# 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 purpose of this project is to take advantage of the void in the market for driver training by creating a web-based solution to help students succeed their driving tests at their local DMVs by providing them online classes, practice tests, and in-person driving lessons..
* The clients name is Liam. He is the owner of DriverPass and came with his information technology officer, Ian.
* He wants the system to be able provide training to the customers through online classes, practice tests, and schedule on-the-road training.

### 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 be able provide training to students through online classes, practice tests, and the on-the-road training.
* DriverPass noticed that many people are failing their driving tests at DMV and wants to fix this problem.
* DriverPass should have access to data online from any computer or mobile device with internet connection.
* The systems needs to be able to register customers.
* The system should be able to charge the customers with their credit card information.
* The system should have strong security features.
* The system should be able to grant certain access to certain employees.
* DriverPass should be able to update if needed.
* The system should be able to track reservations, cancelations, and modifications.
* The system should view three packages for the customers to choose from.

### 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?*

* When the system is completed it should work as a fully functional website where customers can take online classes and practice exams.
* The system should be able to help DriverPass access data online from any computer or mobile device with internet connection.
* DriverPass should be able to download reports and information from the system so he can work on it at home.
* Ian, as an information technology officer, should have access to all accounts, in case someone forgets their username or password, he can help reset them. He can also block access to accounts when an employee is no longer working with the company.
* The system can show who made reservations, canceled it, and modified it last, and they can also print this report.
* The customers can make their own appointments, cancel, and modify appointments using their account.
* The system can show which driver, car, and time the customer is scheduled.
* The system can help disable packages if DriverPass does not want any more customers to register for it.
* For registration, the customer calls the secretory where she can type the first name, last name, address, phone number, state, and credit card, expiration date, and security code in the system. The system includes pickup location, and drop-off location, which should be the same as pickup location.
* If the customers forget their passwords, they are able to reset it automatically.
* The system runs on web over the cloud.
* The system has strong security features.
* To achieve this we need to:

1. Build use case diagrams
2. Build activity diagrams for each use case.
3. Research user interface designs (no dependency to use case diagram)
4. Class diagrams
5. We meet up with the customer for approval if no modifications are needed, we then proceed to the next step
6. Interface
7. Build database tables and link to the interface.
8. We add the business logic(security, role, right) layer
9. System delivery
10. Sign-off meeting

## 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 over the cloud
* The system should be able run fast enough so the customers can have a smooth experience accessing their accounts without any complications
* The system should be updated whenever DriverPass gets a notification from DMV on any updates to the new rules, policies, or sample questions, and if DriverPass wants to add or remove packages.

#### 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 multiple platforms like Windows, Linux, Mac, mobile devices, etc.
* The UI should adapt to mobile devices.
* The back end would require a database to store information

#### 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 distinguishes between different users with the users username/email and password.
* The input is case-sensitive to provide maximum security to protect user information.
* The system should inform the admin of a problem when maximum login attempts have been reached for the users to login with the correct username and password.

#### 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?*

* You should make changes to add, remove, and modify users without changing the code.
* The system will automatically adapt to platform updates so the system is running with the most current version.
* The IT admin should have access to all code to ensure that the program is running smoothly and to make any changes to user information.

#### 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?*

* All users are required to have a unique email and a strong password to log in.
* Cloud ensure a secure connection or the data exchange between the client and the server.
* If there is a “brute force” hacking attempt the account will be locked. There are a certain number of attempts to log in the account with the correct username and password, if they fail to do so, the users account will be locked.
* If the user forgets their password, they should be able to click a link where they can reset their password by receiving a temporary password through their email associated with the account.

### 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 validate user credentials when logging in.
* The system shall show the driver the customer will train with.
* The system shall show the customers drivers comments and their grades.
* The system shall offer three packages to the customers to choose from.
* The system shall allow users to book reservations.
* The system shall have strong security features.
* The system shall allow users to reset their password.
* The system shall track reservations, modifications, and cancellation.
* The system shall allow users to access practice tests and online classes.
* The system shall update when needed.
* The system shall grant certain access to certain employees.
* The system shall charge customers using their credit card information.
* The system shall allow users to make changes to their information.

### 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 easy to understand. It should show a homepage, users account information, grades, drivers comments, upcoming lessons, etc.
* The different users for this interface are customers, the owner, secretary, and IT admin.
* The customers should be able to choose the package and driving lessons. Customers should be able to take online practice tests and review their grades. Customers should be to check the drivers comments and their grades. Customers should be able to update and modify their accounts and their reservations.
* The secretary should be able to register the customers in the system. They should also be to charge the customers using their credit card information.
* The owner should have access to the system so he can edit exams, packages, users information, update rules or policies, etc.
* The IT officer should have access to all accounts, in case someone forgets their username or password, he can help reset them. He can also block access to accounts when an employee is no longer working with the company.

### 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 design does not address that the users need electricity, internet connection, or the budget for their classes. I’m making the assumptions that the users will know all these things and have basic computer literacy skills. I also assume that users have a computer or a mobile device to run the application.

### 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 limitation in the system design are that users need a good internet connection in order for the system to run smoothly, users’ needs a computer or a mobile device to use the application, DMV rules and exams question will need to be updated upon DMV notification, customers might not have the money to pay for lessons, and there are limited cars so the customers might have to schedule ahead of time, in case, the days they are available are booked.

**Technical Requirements**

Technical requirements:

* DriverPass employees need a monitor, keyboard, and mouse
* Cloud based server
* Customers need a desktop or laptop
* Power sources
* Networking cables for servers and equipments
* The system will need internet connection to run
* DriverPass software for easy access for employees
* Security software to prevent unauthorized access

### Gantt Chart



 





