# 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 for the project is DriverPass
* The purpose of this project is to “Take advantage of the void in the market when it comes to training students for their driving test at their local department of motor vehicles.”
* DriverPass wants to provide students with additional lessons and training to prepare them better for their driver’s tests.

### 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 should be able to provide online courses for students to take to help them with their driver’s test
* DriverPass should also allow on-the-road training with certified professionals (that DriverPass will supply).
* The company aims to fix the problem of students not getting the right kind of education when it comes to driving schools. It also wants to allow the student to prepare on their own time through online courses and scheduling their own appointments if they want/need to.
* The system will be composed of a website that allows users to create personalized accounts.
* The system should also be able to differentiate between admin accounts and customer accounts, allow transactions (for courses or in-person appointments), and be easy to navigate by anyone with a computer.

### 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 system should be able to:
  + Be accessible from anywhere on any device (home, coffee shop, library, etc.)
  + Allow customer to reserve a driver for in-person training online.
  + Be able to track which driver is with which student.
  + Display the three packages that DriverPass wants to showcase to their customers.
  + Have a function that allows a customer to reset their password to their account if they forget it.
  + Interface:
    - The test progress should only show what the customer has taken or what they are currently taking.
    - A comments section where any comments by the driving instructor are displayed for that specific customer only.

## 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 should be web-based
* The system should run fairly fast to avoid any time-out errors for users
* The system should be updated:
  + When a customer makes an account
  + When a customer schedules an appointment with a driver
  + When the DMV changes any rules/regulations based off of qualifying to take a drivers test

#### 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 platform should be Linux to begin with because it is cheaper and easier to use to create and maintain a website.
* The system will be using cloud storage, so there is no need to handle anything on the backend.

#### 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?*

* A user’s profile will have their own username and password (ignoring case sensitivity)
* Admin should be notified immediately of any issues or bugs involving the system.

#### 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 will allow the addition/modification/removal of users without changing code.
* The system will be updated as the need arrives if any updates for DriverPass are introduced.
* The IT Admin has full access to the system.

#### 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 will have specific usernames.
* The user will have a password with the requirements:
  + Must be at least 10 characters.
  + Must contain a number, capital letter, and a symbol.
  + Cannot be similar to the account’s past 5 passwords.
* The account will have an email attached to allow for password resets/username retrieval.
* The cloud is responsible for the exchange of data between the client and the server.
* The account should be locked after 3 unsuccessful login attempts.
  + After the first 3 the account will be disabled for 10 minutes.
  + If another 3 failed login attempts are had within the next 24 hours, the account will be locked for 30 minutes after that.
  + If more login attempts are made, every 3 failed attempts will result in the account being locked for double the time of the previous attempt (1 hour, 2 hours, 4 hours, etc.) until a successful login attempt occurs or 24 hours have passed from the previous login attempt.

### 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 book and maintain reservations made by the user.
* The system shall provide the user with practice tests and online classes.
* The system shall offer three different driving packages for the user to choose between if they wish.
* The system shall run efficiently with glitches.
* The system shall provide each user the access they are granted upon login to the system.
* The system shall validate a user’s login credentials upon initially logging in.
* The system shall display to the user any tests that they have already taken or are in the process of completing.
* The system shall show the user the driver they are paired with for their in-person lesson and the time and place where they will meet their driver.

### 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 must allow the customer to make appointments, purchase driving packages, and take online courses/tests.
* The users for the interface are:
  + The CEO (Liam): accesses data from the site for evaluation and security purposes.
  + The IT officer (Ian): Be able to access the system to perform any maintenance or modifications that the company may need.
  + The Secretary: Be able to schedule appointments through the site if a customer calls in.
  + DriverPass Drivers: Be able to access their availability schedule and communicate with the customers. They also need to be able to post comments on sessions they have with clients to that client’s account.
  + The Customers: Schedule appointments, personalize their profile and take online courses/tests.
* The user must be accessible across all platforms (computers, laptops, mobile devices, etc.).

### 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?*

* Everything that we agreed upon in our meeting with the client is within budget.

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### 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?*

* We have 5 months to build this system
* We were not given a budget to work with
* Lack of employees to help build this website in the time that we have.

### 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*