**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 is DriverPass, represented by Liam (owner) and Ian (information technology officer).
* Liam is hoping to take advantage of a void in the market when it comes to training students for the driving test at their local DMV.

**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 problem that Liam and DriverPass noticed was the need for better driver training. He claims that many people fail their driving tests at the DMV and that DriverPass will provide training for their customers.
* They want their system to offer online driving classes and practice tests as well as scheduling on-the-road training.

**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?*

* With this system Liam wants to offer online driving classes and practice tests as well as scheduling on-the-road training.
* He needs to be able to have access to the data from any computer or mobile device. He wants the ability to download reports and information to access them offline.
* The system needs to run off the web, preferably over the cloud.
* DriverPass employees will have different levels of access and permissions also the ability to track activity such as when reservation are made, who canceled it, and who modified it.
* The customer should be able to make, cancel, and modify reservations for driving lessons and provide their personal information along with a pickup/dropoff location.
* DriverPass needs to know which customer is scheduled to drive with which driver and which car at what time.
* For these reservations, Liam wants to offer different packages that provide different services. He also wants to make it so he can modify or remove them when he needs.
* To stay up to date with DMV requirements he wants to receive notifications whenever the DMV has updates.
* Online tests should show the customer's progress/status along with test name, time taken, and score.
* The system should have a section for driver notes where drivers can leave information such as lesson time, start hour, end hour, and any driver comments.
* There should also be a contact page for contacting DriverPass and a way to contact the student.

**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?*

* This system needs to be a web-based system so it can be accessed on a computer or mobile device, preferably over the cloud. But they also want to be able to access data offline to download reports and work on them on Excel, for example. However, modifying or updating the data will not be allowed as to not duplicate data.
* The system needs to be fast and responsive to handle multiple users at the same time. Users will be scheduling and modifying appointments, taking tests, and DrivePass employees will also be accessing at the same time. The system is expected to provide uninterrupted access.
* The system needs to maintain a connection to the DMV to receive updates about new rules, policies, and sample questions. System should I provide notifications whenever updates are made. Other updates like adding/removing may be done in the future, while disabling training packages should be capable without the need for a developer.

**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?*

* This web-based system should run on computers with Windows, macOS, and Linux operating systems but it should also be able to run on mobile device platforms such as Android and iOS.
* These platforms should not need tools such as a database to support this application as it will be a web-based system. A web application such as Google, Microsoft Edge, or Safari should allow for full usability of the system.

**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 be distinguished by their unique username and password. Both of which will be case sensitive. Users will also have their information attached to their accounts such as full name, address, and phone number. DriverPass staff will have special roles assigned to their accounts depending on their accessibility needs.
* The system should inform the admin of a problem when: There are issues connecting to the DMV. The system is down/offline. Any issues with scheduling occurs such as overbooking. Loss of data.

**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?*

* Yes, users with the appropriate permissions should be able to add/remove/modify user accounts without changing the code. For example, IT officer Ian needs full access over all accounts to be able to reset them if someone forgets their password or block their access if they are let go. In the event of a platform update the system will be able to automatically adapt due to it being a cloud hosted web application.

**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 log in with a unique username and password. To secure the connection or data exchange between the client and the server all data should be encrypted to prevent any nefarious actions. In the event that a “brute force” hack attempt is made the account should be locked and inaccessible until the admin removes the lock. The IT admin should be notified of the hack attempt and given as much information as possible about the event. If a user forgets their password, they can contact the IT admin and request a reset, or they will be able to automatically reset it by requesting the system for a password reset link that is sent to the email address attached to the account.

**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 request the user’s personal information, such as full name and phone number, when creating an account
* The system shall allow users to reset their passwords via a secure link
* The system shall lock user accounts after multiple failed login attempts to prevent “brute force” hack attempts
* The system shall allow IT admins to reset user passwords and block or unblock accounts
* The system shall allow special user roles to be assigned with appropriate access levels
* The system shall allow admins to add/remove/modify users
* The system shall receive DMV updates about rules, policies, or practices tests
* The system shall notify admins when new DMV updates are available
* The system shall allow admins to download reports to work on offline
* The system shall keep track of changes made to records including who made the changes and allow admins to print an activity report
* The system shall allow customers to schedule, cancel, or modify driving appointments online
* The system shall allow staff to create, cancel, or modify appointments
* The system shall store information about each reservation, including user, date, time, driver, and vehicle
* The system shall prevent overlapping reservations for drivers and vehicles
* The system shall offer customers preset training packages when registering
* The system shall track the number of training sessions by each user
* The system shall allow admins to disable a training package
* The system shall allow drivers to leave notes on a user’s performance
* The system shall show the user’s progress on tests and what they have completed, including the time taken, score, and status of in progress, failed, or passed
* The system shall be accessible from computers and mobile devices through the cloud as a web app

**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 include the user’s information such as full name, address, phone number, etc. This information will be input by the user or a secretary. It will also include the student photo, driver photo, and any special needs of the student. The interface will include a section for online test progress where it will show the tests the customer has taken. It will show what’s in progress and test that have been completed. It should also say the test name, time taken, score, and status. The status will be in progress, failed, or passed. In the driver notes it will show the lesson time, start hour, end hour, and any comments made by the driver. There will also be a page for contacting DriverPass. All of this interaction will be done on a computer or mobile device web browser.

**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?*

* The drawing made by the client only shows a single page but it does not describe how users navigate to that page or to different pages to perform actions like scheduling appointments and taking tests.
* The assumption we are making in our design about the user is that they have a computer or mobile device with a web browser and an adequate internet connection. We are also assuming that users and admins/staff are capable enough to navigate a web app with minimal to no guidance.

**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?*

* In the system design there is a limitation that Liam, the owner, wants the ability to add/remove training packages but currently it requires a developer to do it. Another limitation is that the system requires a constant online connection to operate. The system is also limited to one location, without support for multiple locations.
* A limitation we have as far as resources and time is that it appears we have a small team available to work on this project and some of them don’t return from vacation until later. No budget limitations were set but I would imagine they are expecting a reasonable budget for this project. As far as technological limitations are concerned, no specific programming language has been required, and the system must be a cloud-based web app.

**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

AI-generated content may be incorrect.*