# 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 Driver pass owned by Liam.*
* *The client wants the system to save student driver work progress, make appointments/reservations online.*
* *For users to have the ability to automatically reset passwords if they are forgotten.*
* New drivers shall be able to take online classes to study for their driving tests.
* To take on-the-road training if needed.

### 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 problem Driver pass intends on fixing are student drivers failing their driving tests. The students do not have a fully functional program that allows them to use recourses to study for the driver’s test to pass successfully.*
* The application must be able to measure the progress of each driving student by saying test name, time taken, score, and status. The status should also say if the students passed or failed.
* Every session will be two hours long spreading over the course of three separate sessions.
* The registration should be processed by Driver Pass getting a phone call or a registration form. Then, the customer gives their information consisting of: First name, last name, address, phone number, state, and the credit card number with expiration date, and security code through an online contact form on the web and mobile versions of the application.
* The application shall also include a pickup location from where the customer would like to be picked up from. Also, to ask them for a drop-off location. This will be the spot the client was originally picked up from. This can be done with a simple map API of a map. We can create a section where there is a mid-sized map display that users can interact with to see the surrounding locations.
* The application features driver notes to show any comments the driver left. Also, the lesson times. It should display a table of some sort.
* The users can call or visit the Driver Pass office to schedule an appointment with the secretary.
* A problem Driver pass wants to fix are issues with student drivers failing their exams.

### 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?*

* *To allow more students to successfully pass driving tests.*
* To refer to the DMV so they can be updated with new laws, policies, or sample questions when they are available. The client needs to be updated when this occurs.
* A measurable task that needs to be included are how many student drivers they have helped over a period. This can then be uses on the application to serve as social proof that the service is credible.
* After gaining success through the platform, they may be able to sell the project to schools and partner with other businesses to expand.

## 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.*

* *For the system to function properly it will need to be interactive for the drivers, instructors, and client. This can be done with contact forms to collect information, an API of map data for pick up and drop off locations, a section for comments and session progress for the driving students, also instructors. The owner will need the application to be cloud based so he can access it from anywhere to update any changes and delete user accounts. This must be done securely so only the owner can view and edit user information. Also, the application must have very minimal technical issues. Furthermore, it is imperative that after the application is up and running, there will be no need to update any code. If so, a very minimal amount.*

#### 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 application must run the web and on a cellular device. To ensure the owner can access information from anywhere we must make this project cloud based. This way file sharing will be easier.
* The system should run as fast as the users and clients need it to. There will be exceled loading times to prevent users from clicking off the website.
* The system should not be updated more than it needs to be. If there are bugs (there really should not be) we will fix it. If there are optimizations, we can employ to offer better cloud services or more user interactivity we can facilitate.

#### 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 constraints of the application depend on the programming language used to build. If we use JAVA, we can ensure cross platform functionality across all devices with little to no issues. However, if we use something like C++, we will have to create different versions of the code so the build can run on devices with varying display sizes.*
* *Looking at operating platforms, using java will ensure cross platform and multi device functionality. The project can be run on Windows, Mac, and Unix systems with little to no issue.*
* To prevent data redundancy, updates must be done online. Otherwise, there will be duplicated data on different servers.

#### 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?*

* Differentiate between users when a person gives their information they will be prompted to enter if they are and admin, trainer, or student.
* After they send their information, if the person is an admin or owner, we can build out a page to the site only they can access with a certain access code to make changes.
* If user is a student, they will be prompted to select a package for the length of time they will be drive training. They will also be prompted for what schedule meets their needs.
* If user is a teacher, they will be sent to a dashboard of existing, previous, and furture sessions.

#### 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 clients want to be able to disable a package if he does not want any more customers to register.
* Students and teachers will not have the ability to make changes to anything other than scheduling, and session types that are of their own choosing so they can fit it in with their personal lives.
* The type of access an IT admin will be accessed to required information and issues so they can be fixed.
* The system will adapt to platform changes through the admin. Preferably someone who knows how to code. For example, if someone deletes their profile, we can use an object-oriented language to search a name then cut it from the array. Or course before that we can make updates on the front-end using JavaScript by setting a function to hide user profiles after they get rid of their accounts.
* Users will not be able to make changes without updating the code that have privileges to access rights.

#### 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?*

* If the customer forgets their password, they need to be able to automatically reset it.
* What is required for users to login will be the email address and password.
* When a brute force hack is taking place, we can create a function with the code to hide all information on the front end. On the server we can set up a secure server that only, but few know about.
* When users forget their passwords, we can send them an email verification with a secured code so they can change their password.
* To secure the server between the client and the server we can set up a VPN. This will hide user information such as baking information, location, and saved data from surfing the internet.

### 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 require an input form in place where the student (or secretary) fills in the student information, such as first name, last name, address, et cetera. There also should be a page for contacting us, and a way to contact the student. You have me, the big boss. You have my IT officer, Ian, who will be responsible for maintaining the system, modifying it, et cetera. You also have my secretary who answers the phone and makes appointments. Oh, and I want the user to be able to make appointments, cancel, and modify appointments online if they wish.
* The system shall need to give full access to authorized personnel or the client over all accounts so they can reset them if someone forgets their password, or if owner lets go of someone and shall be able to block user access.
* The system shall be able to let authorized users know who made reservations, canceled reservations, who edited it last.
* The system shalI be able to print an activity report and figure out who is responsible for the various tasks listed above.
* The system shall allow customers to make reservations for driving lessons.
* The system shall authorize customers to be able to tell Driver Pass the day and time they want to take lessons.
* The system shall allow users to be able to make online reservations using their account.

### 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 needs of the interface include a web application. The different users will be the driving students, teachers pr instructors, and the authorized users of our client Driver Pass.
* The users will interact with the interface via web application and on a mobile screen.

### 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 owner, Liam wants to access application data for the application from anywhere online from a computer and a mobile device.
* He needs to be able to download application reports so he may work from home is need be.

### 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?*

* I do not see any limitations with budgeting, timing, or technology.

### 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 cell phone

Description automatically generated