# CS 255 Business Requirements Document

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?*

* This project is for one of our clients, DriverPass, a newly launched company wanting to provide students competitively packaged driving lesson plans to better prepare them for driving tests at the local Department of Motor Vehicles (DMV). DriverPass wants its customers to be able to take online classes and practice tests, while also providing them with on-the-road training if they wish.

### 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?*

Liam, the owner of DriverPass, has found an opportunity to fill a void in the market by providing better driver training for students planning on taking the driving test. He aims to solve the problem of many students failing their driving tests on the first try. As a solution, Driver Pass wants us to build a system that offers online classes and practice tests, along with package options to book on-the-road training. The different components of this system will include:

* Online accessibility for students and instructors from any computer or mobile device, as well as downloadable reports that can be used offline.
* A web portal interface that is user-friendly, to access account, schedule appointments, access test scores and progress statuses.
* Connectivity to the DMV to provide real-time updates on rule and policy changes.
* Full owner control of the system for security and tracking purposes.

### 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?*

* The owner of DriverPass using the system should be able to:
  + Have full access over all accounts
  + Track all activity, such as reservations, cancelations, and modifications
  + Print activity reports
* Employees using DriverPass’ system should be able to:
  + Enter customer registration information
  + Access customer account to track progress.
  + Match customer with driver, time, and car.
* Customers using DriverPass’ system should be able to these online:
  + Have access to account once registered.
  + Make reservations for driving lessons
  + Track their progress and test scores.
  + Option to reset their password if they forget it.

## 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 must support all mobile device formats
  + Android, iOS
* The system must support all current web browsers such as:
  + Firefox, Safari, Chrome, Explorer
* The system must provide monthly performance reports
* The system must perform updates without service interruption

#### 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 must run on Windows operating system
* The system must be hosted by a cloud-based database
* The system must allow the use of Windows application to run apps such as:
  + Microsoft Word, Excel spreadsheets, and PowerPoint
* The system must allow the use of Adobe Reader for editing PDF documents
* The system must allow for standard video and image file formats such as:
  + MP4, MOV, PNG, JPG, GIF

#### 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 system must create account user profiles based on registration
* The system must have rich text editor with HTML capabilities
* The system must notify administrators when systems are down
* The system must send email reminders to students of upcoming tests and training appointments

#### 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?*

* The system must have a growing capacity to store large amounts of data
* The system must allow students to change their password
* The system must allow system administrators to:
  + Reset passwords
  + Block access to discharged employees
* The system shall be connected to the DMV for updates

#### 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 shall have a public cloud-based environment with authentication
* The system must use user two-step authentication and password management
* The system must audit and track log in analysis
* The system must have network and data security
* The system shall allow for role-based account privileges

### 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 run on a cloud server
* The system shall validate user credentials when logging in
* The system shall allow for account creation and registration by students
* The system shall allow for account modification/deletion by administrators
* The system shall store and manage test and learning materials electronically, as well as downloadable offline
* The system shall provide students with the following 3 package options
  + **Package One:** Six hours in a car with a trainer
  + **Package Two:** Eight hours in a car with a trainer and an in-person lesson where we explain the DMV rules and policies
  + **Package Three**: Twelve hours in a car with a trainer, an in-person lesson where we explain the DMV rules and policies—*plus* access to our online class with all the content and material. The online class also includes practice tests.

### 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 system shall be accessible on a web browser by mobile devices and desktop computers
* The system shall allow access to the student, the driving instructor, and administrator
* The system shall display the following:
  + The company logo
  + Student information:
    - First name, Last name, address, city, state, zip, phone number, email.
  + The student’s online test progress:
    - Name of test taken
    - Time taken
    - Score
    - Status:
      * Not taken, in progress, failed, or passed
  + A table containing notes from the driving instructor for:
    - Comments
    - Lesson time length
    - Start and end times
  + A photo of the driving instructor
  + A photo of the student

### 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 customer has all necessary permits and legal processes worked out
* Project costs will remain the same as initially estimated
* End users will be available for testing when needed
* Resource material will be provided on time and on correct format

### 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 estimated 3-month time span of the project may not be enough
* Cost limitations can arise due to the use of a third-party cloud-based server
* Accessibility limitations may arise in the need to utilize all web browsers
* Design limitations may arise due to the customer’s specific interface requests

### 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.*

Chart, waterfall chart

Description automatically generated