurately distinguish its users according to their roles in an appropriate manner that provides timely notifications to the administrators only in case there are any problems at the platform level, such as problems relating to test performance or scheduling.

#### 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 source code itself shall not be subjected to changes in user roles or privileges; these changes shall be made within the system itself. This is as it should be-easy to adapt to platform updates without, or at least with very minimal, manual changes. IT administrators shall have backend access for efficient management of users and system resources.

#### 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?*

* Special importance will, therefore, be given to security concerns in the DriverPass system. For this, it shall permit the user to sign in using a secure username and password. Data exchanged between the client and server should be encrypted to protect against unauthorized access. In this regard, if a user fails to log in after multiple attempts, the account will be temporarily locked, and the admin alerted. Additionally, the system will avail options to users to recover their forgotten login credentials.

### 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.”*

* Concretely, the system shall offer several key functionalities: the credential verification of users upon login; the possibility for the student to take simulated exams that are time-controlled; book driving sessions, performance tracking at the level of the individual. Further, administrators shall be allowed to perform system updates and assign instructors to students, while the instructors update lesson schedules and monitor student performance.

### 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 project's interface should be web-based and responsive on desktop and mobile. Students are required to have the ability to log in, access exams, schedule training, and see their results. The instructors will need an interface for managing schedules and monitoring the progress of students. The interface needs to be user-friendly and hence easy to use for users who have poor technical backgrounds.

### 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 designing this system, certain assumptions were made users will be able to access a reliable internet connection to use this system-it is assumed that only authorized personnel will be performing data changes, and that IT personnel will be available to perform regular system updates or maintenance.

### 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?*

* Some limitations in the design of the system are related to possible budget constraints, which might reduce the number of features to be implemented within the initial phase of the system. The design must consider time constraints since the system has to be developed and deployed within a very short time, which could even limit the complexity in some functionalities.

### 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.*

*A screenshot of a computer

Description automatically generated*