# CS 255 Business Requirements Document

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?*

* Take advantage of a void in the market in training students for driving tests at their local department of motor vehicles (DMV)
* Provide driving training to his customers
* Offer online classes and practice tests
* Provide on-the-road training based on customer preference.
* Ensure everyone has the most updated training and policies
* Work with the DMV for any future compliance changes

### 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 system will be accessible on multiple platforms except for offline use.
* The system will allow user tracking, for example, be able to know who made reservations, who canceled them, and who modified them last.
* Be able to print an activity report and who is responsible for each activity performed
* The system will be able to identify the driver and the customer as they are scheduled together for on-the-road training.
* The website needs to show:
* Driver notes
* Online Test Progress
* General information of the student
* Specials needs if any
* Driver photo
* Student photo

### 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?*

* Upon completion, the customers should be able to use the system to make reservations for driving lessons and on-the-road driving training lessons.
* When scheduling, the system should let the customer input day, time, and date of each reservation
* The system should prompt a guess customer to create an account, then use their account to make reservations
* Should be able to push notifications to the users according to the user’s activities.
* Run off the web, specifically the cloud space.
* The user interface should have a contact us page where DriverPass information will be uploaded and an input space where the student or guest can input their email address.
* System should allow Customer Registration
  + First name
  + Last name
  + Address
  + Phone Number
  + State
  + Payment: credit card number, expiration date, and the security code.
* Show overall training progress, online test progress, on-the-road driving progress
* Training progress
* Test name, time taken, score, and status like not taken, failed or passed.
* Mark and display task correctly performed with checkmarks, and task incorrectly performed with a cross
* Display Student’s general information
* Pick up location
* The drop-off location should be the same as the pickup location.
* Show driver notes/comments on-the-road training performed

**Users of the system:**

* + The Owner/Big boss
  + IT officer-maintenance of the system
  + Secretary-Register users make appointments online and in-person
  + Guess customers-View Packages, Create Profile
  + Customers- Make Appointments, Cancel, modified/change date.

## 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 needs to run on the main operating systems and web browser
* Android
* Mobile devices
* IOS
* Web Browser
* The system needs to run fast enough to quickly update its web browser and its corresponding applications.
* The system should be updated after each modification and on a scheduled basis.

Modification:

* New Security Update
* Reports of Crash/Buggs
* General Updates/Scheduled Updates
* New DMV test regulations, new laws, and legal/illegal driving information

#### 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?*

* Few platforms’ constraints I can think of are
* Web browser, mainly HTTPS/JAVA
* IOS
* Android
* For the back end, we can set up a space, server, virtual machines on one of the cloud provider’s platforms, using cloud services will make it easier for us to make the system multiple platform 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?*

* We can distinguish between users based on their login information, such as username and password. Optionally, we can add the AI feature that recognizes users’ faces as they use the platform.
* The password input will be case-sensitive because of strong password authentication.
* 3rd incorrect user log-in warning will warrant the system to
* Inform the administrators
* Requestion a user password change
* Request two-factor authentication questions to be answered.

#### 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, the ability to make changes without changing code will be needed, and they should involve
* Adding user
* Removing user
* Modifying user’s data
* The system should leverage the
  + IOS app updating system
  + Android app updating system
  + Sometimes there may be a need for an on-premises update, but this should happen during the noncrucial time
* The IT admin needs permission to
* To add, delete, modify source code
* Monitor system performance
* Track system users
* View Inflow of DMV data and manage DMV data on rules and policies on driving tests.

#### 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?*

* User will need their Username and Password to log in
* We can use Secure Socket Layer (SSL) to secure data exchange between the client and the server. This is required, very important
* Let the user know of any suspicious activity performed
* Any suspicious activities, unexpected activities, attempted hacks will be reported to the administrator and the user will be automatically logged out of the system.
* If a user forgets their password, they should be able to reset it by
  + Answer a list of security questions with their corresponding answers
  + Reset their password
  + Contact customer support department for password reset

### 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 update all data and information between platforms.
* The system shall allow a user to reset their password.
* The system shall allow data to be modified on any platform.
* The system shall tell the progress of scheduled training and hours taken.
* The system shall be updated with any DMV regulations or laws.
* The system shall show online test progress.
* The system shall display user information.
* The system shall be flexible and able to modify to add new features.

### 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 user interface will be designed to fit different operating systems, screen sizes, and devices.
* The IOS OS, Windows, Linux, Tablets, mobile screen flexibility, and every other mobile can leverage the web version of the system too.
* The interface will display:
  + Online Test Progress
  + Driver Notes on logged in account
  + Student Information
  + Special Driving Requirement (if any)
  + Driver Photo
  + Student Photo

### 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?*

* Being familiar with mobile devices, for example, android and other mobile devices
* Knowing how to design IOS mobile devices
* Knowing how to include the system various keyboard and mouse versions

### 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?*

* May not be able to operate offline to avoid duplication of data
* We should be good on the budget unless a serious issue, flaw, disturb the project.
* Not so many technical limitations, however a web browser on a traditional computer usually has more processing power compared to mobile devices due to the CPU and memory allocation, so with this in mind, we need to optimize the mobile devices to function very well.

### 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 picture containing chart

Description automatically generated