# CS 255 Business Requirements Document

Brandon Kelfstrom

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?*

* The goal of this project is to provide a way for student drivers to study for driving tests. The project will provide online classes and tests that students can utilize at their convenience, either online or offline. These resources should be accessible by any device for maximum reach.

### 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 wants the system to have downloadable reports so that user data can be recorded by the company. There should be multiple tiers of access based on employee role, such as IT being able to change other accounts’ passwords.
* The system needs to automatically handle reservations. The reservations should also be editable by employees if any reservations are scheduled or edited outside of the online user portal.
* The system should keep track of user/driver pairs along with time and car to be used.

### 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?*

* A user will be able to create an account and login to it
* A user will be able to add their information
* A user will be able to schedule classes online
* A user will be able to access materials online or download them to their device
* A user will be able to edit their reservations online
* Employees will be able to view and edit reservations
* Administrators will be able to change user passwords
* User statistics will be able to be downloaded by employees

## 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 system needs to run in any browser. The site will be accessed from all types of web-enabled devices.
* The system does not need to run at high speeds, but page changes and basic functions should occur nearly instantaneously with average internet speed
* The system should update on each system edit

#### 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 should run on a cloud-based platform
* The system should have a database of user information, a calendar of reservations, and a list of drivers and cars

#### 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?*

* Different accounts will have a flag in the back-end that will denote their clearance. A master admin account will be initially created by the development team and that will have the ability to change clearance of other registered accounts
* Usernames/emails will not be case sensitive, but passwords will be
* Admins should be informed of problems when multiple attempts are made by unauthorized accounts to access sensitive information. Password change requests should also be noted with low priority.

#### 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?*

* Users should be editable without ever touching code
* The system should receive updates with minimal down time. All databases should be untouched
* IT admins should be able to change user passwords, view login statistics, and check system edit history

#### 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 should have either a username or email and a password to login.
* The website should use HTTPS and a captcha type system
* An account should be IP banned if a brute force hack is attempted
* A user should be able to automatically reset their password through an email

### 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 will validate user credentials
* The system will automatically update the reservation calendar
* The system will save user information
* The system will manage drivers during reservations
* The system should save driver notes and class progress

### 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 should be simple to use and visually simple
* The main users are children ages 14-17 (primarily concentrated on 15-16)
* Each user should be able to view their progress through courses, see their saved information, and schedule classes
* The user will interact through the web, likely on a smartphone browser. The UI should scale for mobile and desktop browsers

### 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 students will have access to a computer or smart phone. Students are able to call in and make changes to reservations, but not access other information. It also assumes that those with access to the hardware have reliable/fast internet. However, information can be downloaded which could help those with unreliable internet.

### 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?*

* The system is being created in less than 16 weeks start to finish. Many features will be fairly basic, like reservation scheduling. It will still work, but will not be flashy or impressive.

### 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.*

Timeline

Description automatically generated