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# CS 255 Business Requirements

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 purpose of this project is to create a system for DriverPass to assist students in preparing for driving tests.
* The client, DriverPass, wants to provide:
* Online practice tests.
* On-the-road training scheduling.
* Integration with DMV requirements for up-to-date test materials.

### 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 identified that over 65% of students fail their driving exams due to poor preparation tools.
* The system aims to:
* Improve student success rates.
* Address market gaps in driving education.
* Include features like online scheduling, progress tracking, and security measures.

### 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 enable users to:
* Schedule, modify, or cancel driving lessons.
* Track progress and test results.
* Access DMV-updated practice materials.
* DriverPass staff should be able to:
* Manage reservations and generate reports.
* Monitor user activity and system performance.

## 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 must operate on web-based and mobile platforms.
* Updates must occur biannually or when DMV requirements change.

#### 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 will use cloud-based infrastructure for scalability.
* It must support Windows, macOS, and mobile operating systems.

#### 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?*

* User credentials must be case-sensitive and unique.
* The system must notify admins of issues, such as failed login attempts.

#### 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 staff must be able to easily add or remove users without technical assistance.
* The system should adapt to platform updates without service interruptions.

#### 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?*

* Multi-factor authentication for all user roles.
* Data exchanges must use HTTPS for encryption.
* Accounts will lock after five failed login attempts.

### 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 upon login.
* The system shall allow students to:
* Schedule, modify, or cancel lessons online.
* Track their progress through practice tests.
* The system shall enable administrators to:-
* Generate reports on user activity and reservations.
* Reset passwords and manage user accounts.
* The system shall notify DriverPass of updates from the DMV.

### 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.)?*

* Interface needs:
* Students:
* Schedule lessons and view progress.
* Access practice tests and track results.
* Drivers:
* View lesson Schedules
* Provide session feedback and reports
* Admins:
* Manage reservations and user accounts
* Generate and print reports as needed

### 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?*

* All users will have access to a stable internet connection.
* DMV updates will be provided in a format compatible with system integration.
* Customers will primarily use modern devices and browsers.

### 

### 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?*

* Budget and time constraints limit the scope to essential features for the initial release.
* Advanced package customization will require future updates.

### 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 graph with red and orange squares

Description automatically generated