# CS 255 Business Requirements Document - Tristin Raymond

## 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
* Liam, the owner, wants to take advantage of a void in the market when it comes to training students for their driver's exams
* Liam wants to provide online classes and practice tests, as well as on-the-road training for those learning to drive

### 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?*

* Liam wants to be able to access the system and data from anywhere, either online or offline, and be able to download reports when needed
* The IT department would need to have administrative rights, while normal users would only be able to use functions that have been assigned to their roles
* Tracking information, such as who makes a reservation and cancels it
* Scheduling and booking service for the customers
* Match drivers and cars with the client
* Three package options are available
* Ability to disable a package when needed
* Information gathering/location for the pickup and drop-off for the lessons
* Connected to the DMV to ensure that the training is always up to date
* The system should run on the web, preferably on the cloud

### 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?*

* Upon completion, the site should be a full-fledged scheduling and training location for new drivers
* The system will collect information from the trainee and schedule times based on the packages they chose
* The dashboard will show current progress, as well as upcoming lessons

## 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 needs to be able to support simultaneous online access from many users.
* The data access needs to be fast and reliable, as well as use a cloud-based system.
* The system should be updated as quickly as possible to make sure that all new and relevant information is being shown correctly.
* Reports should be able to be downloaded quickly for offline use.

#### 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?*

* Ideally, the system will be web-based, making it so that any platform can access it.
* The system would likely be cloud-hosted in this case.
* The website will ideally be able to be accessed through both desktop and mobile devices with an internet connection.
* It is unlikely that there will be a way to access the site in an offline mode to ensure the integrity of the site and its data.

#### 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 need to make sure that appointments (times and days) are scheduled consistently, as well as accurately.
* We should be able to track who makes an appointment, as well as who might modify, reschedule, or cancel an appointment.
* The feedback of training and test results would need to be shown accurately for each student.

#### 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 needs to be flexible enough for an admin to be able to make site changes without requiring any major rework of the entire site.
* It would be nice if the site could be able to support integration with the official DMV site in the future.
* Leave room for the possibility of new training in the future.

#### 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?*

* There needs to be some level of user authentication to make sure the person logging in has the correct authorities within the site.
* Passwords need to be banked securely, and in a way that admins are able to change/reset a password if a customer needs.
* There needs to be some sort of moderation level and permission so that only the admins are able to make site modifications, while customers are limited to making appointments and taking the training.
* There needs to be secure payment processing.

### 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.”*

### 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.)?*

* First and foremost, a clean and easy-to-read user interface. This should show course status, test results, as well as lesson details.
* There needs to be the ability to book, modify, and cancel reservations on the site.
* An admin dashboard should show messages, as well as a way to update grades, manage users, and generate reports.
* There should be some sort of information gathering when a customer makes an account, such as name, contact info, payment info, and drop-off locations.
* A way to view any new updates to the curriculum from the DMV.
* A way to print reports for any data that might be necessary about a client.

### 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?*

* It is assumed that all users of the website have internet access, as well as basic literacy when it comes to using a website.
* Cloud services will host the website and handle data and security.
* An API connection to the DMV provides updates to the website.

### 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?*

* There will not be any sort of offline editing. This will prevent redundancy in any of the data backups.
* The system can be customized, but requires the support of a developer.
* Payment services rely upon 3rd-party processing.

### Gantt Chart

