# 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?*

* Our client DriverPass wants to train students for their driving test at their local Department of motor vehicles (DMV).
* More specifically, they intend to fulfill the need for better student driver training with online and in-person classes and on-the-road training with a driver.
* This will increase the rate at which students pass their tests at the DMV with an easy-to-use system.

### 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 system will allow users with different rights and roles to access data pertaining to student information, changes to classes and in-person driving lesson reservations times and dates.
* Security for password reset and access restriction.
* Allow students and admins to book appointments for students
* Match students with a specific driver, car, at a specific time to avoid double booking.
* Create 3 different packages that can be purchased by students and that admins can disable and in later versions modify.
* Receive update from the local DMV when policy changes are implemented to update the course material.
* Report creation of user activity and changes to the dates and times.
* Client prefers the system to run on the cloud so that they it handles backup and security.
* The user interface will include:
  + Online test progress and completion.
  + Test name, time taken, score, and status: Not taken, in progress, failed, or passed.
  + Driver notes include: Lesson time, start hour, end hour, and comments.
  + New student registration page.
  + Contact us information page.

### 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?*

* Allow new student registration.
* Allow admins and students to book driving lessons, make changes or cancellations.
* Restrict access in accordance with rights and roles.
* Create a report of system activity.
* Ability to disable packages.
* Password reset capability.

## 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 will be accessible online.
* The convenience of having the online portion of the training program is one of the main selling points for DriverPass.

#### 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 must run on the cloud.
* The client prefers the system to run on the cloud and relinquish the majority of backup and security to the cloud provider.

#### 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 training curriculum must be updated with current DMV regulations and materials.
* Outdated material taught in the DriverPass will become obsolete if not up to date with DMV policies.
* The system must provide access to information stored to the proper role for review and modification if needed.

#### 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 store student information.
* New registrations must be stored for later access and modification if needed.
* The system user interface must provide testing progress and completion to students and admins.

#### 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 system will allow users to have difference access to several of the systems, depending on their rights and roles.
* Protection of data and user information will be performed by creating several roles and allowing each one to have specific rights to access and modify data.

### 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.”*

* Create a report of system activity.
* A report to keep track of user activity was requested by the client for accountability purposes.
* Allow password reset for users.
* Restricting user access to their assigned roles will prevent unauthorized changes to the system and protect user’s information.
* Allow admins to book driving lessons, make changes, and cancellations.
* This is a critical service that DriverPass is providing and allowing changes to be made through their website will be more efficient than in-person.

### 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.)?*

* Create a new student registration.
* This is the first step to getting students enrolled into the DriverPass training system.
* Ability to enable and disable training packages.
* The client requested the ability to enable and disable packages to limit the number of customers registering for each package.
* Allow online test completion.
* Online testing will make it easier and faster to determine student proficiency and readiness to take the DMV test.

### 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?*

* One can assume that the drivers are also teaching in the classroom and will also need to have access to make, cancel, and modify appointments.
* Drivers will be instructing students on the road, but there is no mention of who will be instructing the in-class portion. If the drivers will be performing in-class instruction, then it makes sense that they would also have access to the appointment system.
* The client requested he wanted “to access data online from any computer or mobile device” which would include many different operating systems, for example, Windows, MacOS, Linux, iOS, and Android.
* Since the system must be accessed from several platforms, this must be one of the major considerations when at the beginning of the project.

### 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 must be able to be managed by a small company since it is expected that a small team consisting of the owner, the IT officer, a secretary and ten drivers. Additionally, students will be able to also make, cancel, and modify appointments.
* This is a very important limitation because it will determine the scope of the project. The system must be tailored to function within the restrictions of the team operating it.
* The system can only run while connected to the internet.
* Even though DriverPass has a physical location, to avoid any conflicting or duplicate data, the system must be online to synchronize data correctly.

### Gantt Chart

Timeline

Description automatically generated with low confidence

Resources:

Southern New Hampshire University. (n.d.) *CS 255 DriverPass Interview Transcript*. <https://learn.snhu.edu/content/enforced/1027158-CS-255-H7548-OL-TRAD-UG.22EW4/course_documents/CS%20255%20DriverPass%20Interview%20Transcript.pdf?_&d2lSessionVal=xr3TN1eZWTOHx4GlXTSwVWeBN&ou=1027158>

Dennis, A., Wixom, B. H., Tegarden, D. (2012, February). *Systems Analysis and Design with UML, 4th Edition.* Wiley. <https://learning.oreilly.com/library/view/systems-analysis-and/9781118037423/08_chapter003.html#ch003-sec014>