# 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 company DriverPass is an organization that is dedicated to aiding beginner driver students through the process of passing their driver’s tests at their local DMV. According to the interview with DriverPass they want an online application that is available on computers and mobile devices. Client requests for data to be stored in this online application. The application system must have an option to download the reports of data.

### 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?*

* The client would prefer for the system to allow users to schedule driving class appointments to aid the DMV with facilitating the driver education lessons in an efficient manner. The system will also have a feature that allows driver instructors to take notes, keep track of upcoming appointments, and view students’ contact information if needed. One component that the system needs is the ability to set appointment schedules and reminders. The additional components are also a login system for students and instructors to keep their personal information secure.

### 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?*

* The system should give students learning to drive the ability to schedule appointments for driving classes at the DMV to make the learning process easier. An additional goal of the system is to help instructors to keep track of scheduled appointments with their students and give them assignments or other forms of communication with students in the system. The company DriverPass, would also like for the system to store data and have the data to be downloaded for client company uses. An example of this is the company wants to be able to modify the data and reupload the data to the system.

## 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 that DriverPass is requesting should ideally have the ability to run on a mobile based application, while simultaneously customers and the client company should be able to access the online website. This website system needs to run on all operating systems, for example Mac, Windows, or Linux. However, the mobile application environment requires the system to run on all Apple and Android devices simultaneously as well. The system should also have low enough latency to allow the convenience of downloading and uploading data while the system is online. The system should also have fast enough speed to rapidly examine and scroll through the data whenever system is offline as the client, DriverPass, desires. The client DriverPass in this situation would desire for the system to receive updates relatively infrequently, only when the DMV changes its rules (which might happen a few times a year), or when the company wishes to add a new feature.

#### 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 client company mentioned previously in the interview their desire to have the system work on any computer and additionally any mobile devices. An example of this is hypothetically the DriverPass application working on all commonly used platforms such as Windows, Mac, and Linux. And additionally running on Android and iPhone mobile devices as well for the customers' and the client company's convenience. For the back end of the system to continue running properly it may require the use of a relational database, and a server as well. The server will be significant in the role of providing data to users of the application or the online website in the client- server model that is widely used.

#### 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 be able to distinguish the different users by the account name for each user. The username login system should not be case sensitive ideally because this could possibly make the login process for the users of the system frustrating or inconvenient. The administration of the system should be notified of an issue in relation to a threat of maintaining the security of the database that is within the system. It is also important for the administrators is notified when a programming error has occurred immediately if the error is negatively impacting a core function of the application, the online website, or the database that stops the regular important business activities for DriverPass. In any event that these types of problems appear corrective maintenance should be performed.

#### 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 is possible to update the database of a system, and thus the user data, without changing the code. To adapt to platform updates, the code will need to be modified for some platform updates, but not all (only those that would break functionality). The IT administrator will need the ability to ensure the app is running and to update the database, so they will need access to the database and to the server or cloud host running the app.

#### 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?*

* To login, the user will need a username and password, and possibly an optional two-factor authentication method. The data exchange can be secured by public key encryption, and use of HTML 5 for the web app. To protect against brute force hacking, the account could be locked out after a set number of failed login attempts, such as 3 attempts. There should be an option on the app or website to reset the password using the user's email or phone.

### 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 add a class session to an instructor's calendar when requested.
* The system shall "block off" a calendar slot once a class is scheduled.
* The system shall check that the user enters a valid password.
* The system shall enable taking notes on students.
* The system shall download information from the database on request by an instructor.
* The system shall update the database in accord with instructor uploads.

### 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 must enable the functionality shown in the meeting. For instructors, it must provide the ability to view appointment details, to take notes on students, to view data online and offline, to download and upload data, and to schedule appointments. For students, it must have the ability to schedule and modify classes, to select different packages, to watch online study material, and to view past classes. The user interface should be accessible through a web browser or a mobile app.

### 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?*

* I assume the users have access to the internet.
* I assume the users have modern web browsers and mobile devices.
* I assume the users are only using major computer or mobile platforms.

### 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?*

* Resources: DriverPass is on a limited budget for both development and web hosting.
* Time: The app should be completed quickly, ideally my May as expressed in the meeting.
* Technology: The system depends on compatibility with major web browsers and mobile devices, which could be broken by updates.

### 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.*

The Chart is below.

