Module 5-2 Project One

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CS-255-T4478 – System Analysis and Design

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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

### 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, DriverPass, noticed there are a lot of people failing their driver’s test at the DMV. They believe it is due to a lack of tools to help drivers pass. DriverPass decided they would like us to create a system in the form of a website that will provide students with online practice exams and the ability to book on-the-road training.

### 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 would like their system to help aid and fix the problem of people failing their driver’s test. They off three different packages to choose from for the on-the-road training.
* The two clients, Liam and Ian, want their customers to be able to make reservations for scheduling sessions, make appointments, modify or cancel them, register with their necessary credentials with pickup and drop off addresses, and record the customer’s progress under Drivers note.
* The system should allow for data access from anywhere if there is an internet connection. It should also have proper security features to grant access to different users, and the things they have access to do using the system.

### 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?*

* When completed, the system should be a fully functional website that allows customers to book, modify, and cancel their on-the-road driver training.
* DriverPass needs to be able to identify the driver the customer is schedule to go out with and track which user is matched up with a certain driver, time, and car.
* Customers need to be able to take practice tests and classes online.
* The client wants to be able to disable packages if they do not want any more customers to register for it.
* They need to make sure that their tests and practice they are providing are current with what the DMV requires, which means they need to be able to connect to the DMV so that they can update with new rules, policies, or sample questions.
* The system should only grant certain access to certain employees to make changes if need be or to further improve the system.
* The system needs to run off the web, preferably over the cloud. They do not want to deal with back and security.
* To help create the system, we should use object models, process models, and UML diagrams to help visualize the system.
* We need to pick an operating platform and the languages we will be using to create the website.

## 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 needs to be web-based using a website over the cloud.
* The system needs to be able to support security and backup without the admins input.
* The system needs to run fast enough to support users access the website without any hinderance.
* The system needs to be able to be updated anytime the client decides to add new features or update new requirements as given by the DMV.

#### 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 be able to run on all major platforms (Windows, Unix, Mac, Android, etc.).
* The system should be run over the cloud for back-end requirements, such as database, security, and backups.

#### 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?*

* Each user will be able to create a unique username and password when signing up for the website’s services. The input should be case-sensitive to increase the number of possible accounts.
* A multi-factor authentication, such as emailing users logging in on a new device, should be implemented.
* The system should inform admins immediately of any errors with the website in order to fix the errors to reduce the system downtime.

#### 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 be able to add, remove, and modify user accounts and information without changing the base code.
* The system will be able to add new services, remove existing services and modules, and modify current packages by the admins as new platform updates are introduced. These will happen when DriverPass wants to add new features to the website.
* The IT admin will have full access to the system to make necessary changes to employee credentials.

#### 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 will require a unique username, password, and multi-factor authentication.
* The cloud will be responsible for data exchange between the client and server.
* The system should lock accounts after a preset number of failed attempts. To unlock, technical support needs to be contacted.
* The system should email a forgot password link to the email address associated with the username.

### 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 book reservations made by users.
* The system shall provide classes and practice tests with the DMV’s current requirements.
* The system shall offer different driving packages, with three currently available.
* The system shall run fast, reliable, and efficiently.
* The system shall allow access to users based on their permissions.
* The system shall current progress of users in their work, tests, and courses.

### 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 needs to provide the customers with options for making reservations for different packages, tests, and online classes.
* The interface needs to allow DriverPass employees access to change and update the system as needed.
* The interface must be to be accessed from any device with an internet connection, i.e., phone, laptop, desktop computer.

### 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?*

* There was no budget given. As such, all of tools to build the system will be within budget, including using the cloud.
* We are assuming we have access to all available resources of the technology required.

### 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?*

* There are 16 weeks from to start to finish and there is no budget specified.

### 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.*

Timeline

Description automatically generated