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CS 255

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# CS 255 Business Requirements Document

Complete this template by replacing the bracketed text with the relevant information.

This template lays out all the different sections that you need to complete for Project One. Each section has guiding questions to prompt your thinking. These questions are meant to guide your initial responses to each area. You are encouraged to go beyond these questions using what you have learned in your readings. You will need to continually reference the interview transcript as you work to make sure that you are addressing your client’s needs. There is no required length for the final document. Instead, the goal is to complete each section based on your client’s needs.

**Tip:** You should respond in a bulleted list for each section. This will make your thoughts easier to reference when you move into the design phase for Project Two. One starter bullet has been provided for you in each section, but you will need to add more.

## 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 this project is DriverPass, and their vision is to have a system that people who are striving to get their drivers licenses, can use this system to take online classes and practice test, as well as have the option to have on-the-road training, so that they can have a increased chance of passing their driving tests they take at their local DMVs.

### 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 a system that allows access of their data from anywhere through online capabilities, and being able to download reports and information that they can then work on at home. The system will need to have different levels of authority, which can allow someone with the same role as Ian, to reset passwords or block access. Also having the ability to track data to be able to print an activity report based on reservations. Customers need to have access to make class reservations, which can be done through the service, or by calling or visiting DriverPass’s office. Tracking system to keep them up to date on driver customer pairs, and car in use. Ability to disable packages. System connection to the DMV to have up to date rules, policies, and sample questions. System should run off the web, cloud if preferable choice. Implementation of interface sketch. Test progress, customer information, driver notes, special needs, and photo of driver and student to be included in interface that can be pressed and lead to detailed pages.

### 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 allow customers to make appointments to take a driving class, in which they can choose one of three packages. Then inputting required information, customer is able to take driving classes as well as practice test. Information should be downloadable for offline use, as well as contact information of DriverPass should be available to make up dates or changes. To complete this task case and activity diagrams with be built, time frame will also be decided based on team members working on the project. We will need to determine the time it will take for the diagrams to be completed, followed by the interface, once those are done then its business logic layer that will be worked on last.

## 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 environments that DriverPass needs the systems to run on are web, as well as mobile, to allow for use of the system anywhere someone is at. The system speed should be fast for the client wishes to allow for classes to be taken online. It will also need to be able to keep the students as well as the administrators up to date on the information and tracking of the vehicles.

#### 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 Windows as well as MacOs, for these two are the most common and popular systems. The back end will not require any tools due to the wish to have the system run over the cloud to not have to deal with said backup and security.

#### 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?*

* When it comes to the accuracy and precision of the system, the way to differentiate between user will be through a username and password that will be case sensitive. If a user inputs their required information three times and fail to access their account, the system will display a message letting them know of each failed attempt till telling them they are locked out. They will be able to change their password by clicking a link that will ask for their email address. If the system completely locks a user out after three attempts, the system should let the admin know, and be aware of the activity surrounding the account.

#### 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 need to be able to add, remove, and modify users without changing code. Being able to change the users access to the system due to them not paying their bill, while also being able to book cars and lessons for the user. The users will be objects that can then be implemented into the code that will allow for them to be usable in an add function, remove function, and modify function.
* The IT administrator will need to be able to fully access the system to make sure it is running properly, while also being able to add or take away package options that DriverPass wishes to be able to do. They will not have access to users personal information but be able to give the user access to specific options, or restrict access instead.

#### 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?*

* A password and username will be required to login.
* The security of the connection or data exchange will be over the cloud, through HTTPS, and help reduce the need to worry about security from a tools or database perspective.
* If a brute force hacking attempt if found to have occurred, the account should be locked down, and an email should be sent to the user of the account to notify them of the issue.
* If the user forgets their password, they should be given the ability to change their password via a reset password link.

### 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 display all options that a user/admin has access to.
* The system shall track user progress in classes and tests.
* The system shall track information on vehicles out and in.
* The system shall allow for user/admin information to be stored.

### 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 will need to allow the user/admin access to specific options for the associated role.
* The different uses for this interface will be administrator and user.
* The user will need to be able to click on links or displayed images, to access profile to update their, first name, last name, address, phone number, state, credit card number, expiration date, and security code. They will also need to be able to access the multiple packages that will be available for them to choose from and schedule appointments.
* The admin will need to be able to make changes to user accounts with restricted access to the users personal information, such as credit card information, but if the user is locked out, they need to be able to send a reset link, or unlock their account if the user calls them.
* The user will be able to interact with the interface either through browsers or mobile.

### 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 things that were not specifically addressed in the design above was the final look that the interface will have.
* The browsers and the mobile device will be running on the most up to date software.
* The languages that the program will display has not been decided, will it only be in English, or will it allow for switching the language to suit the user.

### 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?*

* When it comes to time frame, the size of the team working on this project will affect the time this can be completed, with the time spanning from January 22nd to May 10th.
* With how the client wants the system, budget will need to be confirmed to determine if changes will need to be made, or if need be, asking the client if they wish to put more money into the project to reach the desired outcome.
* With language not being discussed, there could be limitations on user usage if we do not think about the accessibility of the system.

### Gantt Chart

A picture containing text, screenshot, software, diagram

Description automatically generated