# 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?*

* Liam, the owner of DriverPass, wants to make a system for students who are learning to drive to better prepare them for their dmv test by providing online classes and practices as well as on the road testing.

### 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 to help students pass their dmv tests by providing online classes and practice tests. The components that will be needed in this system are a navigable interface for both people in the company and the students. There will need to be classified roles with privileges for each on what they can and cannot do. There will need to be a data storage system to safely keep the information of all the drivers but also the students who will be with them. There will also need to be a tracking system so they can see who and what was modified. The system also has to be flexible for any future additions. This will be a web based system running off of cloud storage and handling. Lastly this system will need to be kept up to date with the Dmv specifications.

### 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 be able to store the info of the student as well as be able to track their progress in their classes. It should also be able to schedule and reschedule any classes made by the student.

## 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?*

* Since Liam (the owner) wants this system to be accessible from anywhere he is probably leaning more towards an application type program but that seems to be a little limiting. While this is a good idea for an app and should be done as one is can reasoned that it would only limit it to your phone. Also making it into a web-based site that can be accessed from your desktop or laptop would also be a great advantage for versatility and usability. The system should be fairly fast in its processing since it will be an online class format where students will go to learn. I am unsure if he wants these to be live classes where the students join in at a certain time or watch pre-recorded videos at their own pace or even a mixture of both. Still if there is going to be an online class aspect to this then the servers hosting the site and application should be fast as it will take a lot of video processing to stream the videos and host them as well. The system can do an automatic update once every month in the downtime hours when the site is less trafficked. It should also do an automatic backup every night during the downtime as well but that should leave the site offline for more than a minute or so, as to not be a hindrance to anyone who may be using it at that time.

#### 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?*

* Given the need for versatility, DriverPass should be able to work across all major Operating Systems. This would mean it would work on Windows, Unix based systems, Linux based systems and macOS. The backend would need to support a database to store all user information securely so that they can use the software as it is intended as it is needed to make a profile and get classes. As well as a database that stores and shows all updates and backups to make sure that nothing as gone wrong and if so how and why so backend users can have an basis for what happened.

#### 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 users will be stored in a backend database with their information on it, including things such as login verification. The inputs for login should be case-sensitive as it makes it harder for anyone who may be trying to cause harm to get in as it needs to be exactly right not just close. The system itself should inform admins of a problem fast so they can work on fixing it. I think also a ai admin program can help with some backend administration as well as ease the workload of moderation as it can access and monitor everything all at once and can be used a deterrent or even quick fixer for when something does happen so the admins can be more focused on the bigger problems that the servers can encounter.

#### 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?*

* You should be able to make changes to the user without having a need to go into the code and change it. It should be part of the admin tools to make those changes and be able to do so without delving into the code to find the problem or make a change. The system will need to adapt to system changes well and adjust what it can do with more updates to the system. As the system improves so should it. The IT admin should have full access to the backend to monitor, update, change, and improve what the program can do. They will need to be able to make changes to a wide variety of things such as information on pages to user accounts.

#### 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 should provide a username and password for login as well as a CaPACHE verification. If too many attempts are made but have a successful login a second step of verification should be at least 3 security questions that need to be answered to further confirm it is who they say they are. If too many attempts are done and not successful then a password reset is initiated and the user must change the password which will be sent, with instructions on how to do, to the email associated with the account. If a “Brute Force” hacking is attempted on a account then that account is locked completely out of the website with no other way of accessing unless if they call the office and confirm who they are by answering username, password, all security questions, and street address that they have provided for the account. If verified the account will be unlocked but a password reset will be necessary before logging in again.

### 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.”*

* [Insert text]

### 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.)?*

* User - needs to be able to login, access and modify profile, access classes and class signup, Handle transactions for payments of classes. The user will interact with the interface through a web site or a mobile device but both should work no matter what they are on.
* Teachers - same as users but will have access to modify and update class material as well as tracking for the classes such as submissions and grade updates. Can be done on browser or mobile
* Admins - They can do what users do and teachers for administrative purposes as well as modify pages and payable packages on the program. They will also be able to handle user and teacher accounts if they can not access them for simple IT things like being able to initiate a password reset.
* IT - They will have complete control over the program with access to the program. Their role is to be able to handle the more difficult tasks like lockouts. They will be able to modify both user and teacher accounts as well as remove any accounts and set permissions for any role. These should be able to be done on browser as well as mobile for on the go help.

### 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 making a general assumption that they will have access to a computer or at least a phone. Does not mean that they have it at their own home but at least have a way to get to one to be able to do their classes.

### 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?*

* A limitation that I can see happening is that the IT, Admin, and Teacher would struggle with being able to do some of their things off mobile but it would not be impossible for them to do it. This is a project on a time limit so there will need to be a team to handle the construction of this program. Technology wise they want it to be hosted over a cloud based server. There was no discussion of budget but I am guessing they are not a huge company and have a limited budget that they can work with but with what they are asking I would assume that it is more than what most their size has so I would say it could be started as a higher mid-range program that can be modified as time and people use the program.

### 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.*

