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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 purpose of this project is to address the need for better driver training, particularly in preparation for the driving test at local Departments of Motor Vehicles (DMV).

● The client, DriverPass, envisions creating a comprehensive system to facilitate this goal.

● DriverPass intends to offer online lessons and practice tests to help students prepare for their driving tests effectively. These resources will be accessible through the website.

● In addition to online resources, the system should allow customers to schedule on-the-road training sessions. This feature ensures a comprehensive learning experience for the clients.

### ****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 needs to be accessible from anywhere, both online and offline.

● DriverPass wants to be able to have access to reports and make adjustments if needed from anywhere.

● DriverPass seeks a web-based system hosted on the cloud for scalability and reliability.

● The system needs to provide convenient and flexible access to training materials.

● Customers should have the capability to book driving lessons using their created accounts.

● Tracking is needed not only to keep track of the drivers and cars being used during the lessons but also for the reservations, cancellations, or modifications being made.

● The ability to disable a driver package being offered so no more customers can register.

● Having the system connected to the DMV is a must to stay updated on Laws and compliance.

### ****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?

● Customers should be given access to online driver training resources and practice tests.

● Give consumers the option to book on-the-go training sessions via your website.

● For ease, ensure the system is usable online and offline.

● Allow DriverPass to examine reports and make appropriate changes remotely.

● Create robust security safeguards, such as user roles and permissions.

● Keep tabs on user activity to keep track of reservations, changes, and cancellations.

● Connect to the DMV to receive notifications and updates on compliance.

● Create a scalable, reliable web interface that is user-friendly and hosted in the cloud.

● Think about conceivable additions to the system in the future.

## ****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 within a web-based environment, enabling users to access it from different devices and locations.

● The system is expected to deliver responsive performance, ensuring that web page or feature load times do not exceed 3 seconds.

● To stay current and competitive, the system should receive updates with new content and improvements at least once every three months.

#### ****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 have the capability to function seamlessly across multiple platforms, including Windows, Unix, and macOS, with no constraints specific to any particular platform.

● The system's backend is required to employ a relational database for the storage of user data, reservations, and other pertinent 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?

● User identification must differentiate between users with similar names by being case-sensitive.

● The system should promptly alert the administrator of critical errors or security breaches and provide comprehensive information regarding the problem.

#### ****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 enable seamless user management operations, including the addition, removal, and modification of user profiles, without necessitating any code adjustments.

● The system's design should enable it to adjust to platform updates, guaranteeing compatibility with the most recent operating systems and web browsers.

● Full access to system settings and configurations for efficient management of user accounts, permissions, and system resources should be granted to the IT administrator.

#### ****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?

●Users are required to input a valid username and password combination to access their accounts.

● The system will employ encryption protocols such as HTTPS to safeguard the exchange of data between clients and servers, ensuring the protection of sensitive user information.

● In the event of a specified number of unsuccessful login attempts (e.g., three), the system will temporarily lock the user account as a preventive measure against "brute force" hacking attempts.

●Users who have forgotten their password will have the option to reset it by providing their registered email address. For account recovery, the system will generate and send a password reset link to the user's registered email address.

### ****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 perform user credential validation during the login process.

● The system shall grant users access to online driver training resources and practice tests.

● The system shall facilitate the booking of on-the-go training sessions via the website.

● The system shall ensure usability in both online and offline modes.

● The system shall allow DriverPass to access reports and perform remote adjustments as needed.

● The system shall incorporate user roles and permissions to enhance security.

● The system shall enable tracking of user activity to monitor reservations, modifications, and cancellations.

● The system shall establish a connection with the DMV to receive compliance notifications and updates.

●The system shall offer a cloud-hosted web interface that is both scalable and dependable.

### ****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.)?

Various user roles for the interface encompass individuals such as the top executive (Liam), the IT officer (Ian), the secretary, and customers.

● Both Liam and Ian require comprehensive access rights for system management and maintenance.

● Customers should have the capability to create, cancel, and modify appointments online.

● The interface must be accessible across multiple devices, including mobile devices and web browsers.

### ****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 web-based system presupposes that users will have internet connectivity.

● Effective navigation of the interface requires users to possess basic computer skills.

● During registration and reservation processes, users are anticipated to furnish accurate information.

### ****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?

● System design constraints may encompass limitations in resources, time, budget, and technology.

● Customizing packages might necessitate involvement from developers or system analysts, restricting modifications by non-developers.

### 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.*

