# 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?*

* This purpose of this project is to develop an online system to manage reservations and provide practice exams for a drivers training business.
* DriverPass is a company that provides driving training. They provide practice exams, and behind the wheel training .
* The system they are looking for is one where students can get practice exams, and also schedule driving packages.

### 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?*

* DriverPass has noticed there is a need for better driver training. Too many people are failing their drivers test at the DMV.
* DriverPass hopes to take advantage of a void in the drivers training market.
* The system should be able to have the following components:
  + Practice exam downloads
  + Database of customer information
  + Scheduling for driving practice

### 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?*

* Should be online, but allow data to be downloaded for offline use.
* Should use Roles Based Access Controls (RBAC)
* Customers should be able to schedule appointments
* Should track trainer and customer pairings
* Should offer three initial training packages, and allow for packages to be disabled at will.
  + Package One: Three Two hour sessions in a car with a trainer
  + Package Two: Four Two hour sessions in a car with a trainer and an in-person lesson on DMV rules and policies.
  + Package Three: Six Two hour sessions in a car with a trainer, an in-person lesson on DMV rules and policies, and access to online class with all the content and materials.
* Should track customer information
  + First and Last name
  + Address
  + City, State and Zip Code
  + Phone Number
  + Credit Card information
  + Photo
  + Any Special Needs
  + Driver notes
* Should be able to update practice exam information from DMV system
* Should display practice exam progress
* Should store drivers notes on each 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?*

* The system should be a web-based application on a cloud based system.
* The system should be responsive.
* The system should update automatically from the DMV. In addition, system administrators should be able to update the system at will.

#### 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 should be in the cloud. I recommend a Linux cloud provider.
* The backend will require a database server and possibly an email server.

#### 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 should employ Roles Based Access Controls (RBAC)
* All input should be case-sensitive, and support UTF-8 character sets.
* The system should email system administrators anytime there is a problem with the system.

#### 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 should access a database server on the backend, allowing changes to users accounts, class content, DMV requirements, and schedules without changing the code.
* IT Administrators will require full access, however that access should be split across multiple purpose built accounts.

#### 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 a username and password to log in.
* The system should use SSL/TLS and HTTPS for communications between client and server.
* Any account that has had the wrong password entered 3 times should be locked until an administrator can unlock it.
* The system should have a “forgotten password” function. During account creation some questions should be asked of the user, in order to verify identity should the password be forgotten, allowing the user to change their forgotten password.

### 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 allow for the downloading of data in csv format for work offline.
* The system shall allow for online access to data.
* The system shall track all updates to the system and which user account made the changes.
* The system shall allow for customers to schedule driving lessons online.
* The system shall allow for administrative users to schedule driving lessons for any customer.
* The system shall track driving lesson appointments by customer, car, instructor, date, and time.
* The system shall employ Roles Based Access Control (RBAC) and assign all users to individual roles.
* The system shall employ a backend database to track the following things:
  + Driving Lesson Cars
  + Driving Lesson Instructors
  + Users
  + Package Deals Available
  + DMV Rules and Regulations
  + Practice Exams
* The system shall allow for configurable Lesson Packages.
* Administrative users shall be able to add packages, or remove packages as required.
* The system shall track the following information for each registered user:
  + Username
  + Password
  + First and Last name
  + Address
  + Phone Number
  + State
  + Credit Card information
  + Pickup and Dropoff locations
  + Forgotten password questions
  + Practice exams taken
  + Progress within a practice exam
  + Instructor notes on student.
  + Driving lesson history
* The system should allow for users to reset a forgotten password after appropriate identity verification.
* The system shall be cloud-based, web-based application.

### 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 should be displayed within the client-side web browser.
* The basic layout of the home screen should include:
  + Company Logo at the top center.
  + Online test progress, under the logo, on the left hand side.
  + Student information under the logo on the right hand side.
  + Under the Online test progress, should be the Drivers Notes on the student.
  + Under the student information, should be any special needs required, the students photo, and the instructor 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?*

* Assume that appropriate encryption and secure protocols will be employed within the system.
* Assume that initially credit card information is just stored within system, and credit card charges will be handled by a different application.o

### 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?*

* Adding lesson packages outside the layout of the initial packages might require changes to source code.
* Changes to the layout of system pages will require changes to source code.

### 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 table

Description automatically generated*