# CS 255 Business Requirements Document

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## 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. DriverPass has noticed some given % of students failing the license test(65%). They would like to create a system delivering the capability to practice tests online, and offer in person driving training.

### 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 primary goal of the system is to increase the percentage of students passing licensing exams by offering online testing and in person driving practice. The problem that the system aims to fix is to reduce the percentage of students failing the final exam. The system will require components for students with unique IDs to practice online exams and schedule in person driving practice.

### 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?*

* When the system is completed it will need to be able to handle the Unique ID’s of clients so that they will be able to create an account. These accounts will need to be password protected and capable of storing information such as contact numbers and addresses. The accounts must be capable of interacting with a scheduling system for in person driving, and a system to deliver online testing/exams. The system will also need to be capable of recording exam access and driving records from testing. This will have to be recorded alongside information about which instructors delivered the hands-on training. For payment options the system will also need to be capable of handling transactions involving credit card information.

## Requirements

### Nonfunctional Requirements

#### 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 be widely accessible, so it will require compatibility with online and mobile platforms.
* The system should be rapidly responsive, without excessive load times or lag.
* The system will require robust up-time, cloud environments should be considered.

#### 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 will need to run on common browsers on mobile platforms, and desktop.
* The system will need to be wary of excessive client-side storage when considering mobile platforms.
* Updating mobile platforms can be more challenging than strictly web based platforms.

#### 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 will need to handle Unique User IDs correctly to ensure account integrity
* The system will need to correctly update booking schedules to ensure users are viewing accurate and up to date information.

#### 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 for user feedback or error reporting to allow for the development team to roll out solutions.
* Modifications to the User list, payment information, and scheduling system, to allow for any future 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?*

* Unique User IDs
* Unique passwords following a set character and letter guideline
* Optional 2 factor identification
* Maximum login attempts within a given time period to negate brute force attacking methods
* Location tracking for unusual logins
* Encrypted communication between the end client and server.
* Administrative override for altering User/account information and booking

### 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 allow for the user to choose a plan and payment options
* The system shall allow the user access to differing types of exams
* The system shall allow the user to schedule in person driving practice.
* The system shall allow the user to view past performance on driving tests or exams.
* The system shall allow the user to change payment methods.
* The system shall allow the user to change booking choices.
* The system shall allow the user to change passwords and contact information.
* The system shall allow an administrator full access to change passwords or account and booking details.
* The system shall allow multiple packages to be purchased.

### 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 will need to be capable of function correctly on both mobile and web based desktop platforms.
* The interface will need to be correctly cropped for different platforms and capable of working with a touch screen in the case of mobile.
* The interface will need to be capable of delivering the functional requirements in an aesthetically pleasing, and functional fashion.

### 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 User owns a functioning mobile or desktop device require to access the system.
* The User has basic computer knowledge or skill required to navigate to the website.
* The User does not have any disabilities that would make it impossible or challenging to interact with a mobile based platform(blindness).
* Blind people can't drive.

### 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?*

* Requested Time frame given by product stakeholders.
* Training material or capability of driving instructors
* Budget limitations
* Team limitations

### Gantt Chart

