# CS 255 Business Requirements Document Template – Lee Hunter

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?*

* Our Client Driver Pass has tasked us with building an online system that will help them facilitate their high-quality driver training program. The system we build should allow students to connect with DriverPass to receive online education, as well as in-person driving instruction.

### 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 has noted that many individuals who attempt to get their drivers license fail the driving test at the DMV. To our client, this indicates an increased need for an affordable, accessible, and high-quality training program that provides students with the knowledge and skills they need to pass their driver’s test. Our online system will allow DriverPass to provide this service in an intuitive, organized, and convenient manner. It should work as a two-pronged system, with one part that facilitates online courses that educate students in the rules of the road while administering tests to be graded. The second should be a scheduling system, where students can reserve and keep track of in-person driving sessions with DriverPass instructors. Information regarding the student’s personal info, test progress, and upcoming in-person sessions should be contained in a page attached to their user profile

### 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?*

* Online functionality
* Should be built using cloud architecture
* Style of security should be Privileged Access Management
* There should be a system that allows users to register as students. This page will intake the users name, address, state, phone number, credit card info, and pickup/drop-off location.
* There should be a payment page that allows users to opt-in to different DriverPass packages which offer different tiers of services. Privileged users should have the ability to disable/enable these packages for purchase.
* The site should have an online education section which facilitates online courses for students and administers tests. Course/test progress should be able to be tracked
* There should be a system for students/secretary to make online reservations for in-person driving using their personal accounts. The date, time, instructor, company car, and reservation status should all be tracked and displayed within the student’s account/company side tracking page. The company side page should be printable and modifiable by privileged users.
* Include a user profile page that displays important information like online test progress, notes from instructors, special needs, a photo of the instructor/student, and all the student’s personal information.
* A page that displays all the DMVs current rules, policies, and sample questions. This information should be tracked, and any changes or updates should create a notification to be sent to the administrator.

## 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 will need to run in a web-based environment to reach as wide an audience as possible, and for the facilitation of online driving educational courses. The network connection between students, instructors, and DriverPass servers must be stable to ensure that there are no technical difficulties when completing or grading coursework to avoid grading discrepancies. The system should be updated frequently to ensure it scales with an ever increasing userbase, and that it is balancing server load effectively. It would be beneficial to use cloud based architecture for these purposes.

#### 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 must run on a wide variety of web browsers including Chrome, Safari, Firefox, and Microsoft Edge and by extension it should be compatible with Windows, MacOS and Linux. It should run locally on Linux for development. The backend must contain a database to store course as well as student profile information. It must also be able to handle authentication processes for student and faculty logins.

#### 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?*

* We will authenticate users via an email and password system, which will be case sensitive for increased security. In addition each student will be assigned a student ID to more efficiently identify them and access information specific to individuals quickly. Admin should be alerted when there are frequent incorrect login attempts, as this could indicate someone is trying to guess a students information and gain access to sensitive information. Administration should also be alerted if the server ceases to function or when course/grade information is failing to load or be saved.

#### 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?*

* To do this, administration will need a separate function within the system where they can interact with a list of students sorted by ID. This could take the form of an admin page where enrollment is managed. For updates, IT will need access to the server and database to ensure they are implemented correctly. They will also need the ability to run the system locally on Linux for access to backend code.

#### 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 will require an email and case sensitive password to log in. The data exchange can be secured through encryption, ensuring outside parties cannot view sensitive data. In the scenario of a brute force attempt to login, the relevant account should be locked, requiring the student to contact IT for further authentication and a password reset. The same will be required if a student forgets their password, contact IT for further authentication and reset.

### 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 users when logging in and lock accounts after too many failed attempts.
* The system shall allow user to contact administration and It for password resets and technical concerns
* The system shall allow students to view and purchase separate educational packages
* The system shall facilitate online courses and keep track of progress and grades
* The system shall display and update user information
* The system shall notify administration of server failures and unsaved data
* The system shall allow administrators to manage the enrollment status of each student
* The system shall allow administration to schedule in person driving lessons
* The system shall keep up to date with all current DMV rules and guidelines.

### 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 must function as a web-based interface that is compatible with all popular web browsers and operating platforms. The different users will be administrators, IT, students, and instructors. Users will interact with the interface using an admin/user profile to create/participate in curriculum, schedule in person driving lessons, update user information, and manage enrollment.

### 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?*

* Users will have access to a local operating system with an internet connection and web browser.
* Users have an email account
* Users can schedule and attend in person driving courses

### 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?*

* Time limit of 16 weeks
* Budget may not be able to accommodate fulltime IT staff to maintain systems.
* Administration needed to create courses and maintain enrollment and driving scheduling

### 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 diagram of a number of squares

AI-generated content may be incorrect.