# 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?*

* DriverPass is the client that is reaching out to determine if we can help create a website that provides access to online practice exams and on-the-go training for students to better prepare for upcoming driving tests.

### 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 of DriverPass, Liam, has been noticing that there is a need for better driver training has many people have been failing their tests at the DMV.
* The owner wants a system that he can access the data online and offline from anywhere.
  + He has been notified that modifying data can only be done online to make sure there is no duplicate information on different servers.
* The owner wants the ability to read and download reports using Excel or similar programs.
* Needs to have complete access to over all accounts incase the need to rest passwords, delete account, etc. arises.
* The program needs to have the ability to send alerts on new reservations, cancellations or any modifications made for each driving lesson.
* Customers should have the ability to make the reservations themselves or employees should be able to make them too.
  + This will include picking one of three packages that will spread out over at minimum 3 days to accommodate the 2 hour driving lessons.
  + Adding personal information such as Name, address, phone number and credit card
  + Picking drop off and pick up location.
  + Note that the program needs to ability to block off times and dates that are already reserved.
* The owner has requested that he able to receive notification from the DMV to ensure that the company complies to the rules and policy that will allow their students to pass the test.
* The project needs to be on the cloud
* The owner would to be able to track the progress of the customers as well has their personal information.

### 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 the program is completed, it should allow students to take practice tests, schedule driving lesson, review their progress and make changes, if necessary,
* We need to plan out a timeline on when we want each task to be completed by assigning levels of importance to each task. Each task should have a start and end date to follow, and any changes needs to be addressed with all participants.
* We will need to make sure we implement proper use of the cloud to ensure that customers are able to access the website on the go.
* We need to make sure that security of the website is of most importance because customers will be sharing personal information that will only be used for the service provided in this 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 final product must be a web-based system which has the capability of being accessible on all platforms. A Linux server will allow that access.
* The system must run at a consistent speed where any new page loads at an acceptable rate. Doesn’t need to be overly fast but should be stable and reliable.
* The system on an individual level should be updated as more information is added and changed within the user’s profile. This should include the creation of new accounts and the maintenance of old accounts. The information that could be changed includes user profile information, tests in progress, test results and drivers updating their tables.
* The system as a whole should be updated monthly to ensure that they can accommodate new members while maintain old, to make sure the system is running smoothly and doesn’t have any security risks.

#### 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?*

* Since the product is a web-based system the operating system chosen must be accessible to all major platforms. It just needs to run on common browsers such as chrome, edge, firefox and safari.
* The back end does require the need for a database, and we should consider using NoSQL database since they will save time by not having to define any data types.

#### 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?*

* The web-based system will have to use cookies to help distinguish the different users of the product.
* Users will have to enter a username and password that should be case sensitive and allows the use of special characters.
* The system should alert admins of errors that pertain to unauthorize logins, security breaches, system bugs and potential/occurring overload or overuse of the system which would mean the system needs more storage.
* Users should also have the tools available to contact admin support to report any issues with logging in such as web interface not working or changing screens correctly.

#### 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?*

* Users should have the potential to change, add, and remove information pertaining to their user profile information without making any changes to the systems code.
* Any system updates that need to be made should be done during nonpeak hours such as 1am PST-3am PST to account for other time-zones in North America. Warning of upcoming updates should be posted VERY clearly on the homepage and on the login page.
* IT admins need to have access to the database, the server running the system and account information of both clients and employees. This will ensure that they can remove access to the system from former employees and remove access to the product from the users that go against safety rules and regulations.

#### 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 need to enter a username and password to log into the system.
* Using a network request through HTTP will provide a secure exchange between server and client.
* To avoid unauthorized access, any attempt to login exceeds 5 times should lock the users account and a notification will be sent to the user via email to reset a password.
* Any changes name to user information including password changes will be notified through email.
* If changes were made without authorization, users have the option of reaching out to admin to verify their identity and correct any changes made.
* Admin had the ability to lock and delete accounts that pose a potential security risk.

### 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.”*

* Has the ability to download reports while online.
* Should be accessible via desktop and mobile.
* The system should have role security (user or admin) which limits access to information.
* Users should be able to make, adjust and cancel reservations for driving lessons.
* Users can make the changes themselves or they can go through a secretary that can change that information for them.
* Reports of changes made to reservations need to be sent to the user and admin in case there has been an error.
* Administrators should be able to access information of which driver is paired with what student and when.
* This system allows the student to select one of three options for driving lessons with the options of changing.
* Users and Admins should have the ability to create an account for registration where they must provide the following information that can be updated or changed.
* First Name
* Last Name
* Address
* State/Zip
* Phone Number
* Credit Card Number
* Expiration Date
* CCV Number
* Users will be asked to create a password for their account that is case sensitive and allows special characters with the potential to be updated.
* The system will post notifications of DMV training questions, policies and law updates to make sure the company stays compliant with current driving training requirements.
* Users will be able to take exams and save progress where they can come back later to finish. Then show the results of the test.
* Passed
* Failed
* In Progress
* Not Taken
* Students can view a table where driving instructors can input information of lessons.
* Lesson Time
* Start
* End
* Driver Comments
* Allow contact information to be accessed by administrators and specific users. Users should be able to contact the company with questions or concerns.

### 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.)?*

* User Interface will need to include these pages:
* Home Page
* Account Information
* Course Page
* Driver Notes Page
* Student Profile
* Exam information
* Driver notes, upcoming appointments
* DriverPass Contact Information
* There will be four different types of users.
* Owner- access to the entire system
* It Administrator- access to the entire system with the ability to remove or block changes to accounts.
* Secretaries- Limited access to the system. The ability to change students’ information and make changes to appointments.
* Users – Students will have access to their account and their account only. Has potential to change profile information and upcoming appointments.
* Depending on if the user is using a mobile device or a desktop should allow input to be given with a touchscreen or using a mouse and keyboard.

### 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?*

* Users will have access to reliable internet.
* Users will have an email address.
* System will be available at any time in the day unless notified of update.
* The DMV will update their information on driving regulations and requirements.
* DiverPass will meet the requirements listed above.

### 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 time frame to complete this project is only 5 months so if there are any issues and challenges they need to handled immediately and effectively.
* There was no talk about budget and cost in the meeting. So, there might be issues when it comes to hiring a team needed to complete the task and the reoccurring costs to run a server.
* We would need a cloud-based system that allows scalability.

### 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.*

