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CS 255 Business Requirements Document Template

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

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?

- Liam must have access to data both offline and online.
- In order to download reports and information, Liam wants to be able to access data online from any computer or mobile device.
- Ian, the IT officer, has administrative access to grant complete control over accounts in the event that a user's password needs to be changed and to prevent access in the event that someone is fired.
- Tracking of made, canceled, and changed reservations. The owner of DriverPass has access to tracking information and can print activity reports.
- Reservations for two-hour driving lessons will be available. It should be possible for users to book reservations for the day and time of day using their account. Keep track of the user, time, and vehicle that is paired with them.
- Make reservations for three packages. It would be nice to have the ability to add and remove packages in the future. the ability to disable packages in the event that no users sign up.
- Online appointment scheduling, cancellation, and modification capabilities.
- When registering, users enter their first and last names, address, phone number, state, credit card number, security code, and expiration date. Add the locations for pickup and drop-off.
- Be able to automatically reset user password if forgotten.
- DriverPass's connection to the DMV allows for the provision of updates for new regulations, guidelines, or sample inquiries.
- Web interface running on cloud.
- Online test progress is part of the web interface. It displays what the customer is working on and what has been finished.

Objectives and Goals

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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?

- After completing DriverPass, clients will be able to select from three different driving packages.
    - Package 1: 6 hours in a car with a trainer
    - Package 2: 8 hours in a car with a trainer and an in-person lesson where we explain the DMV rules and policies
    - Package 3: 12 hours in a car with a trainer, an in-person lesson where we explain the DMV rules and policies, and access to an online class with all content and material, as well as 2 practice tests.
- Every driving session is 2 hours; therefore the sessions will be spread out into 2 hour increments over time.
- Customers will be able to change, cancel or modify appointments.
- The DriverPass interface will display the customer's online progress. Name, time spent, score, and status are included.
- Owner Liam, IT Officer Ian, and secretary all have admin access.
    - All of DriverPass's data is accessible to the owner.
    - Ian has complete control over accounts, system maintenance, and modification.
    - The secretary schedules appointments.

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?

- Web-based online cloud platform
- Users should experience average load times of 1 to 2 seconds
- The system needs to give feedback when load times exceed 3 seconds
- System updates should occur monthly or whenever necessary

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 needs to be compatible with both computer and mobile web browsers.
    - Microsoft Edge
    - Google Chrome
    - Safari
- The back end needs a database to keep track of user and system data.

- The back end needs a web server to handle and manage incoming requests and outgoing responses.

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 will distinguish between users with separate login sections for customers and employees
- Each user's password will be sensitive to case.
- The system notifies the admin about any issues every day.

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?

- Modifications for the user will be made in the back end without altering the code.
- The system must be able to adjust to any updates on the platform smoothly.
- The IT administrator requires access to both the database and the web server in order to manage and update the system.

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 need a password to access their accounts.
- Adding two-factor authentication provides an additional level of security to protect your connection or data transfer.
- After three incorrect attempts, the user will be locked out.
- "Forgot Password" button that alerts the admin to enable the user to reset their password

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 will check the user's username and password during the login process.
- The system will identify whether the user is a customer or an admin.
- Users will have the option to reset their password whenever necessary.
- The system will permit users to try logging in five times before locking them out and alerting the administrator.

- The system will generate a user account using the provided user information.
- The system will enable access from any location online.
- The system will show different package options for customers to select.
- The system will enable customers to choose a type of package they want to buy.
- The system will enable the admin to turn off packages that are at full capacity.
- The system will monitor which user is paired with a specific driver, at a certain time, and in a particular car.
- The system will link up with the DMV to receive the latest information updates.
- The system will show customer details, the progress of tests, and their current status.
- The system will show the notes made by drivers.
- The system will show the lesson duration, including the start time and end time.
- The system will show photos of both the driver and the student.
- The system will provide customers with access to online learning resources.

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.)?

- Users will interact with the interface through browsers online on both computers and mobile devices.
- Different users include customers, employees and administration
- Customers will be able to see and access:
    - Login and registration page
    - Home page
    - Test progress and scores
    - User information and package information
    - Driver's notes, lesson dates and times
    - Online learning and practice tools
- Administration will be able to see and access:
    - Information of registered customers
    - Packages selected by each customer
    - Ability to add, modify or remove packages
    - Matches between customers and drivers
    - Management of users' and ability to reset passwords

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?

- Each user will have 24/7 access to all online content
- Avery user will understand how to navigate the webpage
- Administration will have the necessary skills to navigate and access all appropriate website functions

- Customers will arrive at their scheduled appointment times and be present for every lesson in their chosen package
- Drivers will be available and present to every lesson

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?

- DriverPass owns 10 cars, and each one requires maintenance to remain operational.
- Problems with the internet connection can occur, leading to delays in updating information.
- There is a restricted number of cars available, so only a certain number of customers can buy packages.
- Some users might not have the latest technology available to them.
- Ensuring that all of DriverPass's requirements are met while staying within their budget and timeline.
- Some customers might only be familiar with specific types of vehicles.

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.