# 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?*

* Provide DriverPass students with online practice exams and on road lesson scheduling in an attempt to increase student pass rates by centralizing training and reservations
* Enable staff to manage customers, packages, cars and drivers from anywhere

### 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 needs a system to handle student registration, package selection. Customers should also be able to select a package, take online classes or exams and also schedule a 2 hour driving lesson
* Users include: Owner, IT, Secretary, Students and Drivers.
* The system will depend on feeds from the DMV to keep all exam and training content current.

### 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?*

* Decrease student failures be offering updated content and practice exams.
* Provide a reliable way for students to schedule their 2 hour driving lessons
* Maintain an audit of reservations to track who created or edited a reservation and when

## 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?*

* Mobile ready web application hosted in the cloud
* Page loads of less than 3 seconds
* Reservation submission of less than 2 seconds
* Daily DMV content refresh
* Nightly backups

#### 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?*

* Web application running on Linux based systems with a relational database for state management with models for, users, packages, cars, drivers, reservations and test attempts
* Exportable report in CSV format

#### 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?*

* Unique accounts for all user types including students and staff. The accounts will be controlled via Role-base Access Control
* Enforce 2 hour increments for all road sessions
* Ensure that no driver has more than one session in the same two hour block
* Audit all reservation activities
* Audit all user records
* Generate alert when DMV content changes

#### 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?*

* To facilitate the ability to mange back office changes we would create an Admin UI only accessible to staff to manage users, packages etc.
* IT can reset passwords or revoke access

#### 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 login using email and password
* Password recovery handled via tokenized email workflow
* All traffic is secured via TLS
* Encrypt all PII and payment details when the data is at rest
* Account lockouts after 5 failed login attempts
* Role-based Access Control

### 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 students to create accounts, log in, reset passwords, profile and payment information
* The system shall let students browse and select packages and included services
* The system shall schedule 2 hour driving lessons by matching a student with a drive, car, date and time while preventing conflicts
* The system shall allow students to create and modify reservations for 2 hour sessions
* The system shall allow the secretary to create and modify reservations on behalf of a student
* The system shall record driver notes including start and end times
* The system shall deliver online class content and practice exams, it should keep track of time taken, score and status
* The system shall integrate with the DMV for updates and notify admins when an new update has been received
* The system shall provide exportable audit reports
* The system shall allow IT to reset or disable accounts and manage roles

### 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.)?*

* Self-service registration, package viewing
* Lesson scheduling
* Practice exams
* Progress tracking dashboard
* Drive notes
* Create and modify lessons
* Edit student profiles
* View assigned lessons, enter start and end time and comments to driving lessons
* Dashboard with revenue and activity
* Mobile ready web application

### 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?*

* Payments will be handled by a payment gateway
* DMV Api will always be available
* Notifications are email based

### 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?*

* First release will not include non-developer package
* Offline modifications not supports
* Small budget

### 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.*

