# 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?*

* Client
  + Driverpass
* Purpose
  + Online driving school
  + In person driving lessons with instructors based on reservations
* Goals
  + Online sign up and reservation system for
    - Different training packages
    - Driving lessons
  + Online training classes and practice tests
  + User management
    - Role based access
    - Ability to change employees access levels
  + Appointment management
  + Data access from anywhere
    - Offline access
    - No modifications in offline mode

### 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?*

* Problems
  + Many people fail their driving tests at the DMV
  + Need for an integrated online / in-person trailing program
* Components
  + User Roles
    - Liam - System Owner
    - Ian (IT) - Full system access
    - Secretary - Appointment management
    - Customers - Online Appointment creation / canceling
  + Training Packages
    - 6 hours of driving training
    - 8 hours of driving training + in-person DMV training
    - 12 hours of driving training + in-person DMV training + online content access with classes and practice tests
  + Reservations and Appointments
    - Online / Phone appointments
    - System matches student with instructor and auto schedules
  + DMV
    - DMV connection for automatic updates about regulation / policy changes
  + Cloud based
    - Web based
    - Data access anywhere
    - Secure and managed by a third party

### 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?*

* System capabilities
  + Users can manage the process of drivers training online
    - Book in-person appointments
    - Read online content
    - Practice tests
    - Progress tracking
  + Secure and easy role-based user management
    - Logging for any change in the system
  + DMV integration
  + Cloud based
* Measurable tasks
  + Implement a role-based access system
    - Owner
    - IT
    - Customer
  + Implement a system for user management
    - New user creation
    - Password resetting
  + Implement a reservation system
    - Ability to create appointments
    - System auto scheduling instructors with students
    - Students can cancel / modify appointments
  + Implement online learning system
    - Reading material
    - Practice tests
  + Implement DMV integration

## 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?*

* It should be accessible through desktop web browsers and mobile devices
* The system uptime should be as close to 100% as possible
* System updates / maintenance should be performed quarterly

#### 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 core of the system should be cloud-based so it can be used / adapted to any of the widely used platforms
* The system will require a payment processing service through a 3rd party
* The system should not have installation requirements and will work natively in a web browser

#### 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 identified using their email address or a unique username
* All input related to login is case-sensitive
* Login attempts will be monitored to help prevent unauthorized access
* Progress through lessons and course work will be tracked and reported accurately

#### 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?*

* IT admins will be able to add, remove, and edit users without code changes
* The system will be built in a way that allows modular updates without requiring large changes

#### 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/email address to log in securely
* All communication between the user and the system will be encrypted
* All sensitive data will be encrypted and stored securely
* After multiple failed login attempts, accounts will be access locked for security
* Account recovery will be possible with email verification
* All system activity by users or admins will be logged for security

### 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 during login
* The system shall allow account registration, modifying, and deletion
* The system shall allow students to view training packages and schedule lessons / courses
* The system shall process payments securely
* The system shall sync to a cloud based database
* The system shall have role-based user access controls
* The system shall track online course progress
* The system shall provide offline access to course materials
* The system shall give instructors the ability to view and manage their scheduled appointments

### 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 user-friendly and accessible through all commonly used platforms
* Navigation should be intuitive
* The system should be responsive and allow for accessibility changes

### 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 have internet access
* Users have an appropriate desktop / mobile device
* 3rd party payment processing will be securely handled

### 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?*

* Offline access will be read-only
* Scheduling test times with the DMV
* No mobile application support

### 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.*

