# 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?*

* The client, Ian and his company DriverPass, would like to create a system that offers training that supplements on-the-road training such as online classes and tests in hopes of improving the passing rate of beginner drivers testing at the DMV

### 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 recognized that there is a need for improvement to driving instruction and they want a system that can allow beginner drivers to supplement their on-the-road driving practice with classes and tests, these should be booked both over the phone or online
* DriverPass wants live training to still occur and will offer reservations for beginners to make with DriverPass’ instructors, but supplemental training will be offered so that inexperienced drivers have a greater chance at passing the driving test at the DMV
* The system will have security and backup that will be conducted by a third party as is the data will be hosted on the Cloud
* The system should track the users that make, modify or cancel reservations
* An activity report will need to be generated so that an administrator can print it off
* There should be different levels of user roles

### 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?*

* A reservation system will be completed, giving the ability to make, edit, or cancel appointments and provides a documentation including the instructor, the vehicle and the date and time of the reservation
* The system should be capable of being accessed in read-only when accessor is offline
* Secutiry and backups will be done by a third-party
* Classes and tests should be offered online for customers to learn and can be purchased through various packages that are offered on the website
* User accounts will be needed that include different role levels
* Customers should be able to select and purchase from an option of different packages
* DriverPass should be given a way to update the packages they offer
* Ideas for interface designs, class diagrams and overall activity diagrams will need to be researched and created
* Documentation will be provided through a GANTT chart as this chart can aid project management by showing tasks and can display a timeline

## 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?*

* DriverPass will be a web-based app that is hosted via the cloud
* Database queries will be made and they should be quick in returning information to its users
* The app will need storage space for the database and photos

#### 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?*

* Because the app will be web-based, a Windows server would be a good option
* Windows provides many tools to host web applications
* The app will be connected to a database to save and query data
* The website can be created using multiple languages and/or frameworks, ASP.NET comes to mind

#### 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 utilize emails or usernames. Case-sensitive passwords will be used to login. If a password is forgotten, a new one can be emailed and they will be prompted to reset
* Admins should receive a notification when an account is locked due to incorrect attempts
* Admins should be notified when the app and database connection is lost

#### 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?*

* Users should be able to edit account information and employees with access should be able to update user information from the application
* IT admin should be able to access user information and must be able to edit user accounts and roles
* The application and the databased should be backed up and updates should be done regularly without affected the database. Test environments can be used to test updating on the application

#### 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 password to login
* Authentication emails can be sent
* HTTPS should be used by devs for sending and receiving data. This will allow data transfer to be encrypted providing more security
* Devs should include a maximum number of attempts allowed by a user to login before blocking them from continuing and prompting the user to either wait for an amount of time or to contact admins to unlock
* If a password is forgotten, the user should be able to receive an email to reset it

### 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 should display the home page that contains the information about DriverPass and the services they provide. A navigation bar should be provided with links. “Register” and “Login” prompts should be provided
* The system should register users only when the necessary data is provided by the user
* The system should be able to validate the user’s credentials
* The system should allow for reservations for driving lessons, including the ability to select from a schedule of available dates, times and drivers
* Education packages should be available for purchase by users
* The system should be connected to the DMV to display and update rules and sample questions for the users to study and practice
* Online practice tests should be available and will display on the profile of the user to view
* A page should be included that shows user test progress, their information, the driver and photo, and should include notes created by the user
* The system should query the database and generate reports for the admins to view

### 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 very simple and inviting to new and existing uers
* Users will be based on roles and should be either customers, admins, IT, or owner/manager
* All users should be able to register and login, also allowed to reset passwords
* Customers should be able to view and purchase DriverPass packages, input information, study/ practice, and schedule lessons
* Employees should be able to create customer accounts, fill in their information, set package types, manage customer/driver schedules
* Admins should be able to create employee roles, get notifications for issues, and should be able to manage the app like backups for example
* The owner/manager should be able to create and access reports, view driver schedules and view the active users
* The user interface will be dynamic and should be adaptable to the size of screen the user is on

### 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 users have computer and internet access
* Users have an email to verify and use for their accounts

### 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?*

* Certain areas of the region may have less/slower access to the application and drivers
* The client will not have a developer to debug at a moment’s notice
* Some devices may struggle with opening the application

### 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.*

