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CS 255 Business Requirements Document

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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’s name company is DriverPass
* Create an online class to train driving students.
* Providing the customer with one-on-one driving lessons and practice test
* Web-based application to register for meeting driving lessons.

### 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?*

* System architecture will have more action for the admin role.
* Data can only be accessed online only through the cloud storage.
* Customer information is linked to their reservation.
* Connect with DMV data to maintain the regulation up to date.
* System should notify user of any change or issue like no available date.

### 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?*

* Track customer personal data like name, birthday and address.
* Auto update program with DMV database for rules and regulation
* Selection of different packages and make appointment.
* Encrypted data for security
* Admin will have different access than customers to distinguish both.
* Employees and the customer will have different roles in the system.

## 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 base system
* Allow to export certain data in an excel file offline.
* The system should be able to run them on any platform possible.
* The system should update every time the DMV does a change in regulation.
* System should run without lag and delay.

#### 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 any mobile and OS possible.
* DMV database needs to be accessed by the system.
* Since the classes are online using cloud storage is required
* Use a robust algorithm and a third party for verification.

#### 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?*

* Usernames will be case sensitive and will be assigned a random 4 digits number at the end.
* The random number will be assigned by a random number generator.
* The system should alert the admin of any issue within a few seconds of the problem through email or a system notification.

#### 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 will be possible to edit the user information without changing the code cause the code will be flexible to allow change.
* The system will use cloud storage so that every patch and update is delivered at the same time.
* IT admin will have special access to the system to the extent of being able to rewrite the code if necessary.

#### 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 Users will need to create a username and a unique password.
* To secure the connection with the client and the server a third party will be in charge of the authentication.
* Each end of the communication will have a different algorithm to reinforce security.
* The account will be disable and lockout of the system and the authentication third party.
* If the user forgets their password the system will give them 2 options either “try again” or “reset your password”.
* The second option will send a reset link to the email on file connected to the account.

*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 authenticate user credentials.
* The system shall allow certain users to have different roles.
* The system shall allow certain users to have access to all the functions in the system.
* The system shall notify the user of any update (system update or DMV update)
* The system shall allow the user to modify their profile.
* The system shall allow the user to send messages to the admin role.
* The system shall allow the user to choose between different packages of lessons.
* The system shall track the user activities.
* The system shall allow the admin role to access these track data.
* The system shall allow the admin to export data to an excel file.

### 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.)?*

* Since it will be a web base application the mobile version should not be too different to the desktop version
* Liam (the owner aka Admin user), Ian (IT user), client (user)
* Admin user will be able to edit user information and track their activities in a log form.
* IT user will be able to have a back door access to the code of the system and make changes if necessary.
* Users will have access to the database of the system: DMV rules, package available for driving lessons, day, and availabilities for driving lessons.
* The first page needs to contain the login field where the user enters their credential.

### 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 is using a smartphone that is not outdated and still supported.
* The system will be supported on less used OS like Linux
* The system will be user-friendly and easy to navigate.
* The mobile version isn’t a tool that every user will be using because their device might not be up to date.
* All customers are teenagers or young adults.

### 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?*

* The runtime of the application based on the web base application might be slower because of the cloud storage.
* It will cost more money to have a third party to authenticate the user but to make it more secure.

### 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 screen

Description automatically generated