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# 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 us to develop a system that would prepare their customers for a driver’s license examination at their local DMV.

### 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 client has noticed a significant lack of similar preparation systems on the market.
* The client has pointed out that many people fail their driving tests at the DMV.
* The client senses a need for better driving training.
* The client wants the system to provide both theoretical and practical aid to their customers, such as online classes, practice tests, and on-the-road training.

### 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 will be versatile and will be accessed from various devices.
* The system will provide a user-friendly, intuitive, and visually appealing interface.
* The system will recognize different user roles providing appropriate access rights and system functionality ensuring the security of data.
* The system will provide access to driver training including preparation for the driver’s license test, online classes, practice tests, and scheduling on-the-road training.
* The system will allow customers to make online reservations for practice driving lessons, cancel and reschedule those reservations as the need arises.
* The system will have the ability to track information and produce activity reports that later will be accessed by appropriate users.
* The system will be connected to the DMV so that it stays up to date with DMV rules and policy changes.

## 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 should be web-based.
* The system should be capable of handling multiple users without a noticeable performance loss.
* The system should provide a comfortable response time, which is less than one second.
* The system should have two types of updates performed: regular and of need. Regular updates should be run every 20-40 days. Of need updates should take place in case a bug is detected, or a new feature is released.

#### 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 allow access from various devices, such as PCs, laptops, and mobile devices.
* The system should be compatible with the most popular operating systems (Windows, Android, iOS, macOS).
* The system should be cloud-based which will take care of the necessary databases required for the system’s back end.
* The system’s backup and security matters should be taken care of without the client’s direct engagement.

#### 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 new user should be able to sign up creating their username and password.
* A new user’s email should be verified in order to create an opportunity for the user to restore or change their username and password.
* An existing user should be able to log in using their credentials.
* The username and password input should be case-sensitive.
* The system should be able to distinguish between different user roles so that it can provide appropriate access rights and open adequate system functionality.
* The system’s admin should be immediately informed if any bugs, glitches, or security issues occur.

#### 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 should allow the IT admin to download data (reports, information, etc.)
* The system should give the IT admin full access to all accounts with the ability to reset and block them without changing the system’s code.
* The system should give the IT admin full access to maintaining and modifying the system without changing the system’s code.
* The system should be easily integrable with different platforms and third-party applications.

#### 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 require the user to input their login and password in order to access the application.
* The system will allow logging in with a biometrics verification if the user enables that function on their device.
* The system will allow users to reset their password by sending a verification link to their email.
* The system should protect users’ sensitive information and its own data from a “brute force” hacking attempts by blocking account access if more than five unsuccessful login attempts take place within one hour.
* The system should encrypt users’ data, including their personal and financial information, before it is stored and transmitted.

### 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 allow new users to sing up creating username and password.
* The system shall validate existing users’ credentials upon their logging in.
* The system shall allow existing users to automatically reset their password if such a need arises.
* The system shall have an input section, which will be filled with the customer information (first name, last name, address, phone number, state, etc.)
* The system shall allow users to modify their personal information.
* The system shall provide users with the ability to make online reservations for practice driving classes, cancel those classes, and reschedule them.
* The system shall allow users to choose one of the three training packages.
* The system shall allow users to access practice tests and online tutorials.
* The system shall allow DriverPass to access users’ contact information so that they can contact the students.
* The system shall allow users to contact DriverPass.
* The system shall allow the IT officer to have full access to all accounts with an ability to reset and block them.
* The system shall provide the IT officer with full access to maintaining and modifying the system.
* The system shall allow the head of DriverPass and the IT officer to download data (reports, information, etc.) which can be worked with offline through other applications such as Excel.
* The system shall allow DriverPass’ secretary to input client information into the system if they come to the office or call to be registered.
* The system shall enable DriverPass’ secretary to make online reservations for driving lessons for people who choose to visit the office or call instead of using the online reservation option.
* The system shall allow the head of DriverPass, the IT officer, and the secretary to see such information as the date and time a class is scheduled for, client and driver’s names, client’s pick-up and drop-off locations, vehicle details.
* The system shall allow the head of DriverPass to see the reservations made, canceled, and modified.
* The system shall allow the head of DriverPass to print activity reports.
* The system shall allow the head of DriverPass to disable any package if deemed necessary.
* The system shall be connected to the DMV database, which should allow the DMV to send DriverPass notifications about DMV rules and policy updates.
* The system shall display an online test progress section and show all the tests that are in progress and the ones that the user completed.
* The system shall display the comments left by the driver as well as the lessons time and dates.

### 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’s users are:

1. Super Admin (the owner of DriverPass, Liam)
2. IT Admin (Ian)
3. Secretary
4. Common Users

* The system will provide all users with an intuitive, easily navigable, and consistent interface.
* The system’s interface will be optimized for diverse screen sizes and resolutions.
* The system’s interface will display the company’s logo at the top of each page for all users.
* The system interface will allow Super Admin, IT Admin, and Secretary execute functions that can be accessed solely by them.
* The system’s interface will allow common users to see packages available for purchase.
* The system’s interface will allow common users to see their progress, including the tests and online classes they have already completed together with the scores and time spent as well as the tests and lessons they are currently working on.
* The system’s interface will allow common users to schedule and cancel their driving practice lessons.
* The system’s interface will have a page with drivers’ notes with the following sections: lesson time, start hour, and hour, and driver’s comments.
* The system’s interface will display drivers’ photos and information.
* The system will have a page with DriverPass’ contact information.
* The system will have a page containing customers’ information (first name, last name, address, phone number, email address, and optionally their photo).

### 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 first assumption is that all the users will have at least a basic level of computer literacy.
* The second assumption is that all the users will have a device modern enough to access the Internet and use the web-based application.
* The third assumption is that all the system features reside within the company’s budget.
* The fourth assumption is that there are qualified people on our team who are able to design the appropriate system.
* The fifth assumption is that during the development of the system, the team will have regular meetings so that all team members are on the same page and the project is evolving as planned.
* The sixth assumption is that DriverPass’ design preferences (color themes, fonts, shapes, textures, etc.) will be discussed and agreed upon prior to us developing the system’s visual interface.

### 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?*

* Although the budget of the project was not specified at this point, it will have to be established in the nearest future. Any budget limitations of DriverPass will directly affect the implementation and maintenance of the system.
* The owner of the DriverPass wants the system to be flexible as he is planning to be modifying and customizing their packages. However, it needs to be understood that such things cannot be built in and accomplished by a non-developer.
* Future system modifications will be considered separately and as needed, but they are not included in the initial system design.
* We have a finite number of employees, and the tasks must be distributed wisely.
* The time constraint was not discussed with the client, but it should be mutually agreed upon.

### 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.*

A screenshot of a computer

Description automatically generated