# 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 is a company called DriverPass
* DriverPass is a company that is looking to connect students with easy to access driving tests and driving teachers.
* They want users to be able to create accounts
* They want users to be able to book 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 sees a problem with the ability of students to connect with learning resources, such as tests and teachers
* DriverPass requires a database to store information related to students
* DriverPass requires an interface for students to access tests and book driving time
* DriverPass requires a content delivery system to serve users content quickly at low cost

### 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?*

* Serve tests to users
* Allow users to create accounts
* Handle transactions for driving packages
* Store user information
* User roles and permissions
* DMV update notifications

## 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’ main environment should be web based, and the system should be able to serve content to users in about 3 seconds, given the user has decent internet and resources.
* The system itself should be updated as the need arises, whether a core part of the system’s framework has received an update, or if potential vulnerabilities are found.

#### 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 run on Linux, as it provides the most efficient use of resources. The back end will require something like MongoDB or MySQL to handle data.
* The backend will also involve a content management section for easy addition of new pages by staff.

#### 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 will distinguish between different users utilizing unique names or IDs. The input for usernames should be case-insensitive.
* The system should inform the admin of problems directly related to the core functionality of the website, for example, if a payment processor is unable to process payments due to a server issue, the admin should be informed, but not if the payment processor is unable to process payments due to a user error.

#### 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?*

* Yes, permissions and user information would be able to be changed through a management software in the back-end, not requiring direct code changes.
* The system would be able to platform updates either manually through an FTP service, or automatically via a script system.

#### 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 user requires either their email address or username in addition to a password to log in.
* The connection can be secured by encrypting data before it is transmitted.
* In cases of brute force attempts, password attempts should be limited.
* If a user forgets their password, they should be able to reset it by entering their email and following a series of steps to change 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 shall encrypt important data before it is transmitted
* The system shall serve content within an acceptable timeframe
* The system shall allow the easy management of user accounts
* The system shall provide a database for user accounts and other important information
* The system shall be able to process payments
* The system shall connect student drivers and teachers

### 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 different users include students, teachers, and the administrator
* All users need to be able to access the log in page
* Teachers need to be able to view scheduling and update their availability
* Teachers and students will utilize the same front facing interface, mainly interacting with it through the website
* A mobile app, with a similar yet more compact design can be created
* Administrators will have access to both the front end and back end tools

### 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?*

* We are assuming users have basic technology skills and internet access
* We are assuming each user will have an email address

### 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 small scale of the client may be a limitation in regards to budget, as upfront hardware cost may be prohibitively expensive, cloud based hosting is likely the best option.
* Future compliance with DMV rules and policy will rely on an expert on the matter and rewrites of all material that is no longer in compliance.
* Access to DriverPass requires internet access, so if an individual wanted to use the tests or information offline, a download option may need to be added.

### 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.*

[Insert chart]