**5-2 Project One Submission: Business Requirements Document**

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CS-255: 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 purpose of this project is to design a system for the client DriverPass who are looking to provide driver training services. DriverPass is looking to assist individuals in a way that will help them pass their driving tests, by offering practice tests, on-the-road driving lessons and online classes.

### **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 wants to offer customers the option to make reservations online, in person or by phone. The client is also looking to track customers activities, offer flexibility with online driving lesson packages, offer the customer a secure way to store their information securely, align with the DMVs system, allow online password resets for the customers account and be able to manage the different user roles.
* DriverPass is looking to help individuals pass their driving tests by offering structured training that can be accessed online, in person or offline.
* The different components needed for the system are as follows:
  + Reservation/Scheduling system
  + DMV synching
  + Tracking system
  + User management system
  + Database integration
  + Reporting functionality

### **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?*

* Once finished, the system should be able to:
  + Provide access to online study materials and practice tests.
  + Track user activity, including reservations.
  + Provide customers the ability to book, modify and cancel driving lessons.
  + Manage the different user roles.
  + Log system errors and immediately notify the administrators if there is an issue.
  + Put together and download reports for business insights.

## **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 type of environment needed in order for the system to run properly would be a web-based (cloud) environment that can be accessed on a desktop and or mobile browser.
* The system should be able to load within 3 seconds for each page.
* The system updates should be done every three months or as needed to make sure it remains secure and can process any enhancements needed.

#### **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 off of Android, Windows, macOS, and iOS.
* A secure API should be required to connect the frontend with the database

#### **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?*

* To be able to distinguish between the different users, role based authentication for customers, instructors, IT admins and owners should be implemented. To remain secure, usernames and passwords should be case-sensitive. And if any problems arise, such as unauthorized access, failed logins and system errors, Admins should be notified immediately.

#### **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?*

* Administrators should always be able to add, remove, and modify users without changing the code.

#### **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?*

* In order for a user to be able to login, they will need an email and password. By using SSL/TLS encryption for client-server communication, this can help secure the connection or data exchange between the client and the server. If there is a “brute force” hacking attempt, the account should then be temporarily locked and the administrator should be immediately notified.

### **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 allow administrators the ability to assign and manage the different user roles and permissions.
* The system shall track and display the assignments of instructors, cars and lesson times.
* The system shall record and track the user activities such as reservation creation, modification and cancellations.
* The system shall enable IT personnel the ability to reset passwords and manage user access.
* The system shall generate reports on the user activity, reservations and financial transactions.
* The system shall provide a gateway to allow the DMVs compliance updates and notifications.
* The system shall validate user credentials when logging in.
* The system shall allow secretaries the ability to schedule appointments via phone or in person.

### **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 needs of the interface put the users and their functionalities together.
* The different users consist of: The Administrator who will need the ability to manage user accounts, generate reports, update course content and system settings and monitor the DMVs compliance updates. The Secretary will need the ability to schedule, modify and cancel appointments, manage customer information and process payments over the phone or in person. Thee Customers will need to be able to create and manage their accounts, schedule and modify driving lessons, track the progression on practice tests and course completion and reset their password if they forget it. The Instructors will need to be able to see their assigned students and lesson schedules, and enter their class lesson information. And finally, the DMV will need to be able to transmit their compliance updates, new regulations and test updates.
* Users will interact with their interface via a web-based (cloud) platform on a desktop or mobile device.

### **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?*

* My assumptions include cloud hosting will provide automatic backups, and that the instructors availability will not create any scheduling conflicts.

### **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 limitations that i can foresee are:
  + Budgets
    - The entire functionality of the system may require additional funding.
    - High website traffic could cause the site to crash which could result in money lost.
  + Customer adaptation
    - Customers may need assistance with site navigation
  + Security Risks
    - Payments will have to comply with industry standards.

### **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.*

