Joaquin Esguerra Jr.

Instructor Aline

CS 255 System Analysis and Design

Project One

November 27, 2022

# 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 support the need for new driver training prior to them heading to the DMV to get licensed. The client DrivePass has commissioned this project to develop a system that provides inexperienced drivers with online classes, practice assessments, and on the road training with a certified instructor.

### 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?*

* The owner is first seeking the ability to access data from the system from any location whether online or offline
* The owner wants to be able to access data via online by computer and his mobile device
* To avoid duplicating data on multiple servers, all updates must made be while online.
* The owner will require excel to be used to download reports for offline use
* The owner is requiring having total access of all accounts and will need the following.
* password reset functionality
* account blocking functionality
* activity report access to view or print a physical document
* The owner will require notification for any user reservation and modification to the reservation up to cancelations.
* The ability to schedule appointments for lessons must be available for all users
* Users will have the ability to choose from three packages based on their training needs
* Packages are built around total hours of training needed and all three packages will require multiple appointments as appointments are scheduled in 2 hr increments
* Users will be required to provide the following info at registration: First and Last name, Address, Phone number, residing State, credit card number for purchases, along with the expiration date and security code of the card
* User needs to ability to include pick up and drop off locations, which should be equal
* The owner has 10 cars and drivers of those cars, and will need the ability to view cars matched with drivers/trainers along with times used
* The owner will require the ability to close various packages to prevent reservations from being made
* User ability to reset own passwords will be required
* The owner requires updated info directly from the DMV as it pertains to updates or changes by state
* DMV updates will need to come in the form of a notification to the owner when policies change or road rules, and new sample test questions
* The owner does not want to deal with backup or security, so the cloud will be required to run the system
* The owner, along with users, will need visibility and access to specific info pertaining to tests, personal info, notes, driver and student photos, and any special needs presented by users or drivers
* Interface must include testing status, type, time, and scores
* Status would ultimately state whether the test has been taken or not and show progress, pass/fail, if it has been
* Notes from Drivers will need to show training times start/finish, along with any comments provided by the driver pertaining to the training of the user
* Input from will be require for student info and updatable contact info for the owner and students/users

### 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?*

* Through reservations, the students will need to have access to take online practice assessments, along with ability to schedule driving lessons through package purchases via the cloud.
* By first determining level of importance, a plan will need to be developed to outline tasks
* The outline will also need a timeline to track completion of each task and stay on schedule
* Team members will need realistic time frames to complete tasks that meet the needs of the owner and project
* Items within the tasks will need to be accounted for to better determine required time.
* Task will have start/end dates to keep the project on schedule

## 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 environment would be required for the system to run on. Web-based applications can be accessed from any device using the internet instead of individual downloads of a single application.
* The system will be required to run fast enough to capture and output a reservation within seconds. Real time results will be required.
* Weekly updates will be required for security updates and or policy changes that effect practice exams.

#### 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 will be required to run on major platforms such as: Windows, MacOS, and Linux. Through a web database the system will be accessible from anywhere.
* The database will collect and store all information. When accessing their accounts, the database will display tables in columns for users.

#### 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 will have a unique username and access can be granted to that information through steps such as two-step verification if needed.
* A limit of try’s will be required for user attempts in accessing their accounts such as a limit of 5 attempts.
* case-sensitive ID
* Account lock if sign on attempts is reached
* Admin alerts will be required if users need further action
* Two-step verification and other security measures will be required

#### 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?*

* Implemented code will be necessary to add, remove or modify a user’s info without major complexity
* System maintenance will be scheduled weekly during 3:00AM to 5:00AM when the system is not widely used
* IT administration will require full access to adjust code, make updates for the website including new rules/policies.

#### 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?*

* Unique userID/password will be required along with requirements to prevent hacking such as case-sensitivity, numbers and or symbols.
* Web-base server will allow for increased security between both the server and clients.
* In the event of a brute force hacking attempt, notifications will be sent out to the DriverPass IT group along with all users whose accounts will be locked to prevent information leaks.
* In the event that a user forgets their password an option will be available to reset through account info such as email/mobile phone number. An additional option to access the account would be answering security questions or two-step verification.

### 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 interface shall display the following: test progress, user info, driver notes, special needs, driver photo/identification, and student photo/identification.
* The system shall allow lesson modifications for owners/students
* The system shall allow scheduling of exams for students
* The system shall allow demographic info updates for students/owners.
* The system shall allow mobile access for students.
* The system shall adjust screen dimensions based on access through mobile or full computer screen

### 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 will be web-based
* The interface will be viewed through desktop or mobile device
* Consumers will have access to information regarding purchases
* Administration will be able to make and adjusts appointments for users

### 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?*

* I’m assuming that all users are comfortable using an online platform and need minimal guidance when navigate the site.
* I’m assuming that all users have compatible devices with operating systems such as a Windows or IOS operating platform.

### 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?*

* Limitations could include formatting for various devices
* Time could come up as an issue if management does stick to the schedule
* Budget and the tech needed for development present no issues

### 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.*

