# 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?*

* [This project deals with the creation of an application that trains drivers/customers intending to obtain a license from the DMV. It involves online classes on rules and regulations, practice tests, and in-person sessions.
* The client is DriverPass. They want the system to be accessible from any location with an online connection with offline accessibility and capabilities. The system will be serverless to allow the team to focus solely on the business.]

### 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, the owner of DriverPass has observed that many people are less than successful when it comes to being well equipped to take on the testing criteria from the DMV.
* He aims to create a system that provides accessible training which will help customers be better prepared for such tests. The system will have 3 default packages which customers will decide on depending on what they are comfortable with.
* The system will provide online content which can be downloaded for offline use, with various practice tests and content for customers to go over.
* The system will also allow a user to be able schedule in-person driving sessions online and through phone call. It will provide an option for them to be able to choose their driver/instructor, car, and type of lesson they receive.]

### 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?*

* [DriverPass wants the system to provide services such as session scheduling, activity reports, activity progress, and provide educational content based off the DMV’s rules and approach to driving.
* The system should have role assigning capabilities to ensure that only users with certain privileges will have access to crucial parts of the application.
* The system should have basic security features such as passwords for security and connectivity to the DMV for updates from them, should also be cloud based. The system will have the aforementioned capabilities/features mentioned in the previous section. The system will also display basic information such as the user’s name, address, picture, and the picture of the instructor. It will have a section containing driver’s notes, progression with topics and content such as practice and actual tests. In simple words, the system will give a brief overview of its user to help them gauge their progress with the topics.]

## 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 needs to run in a cloud-based environment to ensure that the client can focus on running the business
* The system should be able to run online, and in turn download data for offline use, so it should run fast, and without technical problems.
* The system should be created in a way that it receives updates from the DMV whenever there is one. Frequently or non-frequently.]

#### 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 be able to run from/on any device, anywhere, anytime, so long as at some point in time, there is an active internet connection to download data.
* The system should be able to run on windows, Unix, iOS, android, etc.
* The system will/should be serverless, allowing the company to scale up storage for data whenever needed.
* The system will also backup data to servers regularly to ensure that its data remains up to date.]

#### 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 make use of roles/role assignment. This will allow the user to distinguish the type of user accessing it. Some roles will have access to certain privileges, while others will not.
* User input, particularly students and customer input will not be case sensitive, as their personal information such as names, and addresses might have unique spelling and so on. Whatever input they enter will be stored and used.
* The system should inform admins whenever issues are encountered, such as a forgotten password, modified appointment, or even a case of a firing. The system should also alert admin whenever a customer’s package has been completed]

#### 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?*

* [IT admin are responsible for the maintenance of the system, so will require full access to the system.
* IT admin, having full access, are able to add, remove, and modify users, and their information, in case of any problems like forgotten passcodes, or issues with their account.
* Like most applications, when an update is available, the application receives it as well. Only as long as the user has an active connection.
* The system is also connected to DMV, receiving any changes to its rules, policies, etc.]

#### 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?*

* [In providing personal information to the system via a phone call, or application, users create an account. The account will contain their name, address, username, email, and a password.
* Whenever the user decides to log in, things such as their username, email, and password must be provided.
* If the user forgets their password, they could either contact admin, or request a password change. To do this the user must have access to their email, for a reset link. If making a call to admin, should provide either answers to a security question, or a point of contact through which the password can be reset.
* Every user will have a password cooldown period after 4 failed attempts at providing a correct password. The cooldown initiation will be shortened by 1 after every previous cooldown period. If the user locks the account trying to login, they will have to regain access by contacting admin.]

### Functional Requirements

*The different functions the system needs to provide.*

* [The system shall validate user credentials when logging in.
* The system shall give student users access to DMV content and business packages.
* The system shall allow student users to modify appointments and take tests.
* The system shall allow the user to choose their package and driver.
* The system shall allow students to track their progress at any time they log in with an internet connection.]

### 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 system/interface will require an internet connection to use most of its functionality.
* The users of the interface include Owner, IT/admins, drivers/instructors, and students/base users/customers.
* IT/admin will require full access to the system to maintain it, and modify data.
* Owner(s) will also have full access to the system, but to make changes no one else can, like disallowing a service to the public, or rescinding roles of admins.
* Students/base users/customers will be able to access learning content, change their personal info and no one else’s, take tests, choose their driver, package, appointment, pick-up location.
* Drivers/instructors will have the same privileges as base users, but will also be able to put down notes for students based on their driving, suggest sections of reading, correspond directly with learners.]

### 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?*

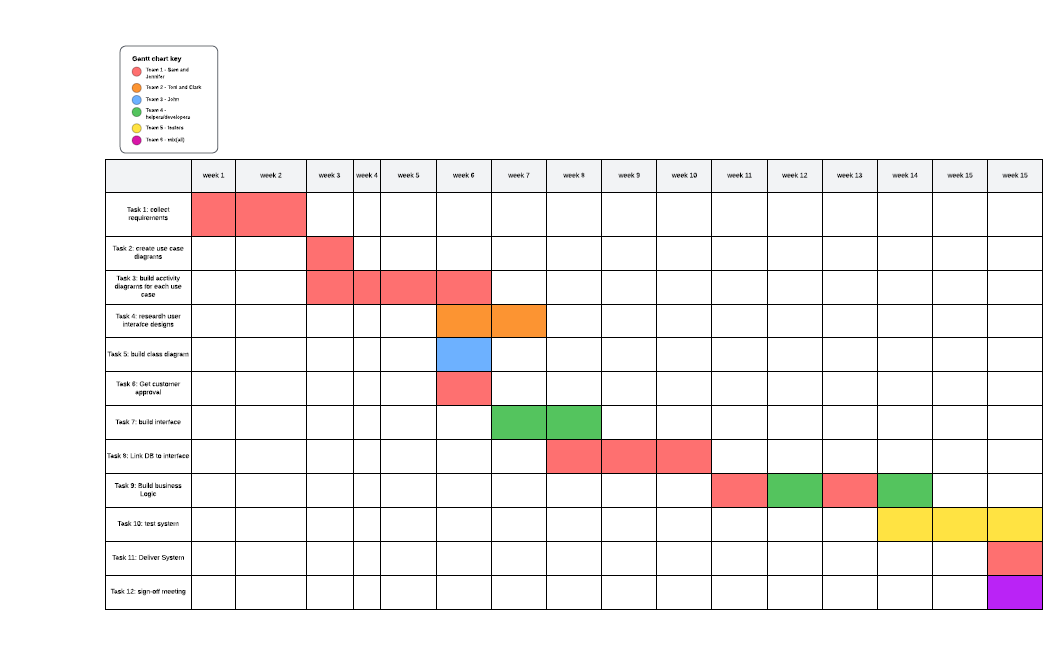
* [users have access to internet connection and a working device.
* Users will not forget their passwords or personal information.
* Users will be able to work the system to find what they need.]

### 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 might not be compatible with older versions of certain devices.
* With time, the tasks all have a timeline we intend to work with, but there is a big chance we might have underestimated the time required.
* With resources, some of the team-members we have might be overworked, depending on their inclusion in multiple teams, holiday hangover, etc. The budget might also not be enough to support the staff and technology we have working on the project.
* In trying to create a system that will function across multiple platforms, it will require an incredible amount of specialization, time, and people. This will have to be sorted out in coming meetings.]

### Gantt Chart

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