# .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 DriverPass
* The purpose of the project is to provide online practice driver’s test and provide online classes to student drivers.
* They want their system to help student drivers who are struggling to pass their tests with the DMV the opportunity to have practice and study before taking their driver’s exam.

### 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?*

* Remote access to data on the server via internet connection
* Differing Roles and permissions based on roles and responsibilities. [
* Manager role
* IT officer role
* Secretary role
* User Role]
* User tracking for updates/changes made internally/externally by either an employee or customer.
* Customer reservation tool for driving lessons.
* Customer identity verification tool
* Users should have the ability to modify reservations at will online, via their account.
* 10 cars are currently available.
* Three packages can be purchased.
* Package One: Six hours in a car with a trainer
* Package Two: Eight hours in a car with a trainer and an in-person lesson where DriverPass explains DMV rules and policies.
* Package Three: Twelve hours in a car with a trainer, an in-person lesson with Driver Pass about DMV policies and rules, plus access to online class with all the content and material, practice tests included.

* Administration should be allowed to enable and disable package offerings based on booking availability.
* Registration is initiated with a phone call, providing personal details such as Name, Phone Number, Address, State, Credit Card Number, Expiration Date and CVV, pickup location if needed and drop off location, which should match pickup location.
* Web-based cloud-server application.
* Connection to DMV for up-to-date information about rules and policies.

### 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?*

* System should provide online portal to practice tests and online classes once registered through the company.
* System should provide test/class progress, completion status, score, and date completed.
* System should track Driver Notes/Comments for student
* System should track lesson time (The start and the end times of the lesson) along side the comments
* System should commit any changes made with a user signature stamp, showing who updated information in the system.
* System should be connected to new information and alerts provided from the DMV for the most up-to-date source for student drivers.

## 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 should be cloud-based and web based, as it needs to be accessible to specific data when offline. This gives an ability to upload at times of active connectivity and access to data and limited functionality when offline.
* The updates to the system need to ensure constant server connection for updates to the DMV and other requested features.
* The system needs to be efficient and quick in regards to things like requests to and from the servers student response times and instructor-posted feedback.

#### 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?*

* A database and server will be needed for the system to function properly on the back end.
* This application should be able to run on any popular operating system, be it Windows, Mac OS, Linux, Chrome OS Android, iOS or iPadOS. Achieving this by ensuring applications are compatible with web browsers such as Chrome, Safari, Microsoft Edge, FireFox, or Opera just to name a few.

#### 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 identify users based on a distinct user ID and password combination. Validating that the combination entered is what has been set by a user.
* Input should be case sensitive to ensure no two entries are alike.
* Administration should be notified after repeated failed attempts at login verification, accounts should be locked accordingly and users instructed to contact administration with help regaining access to their accounts.

#### 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?*

* Adaptability to edit, add, and remove users will be needed by administrators, which can be included in code provided with the system specifically for POST requests and controllers.
* To ensure that the system remains compatible and current, it should actively participate in requests from our programming team.
* The IT admin requires comprehensive access to system components, including user accounts, password management, and the ability to remove or suspend employees when necessary.

#### 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?*

* User authentication will be done by providing a unique user identification name or number, paired with a unique password that must be stored into a database, and confirmed to gain access.
* To secure data exchange between the client and the server, HTTP protocols should be implemented, safeguarding sensitive information.
* In the event of a "brute force" hacking attempt, the system should promptly respond by alerting the administrator after a predefined number of consecutive failed login attempts. This threshold, between 1 and 10 failed attempts, ensures proactive security. After four failed attempts, the login functionality should be temporarily disabled, and an alert should be sent to the administrator.
* User password recovery should be accessible for any user without needing to have validated access. They must verify their identity in a secondary manner to regain access, through means such as security questions, text or email verification.

### 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.”*

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### 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.)?*

* Remote access to data on the server via internet connection
* User types:
* IT Administrator
* Instructor
* Student
* Parent/Guardian
* User tracking for updates/changes made internally/externally by either an employee or customer.
* Customer reservation tool for driving lessons.
* Customer identity verification tool
* Users should have the ability to modify reservations at will online, via their account.
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### 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?*

* Assumptions include the system's continuous availability for 24/7 access, with users primarily being DMV students.
* It's assumed that the system will remain up-to-date with any changes in DMV guidelines, providing accurate study materials
* An assumption is made about the potential development of a future app version of DriverPass

### 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 system's limitations encompass the need for a stable internet connection to access and

update user data.

•Time constraints and budget considerations are limitations that must be acknowledged.

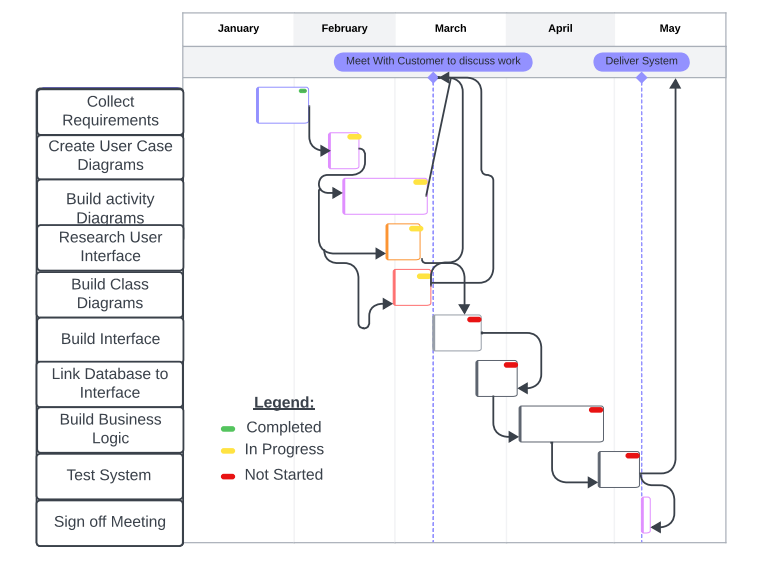
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•Considering that the client currently has ten cars, accurate scheduling for students is essential

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* The system's materials and exams are based on DMV guidelines.
* Considering that the client currently has ten cars, accurate scheduling for students is essential.

### 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.*

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