# CS 255 Business Requirements Document Template

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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 develop a system to train students to better perform on their driver test.
* The client is DriverPass and they teach students how to drive in order to earn their license.
* Liam the Owner of DriverPass, wants to develop online courses and practice tests for students to improve their chances to pass the exam.
* In addition, DriverPass will provide on-the road-training.

### 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 wants a system that will improve the driving students performance to pass the DMV driving test. DriverPass believes that the driver training market lacks online and structured training, thus leading to poor student performance. Which the proposed website is supposed to fix the problem that they perceive.
* DriverPass wants the system to access data from online and offline via PC and smart phone. Receive data update and implement data modifications online only to prevent data redundancy.
* The client wants to have the system allow students to make driving lessons reservations on the online platform or via phone number/office visit.
* Ian needs full access to accounts to reset passwords and assign user permissions based on roles.
* DriverPass’s clients should be able to select three different packages based on the student’s needs.
* Liam wants to be able to add, disable, and modify packages as needed.
* When registration occurs, the student calls to provide credit card info and pickup/drop-off location.
* Online system should receive DMV notifications when they update new rules, policies, or sample questions.
* System needs to run off the web and the cloud if possible. Leaving backup and security responsibility to an outsourced cloud business.
* Liam has a specific interface template to follow. The template has user’s online test progress, user info, driver notes, driver’s and student’s photo.

### 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?*

* DriverPass’s system should improve overall driving students’ performance to pass the DMV driving test.
* Users of the DriverPass system will be able to access data from online and offline via PC and smartphone. Users will be able to receive data updates and implement data modifications online only. As a result, no data redundancy should occur.
* The system allows students to make driving lessons reservations on the online platform or via phone number/office visit.
* Ian can reset user account passwords and assign user permissions based on roles.
* DriverPass’s clients should be able to select three different packages or a number of packages specified by Liam.
* Liam can add, disable, and modify packages on the website and phone app.
* When registration occurs, the student is able call to provide credit card info and pickup/drop-off location.
* Online system will receive DMV notifications when they update new rules, policies, or sample questions.
* The system is able to run off the web using the cloud infrastructure and to reduce DriverPass’s backup and security burden of user data.
* Liam’s specific interface template is fully implemented on DriverPass’s website. The template displays the user’s online test progress, user info, driver notes, driver’s and student’s photo.

## 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 system will be a web-based application and OS application that allows students to interact with practice tests and online courses. Allows for users to choose based on their environment.
* Transcript does not specify, but the speed of the system should not interfere with usability and should be within standards of most functional websites.
* The system should be updated when a new rule, policy, or sample question is provided by the DMV.

#### 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 owner wants students to access information anywhere. So, implementing it on Windows, Unix(For example Android), and IOS platforms is a must.
* Databases will be necessary for storing course work info, sample tests, User info/package selections, and DMV updates.
* Server hardware and software will be needed to host the website. Preferably the windows server OS.

#### 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 authentication to differentiate between a user and admin, Also, there will be a database to store info of what package each user selected.
* Username should not be case sensitive, but password should be in order to increase security.
* The system should inform the admin of a problem when the databases cannot be accessed, an update cannot be applied, and critical errors pop up during failed parts of the application executing.
* The system should report a problem when an update from the DMV has been received in an expected certain amount of time. May indicate that certain code has changed, and the system’s code will need to change accordingly.

#### 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 use an Active Directory interface for the system to create groups for each user. That way no code has to be changed as each user can make their own selections. However, code may need to change as packages change.
* The code will have to scan for the OS and/or browser being used and install updates accordingly. Also, the scan should warn the user if OS and browser is outdated.
* IT admin needs to be able to configure the types of packages and handle user roles/package selections. They will need to have access to error logs to diagnose and troubleshoot the system. Also, they will need to be able to reset user’s password as needed.

#### 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 needs to have a username and password. In addition, security questions should be implemented to increase security by having something the user would only know.
* A common secured interface is the Hypertext Transfer Protocol Secure (HTTPS) standard. It secures information throughout the network between the client and servers.
* To prevent a brute force attack, security questions will be enabled to prevent multiple attempts to get in. In addition, three failed attempts will lockout an account.
* If a user forgets their password, they can receive a link to their email if they select the forget password option. But they will need to answer their security questions to access the reset option.

### 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 validate user’s name and password.
* The system shall validate the user’s security questions.
* The system shall provide packages for users to select.
* The system shall provide sample tests for applicable users.
* The system shall provide online courses for applicable users.
* The system shall have an offline platform.
* The system shall operate on multiple OS platforms and web browsers.
* The system shall update when the DMV creates a new rule, policy, and sample questions.
* The system shall identify the difference between a user and an admin.
* The system shall prevent data redundancy between the online and offline interface.
* The system shall be able to add, modify, and remove packages, as necessary.
* The system shall allow the IT admin to config user roles and reset passwords.
* The system shall allow downloading of reports for analysis purposes.
* The system shall inform the user to make a phone call to register.
* The system shall allow users to make changes to their profile info.
* The system shall allow users to make, cancel, or modify appointments.
* The system shall allow a way to automatically reset passwords.

### 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 interface will require use of a mouse/keyboard for PCs or touchscreen selection/keyboard on mobile devices.
* The interface will need to start with asking for the User’s credentials prior to logging in the system.
* The interface should have an adaptable application layout for PCs and mobile devices.
* The admins and students should have access to both the PC and mobile interfaces.
* The interface needs to be usable on the most used browsers and OSs.

### 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 user has a PC/Device, OS, and browser that is reasonably up to date.
* The user knows where to download the app from applicable mobile store.
* The user has internet for the web app or some functions of the OS application.

### 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 will not function on the web without internet.
* The system will not allow certain functions of the mobile app without internet.
* The system will not function on browsers that are not common to use.
* The Company does not have the resources to invest in compatibility for each browser and OS that exists.

### 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.*

