# CS 255 Business Requirements Document Template

## 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 client is DriverPass.
* They want to create a system that allows for booking of in-person driver’s education, in-person classroom time, online drivers’ education classes and online practice exams.
* The need for a program that behaves as such is to address the deficiency in the lack of online platforms in which student drivers can practice and book drivers’ education sessions.
* In conjunction with the online classes and practice exams, Liam wants the customer to be able to schedule on-the-road training.
* DriverPass intends to offer a multi-tiered driving package experience, ranging from six-, eight-, or twelve-hour sessions. Package one includes six hours in the car with a trainer, no online access or in-person lessons. Package two includes six hours in the car with a trainer, an additional two hours of driving practice time, an in-person lesson pertaining to the information regarding the DMV rules and policies. Package three contains everything that package two did, plus four more physical hours of practice time driving and access to the online classroom including its content, materials, and practice tests.
* This information must be accessed online from any computer or mobile device.

### 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?*

* The background of the proposed system is provided to address the lack of online education available for drivers’ education students.
* DriverPass wants the user to pick one of the three tiers of programs that they offer and that allows the student to have the applicable driving time, online resources and in-person classroom time that is applicable to the tier that they have chosen. They also wish to be able to modify, add, disable, or delete any tier at any point of time from internet-based connections.
* The ability to download and run reports from any online based system, such as a cellphone or computer.
* The system needs to run off the web only, preferably the cloud.
* Work in unison with the DMV website to receive updates when there have been any changes made to stay the most current.
* Allow both the customers and the secretary to make, cancel, and modify reservations regarding the driving lessons.
* Identify the drivers, vehicles, and times that are available for current reservations.
* Have profiles for both the students and the drivers.
* The ability to reset passwords automatically if a customer or employee forgets their password.
* The student profile should show their online test progress, the ones that have been completed, the ones that are registered along with the test name, time taken, score, and status. This is also applicable to the on-the-road training having spaces for driver’s notes.
* An input form where the student or secretary fills in the students’ first name, last name, street address, credit card information, phone number, and things relevant to the student.
* There should be an option for pickup and drop off locations (the drop off being the same as the pickup) that the student is to choose.

### 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 goals in a system analysis are to identify and understand the inefficiencies in the drivers’ education that are currently offered. The objective of this goal is to provide student drivers with more accessible and detailed drivers education courses that correspond with and maintain the latest DMV rules and policies regarding driving.
* The proposed system would ease the ability to book online, knowing the time, date, and location in which on-the-road tests are being taken, by which student, and by which driver.
* By defining roles within the company and the program, the following accesses and roles will ensure that the program stays running efficiently by limiting what each user can or cannot do. Assigning roles within the program are recommended as such:

1. Providing the owner with full access with no limitations.
2. IT officers have access to roles that allow the maintenance and modification of the system.
3. The secretary having the ability to create profiles for others, while being able to reserve, modify, and cancel reservations on behalf of the customers for phone exchanges as well as the ability to add, remove, disable and modify the current packages offered through DriverPass.
4. The clients themselves having the ability to set up and maintain their own profile via the system, leave notes, be able to contact the company, and reserve, cancel and reschedule their own classes, times, and access points to where the driver will be picking them up.
5. The Drivers having the ability to see their scheduled driving times, dates, and pick-up locations with basic applicable student information.

## 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 cloud-based program should have the capacity to run on any web platform, being a cellphone, computer, or tablet that runs off MacOS, Linux, Apple, or Windows based servers.
* It must have the capability to endure fluctuations regarding the number of people accessing the system at any time without affecting the quality of the system performance.
* Mandatory updates should be provided frequently, as often as weekly but at minimum on a monthly 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?*

* This cloud-based program should have the capacity to run on any web platform, whether it is a cellphone, computer, or tablet that runs off MacOS, Linux, Apple, or Windows based servers.
* The unique accesses and roles within the system should ensure that different users and different accesses within different users are easily distinguished.
  + Because of the different profiles between both students and drivers, plus the appliable documents, a database to both store and manage the user profiles is a must.
* The system must be able to distinguish between the different types of users, the drivers, students, and administrators of the system.

#### 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?*

* Unique identifiers should be used to identify different users and their roles within the system.
* Input within the system should be case sensitive.
* As soon as any error occurs, the administrator should be made aware of the problem.

#### 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 changes, removal, or modification of users and their profiles without having to change any code.
* Updates should be an automated process to ensure that the system is running efficiently with the latest updates, preferably when an update is launched.
* The IT administrator should have full access to all of the system, with the ability to override other with lesser credentials or roles.

#### 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?*

* For user log in, the user will be required to enter a case sensitive password in which they created.
* An SSL, or secure sockets layer should be used to ensure that the connection is secure between the server and the clients.
* If a client forgets their password, they can click “forgot their password” to easily change their password via confirmation with the email address or phone number in which they registered their account with. If the user does not opt to reset their password, the account will become locked after five attempts and the IT administrator will have to unlock their account. This will prevent any attempt at brute force hacking.

### 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 validate user credentials when logging in.
* The system shall manage both student and driver profiles, including personal information and document storage.
* The system shall provide analytics to the students regarding their progress thus far.
* The system shall provide metrics to the owner regarding the progress and success rates of the students within the programs**.**

### 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 needs to be user friendly and easily accessible on multiple devices via a browser.
* The user roles will vary through the interface.
  + Students will be able to update their information in the system, including their telephone number, preferred email address, payment methods, and password.
  + Admins will be able to create new student profiles and set up their initial information. They will also be able to reset passwords in event of being locked out.
  + Drivers will be able to set their availability and cancel driving sessions in the event of emergency.

### 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 IT team at DriverPass has the skill set to create and manage the maintenance of a system of this capability.
* The user must have the basic computer knowledge to be able to browse and interact within a user-friendly environment.
* All users must have internet accessibility, especially those with Package Three.

### 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?*

* Limitations within the design of this system include budget, time, resources and technology.
  + A limited budget restricts both the development and the maintenance of the system, as well as the IT department’s capabilities to uphold it.
  + A time limitation poses an issue as the crunch could result in missed scope.

### 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 white sheet with a graph

Description automatically generated with medium confidence*