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CS255

# 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?*

* Client - DrverPass
* Owner - Liam
* Worker 1 - Ian (IT officer)
* Worker 2 - Secretary
* 10 Drivers
* Then we have the users of the system
* The purpose of this project is to provide the customer/users with a high-quality form of training to prepare for the driving exam at the DMV.
* The client wants the system to be provide online classes, practice test, and away to reserve optional on-the-road training.
* The client would also like to be able to access documents from any computer or mobile device.
* Track reservations, who canceled certain reservations, and who modified reservations
* Run off the cloud
* Provide an interface containing sections such as Online test progress, Student Information, Driver notes, Special needs, Driver Photo, Student Photo.

### 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?*

* Web base platform
* The client would like to be able to access documents from any computer or mobile device as long as there is an internet connection.
* Track reservations, who canceled certain reservations, and who modified reservations
* Provide an interface containing sections such as Online test progress, Student Information, Driver notes, Special needs, Driver Photo, Student Photo.
* Keep track of the student’s reservation date, time, pick up location, drop off location all should be able to be completed through the system or by calling the secretary.
* Identify the driver for the student’s reservations
* Track the users online test progress
* Provide different levels of access depending on the user
* The system should always be connected with the DMV and alert if updates are needed due to changes with the DMV
* Users should be able to make, modify, and cancel appointments online using the system.
* The system should offer three different packages for driving lessons
* Provide an easy way for DriverPass to disable a package if no longer needed.
* Store information when a new user registers this information is first name, last name, address, phone number, state, credit card number, expiration date, and security code.
* Provide a secure, but easy way for the customer to reset their password if needed.
* The problem that is trying to be fixed by DriverPass is to provide a better system for their customers/users to train and learn to help them pass the driver test at the DMV. DriverPass noticed there was a need for better training as so many people are failing the driving test at the DMV.
* The different components of the system are the main user interface page, an input form page for the students or secretary to fill in their information, a page for contacting DriverPass, and a Page for DriverPass to contact the student.

### 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 web base and running off of the cloud
* Process updates and alerts linked to the DMV.
* Provide a program where users can take online exams, online classes, make, edit, or cancel reservations for driving lessons.
* Provide different levels of access to different users to make changes or alter certain aspect of the system
* Be accessible wherever there is a stable internet connection.
* Allow the customers or secretary to make reservations
* Provide a working interface that displays important information to the user such as exam progress, and driver nots to name a few.
* Allow access to certain users to disable a package that is no longer available
* Provide a page contain an input form for student information
* Provide a page for the student to contact DriverPass
* Provide a page for DriverPass to contact student
* To help in creating the system the team should use UML diagrams, object models, and process models to assist in the visualization of the system.
* A decision will need to be made on what operating platform and program language will be utilized for program

## 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 for DriverPass ought to be web based this would be in the form of a website over the cloud.
* Anytime a change or new features are added to the system updates should be completed
* The speed of the system should be fast enough to let multiple users use the system without negative impacts on speed and overload causing outages.

#### 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 best system for this platform would be Linux
* The choice to use the cloud which will manage all security, while also managing data bases on the backend
* Databases will be needed to store different types of information for example, customer usernames, passwords, address, payment info, etc. These would be maintained by the cloud provider.

#### 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?*

* Users of the system must create a username and password to gain access to the system. The input for the username and password should be cases sensitive. The passwords must be required to be complex, and the system should require multi-factor authentication allowing for better security.
* If any errors, crashes, or glitches happen the admin must be notified immediately so the system can be up and functional again as fast as possible.

#### 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?*

* With the amount of user changes must be able to be made without changing the code. The code should be written in a way the that allows for modifications with minimal effort.
* As features are added to the system the system will be updated. The system will adapt to this as updates at first will be minimal and as the system progresses update may be more frequent, but by this time the system would have adapted to the frequency and size of updates.
* Two users will have access to make changes to the system and make modifications to other user accounts such as deleting an account. These two users are the admin and the owner.

#### 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 system will require every user to have a username and complex password.
* The system must have multi-factor authentication
* The cloud the system is utilizing will must be responsible for data exchanges between the client and server.
* Brute force attacks a common way of effecting a system so users accounts must be locked after a certain amount of failed log in attempts. This could be set to an amount such as four failed log in attempts.
* A common issue with users and complex password is that they may forget what the selected to use as a password. If a user forgets there password, they will be prompted to have a reset password link sent to the email they used when they set up their account. By selecting the link in the email, they will have the ability to change 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 must validate the credentials of each user when they login.
* The system must book the reservations when they are made by the user.
* The system must display to the driver what customer he or she is paired with.
* The system must show the customer what driver he or she is paired with.
* The system must offer three different driving packages with the ability for future adjustment by owner or admin.
* The system must provide practice test.
* The system must provide online classes.
* The system must be able to receive update on policies and regulations from the DMV.
* The system must be efficient and fast.
* The system must have different levels of access rights based on the user and their granted privilege’s.
* The system must display completed test, work, and other progress by the user.

### 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 shall provide customers with the option to make reservations
* The interface shall provide customers with the option to select and pay for driving packages
* The interface shall provide customers with the option to take online classes.
* The interface shall provide customers with the option to take practice test.
* The interface must allow users with high levels of access to go in and modify and update the system as needed.
* The interface should be accessible from any piece of technology that has a supported web browser and internet. This could be a mobile phone, tablet, laptop, computer, etc.

### 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?*

* We are assuming we will have obtainable access to all of the technology that is needed to complete and maintain the system.
* There has been no budget discussed so we are assuming what will be needed to complete the system will fall within budget. For example, the use of the cloud and the Linux operating system.

### 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?*

* A budget was not given and we only have five months to complete the project.
* The time frame given of five months and the amount of team members working on the system is concerning and I believe it will be a limitation. More people must be included on the project.
* We do not know what approach we will be taking to complete this project, and this could be a big limitation if the work path is chosen. I would recommend taking an agile approach from the SDLC to the project.

### 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