# 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 purpose of this project is to fill a void in the driver testing/pre testing market for students. The DriverPass system will allow the students to use classes and pretest with the option of using hands on driving to give them a better chance at passing the actual test 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?*

* Access to servers on multiple platforms and have access to data on and offline. This will allow for work to be done without internet access and allow for more user groups on different devices.
* Stricter access groups for users. This will allow data to be obfuscated from users that are not at a management access group. A database will need to be required to keep track of users and what group they are attached to.
* Tracking of fleet cars, instructor drivers. This will allow for students to schedule a car and instructor and not overbook. There will need to be a system set up to keep track of both fleet and instructor time to make sure that both are available when they are scheduled.
* Credential reset system. This will allow users a secure way to reset passwords and get sign in credentials. There will need to be a secure password reset system that allows for an ease of password reset.
* User intuitive graphical user interface. User groups will have tailored experiences for their position in the application.

### 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?*

* This system will have a well rounded user experience that will aid them in passing the driving exam. Their experience will start with an extensive dashboard that will provide them with all information they would need about all classes and pretests. They will also be given a few choices on how they would like to schedule driving lessons. The easier option is through the portal but they will also have the ability to call or visit in person to make these appointments. For this to be measurable, there needs to be checks put in place to not allow someone the ability to make an appointment if there is no possible way for one to be made. These checks are the timing of the appointment, making sure a training driver will be available as well as a car in the fleet. On the employee side, employees should not have the ability to access unneeded data for their job titles and day to day work. There will also need to be security built in to every part of the system and especially the password reset. There will need to be a test to see if there are any vulnerabilities in the password database or in the password reset 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?*

* This will be a web-based cloud application.
* The system should run as fast as the users system allows.
* The system should be updated with the systems updates for security, changes in DMV laws and bug fixes when reported.

#### 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?*

* This system should be run on a Linux operating system.
* The linux operating system allows for an ease of internet firewalls for users to access the application.
* Linux also allows for processes that connect the process up to the required databases.

#### 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?*

* There will be different user groups setup for student, administrator and instructor.
* I believe that they should not be case sensitive so that there will be less of a chance to allow for the same user name in different cases.
* The system should always be logging while running. Errors should always be reported instantly.

#### 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?*

* A user account information will be able to be updated in the user database. The system will keep backups of data and different versions so that data can be updated and the system will only keep the most recent data.
* The system will adapt by checking all databases for the user to see the most recent change to the data and save that around all of the databases.
* The IT admin should have FULL access to the server

#### 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 will need a username and password and a one time code sent by email
* The connection is considered secure if the user inputs that code that was sent to their email when they attempt to login.
* There will be a limit set on login attempts before an admin needs to be contacted to unlock the account.
* If a user forgets their password, they will be able to reset by providing the account username and then inputting the code that was sent to that account’s email.

### 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 include a user one time code email when a user attempts to login
* The system shall have different user types to allow for different authorization levels
* The system shall allow for api integration to allow for outlook or google calendar integration
* The system shall allow for files to be to be stored and viewed at a later date if they need to be reviewed
* The system shall Provide all user types with the ability to view grades and user metrics for work. Also administration will be able to see attendance to classes

### 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.)?*

* There needs to be a user intuitive interface that allows users a dashboard for all information they would need.
* There will be a need for a user/admin/instructor interface.
* The user will need to be able to view grades, reserve in person driving, take tests online
* The admin will be able to view both the user and instructor data
* The instructor will be able to view what days they have a lesson, all feedback for the student
* This will be a website that will run like an 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?*

* I am assuming that users will understand the the new technology of one time passwords
* I am assuming that the people scheduling in person will update the calendars in the app so that the schedules are kept track of

### 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 biggest limitations are going to be budget and time. Budget because there are many things that need to be implemented and it will be cloud hosted so there will be increased cost there. There is also a massive limitation on time because there will be many moving parts that need to be implemented.

### 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.*

