# 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?*

* Purpose of this project is to design a system that will provide training and resources to those seeking a driver’s license.
* The client is Liam with DriverPass
* The system should be able to offer packages
* Book appointments
* Store user information

### 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?*

* To act as a source of training for users to fill a gap in knowledge for people taking their driving tests
* System will need to have registration component for users to establish a profile
* Appointment booking section for users to work with the current company’s vehicle and instructor inventory
* Design a customizable package selector

### 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?*

* Needs to be fully cloud integrated
* Will need to research CSP to determine best fit and subscription models
* Have solution in place for security and backup in place that does not involve DriverPass team in order for DriverPass to focus soley on the business portion
* Look for management on these points

## 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 environment will be hosted in the cloud
* To create a good user experience, there should be fast response time when performing actions online
  + Booking appointments
  + Canceling appointments
  + Getting appointment status
  + Updating profiles
* The environment should be built with scalability in mind
* Using vendors such as AWS or Azure, you can take advantage as Pay-As-You-Go models to purchase only what you use
* Create update pools, in order to keep systems up to date without affecting a production environment
* Will need scalable front-end servers to handle the traffic from users
* With the current minimal inventory of 10 vehicles, there should not be a need for Content Delivery Networks

#### 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?*

* Windows eco system will be used for simplicity
* Backup and security solutions can easily be managed by 3rd party with windows easy integration
  + Using built-in backup solutions such as Azure Backup, will take the burden off DriverPass
  + Using built-in security solutions such as Azure Defender
* Windows is typically easier to manage, we don’t know much about DriverPass’ technical abilities their current knowledge
* Will need database for user information
* Will need scheduling and appointment applications to be running
* Will need integration with mobile apps

#### 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?*

* Using a system that utilizes identity management like Azure Active Directory, we can manage the users
* A SSO for the applications and databases can integrate here as well
* For information being input into the system, it should be checked for errors and validated
* The system should send a notification to the admin when the system is either not reachable
* Or if services to the customer are affected

#### 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?*

* If we are using an identity management system like Azure AD, we will not need to change code
* If using a self-developed one, this should be implemented without need to hardcode user information
* The system should be on a scheduled maintenance window, with planned downtime to account for updates
* The IT admin should have full access to the resources.
* They should be able to create, modify and delete and system in the environment.

#### 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 have an assigned user name and password
* Using industry standard security practices such as login page that uses HTTPS or LDAPS for a secure way of passing credentials
* Security policies should be in place
* These can include max number of login tries, password expirations and account lockouts
* A user password reset portal should be available
* This can be tied to an email address to have a reset link sent to the user

### 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 provide minimal downtime to the customers
* The system shall adhere to all industry standards for best security practices
* The system shall not use end of life equipment or software
* The system shall notify desired personal of major outages or issues deemed necessary
* The system shall be backed up regular
* The system shall be accessible from any location
* The system shall keep both user and customer data safe

### 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 CEO permissions will allow full access and control to all resources
* The IT officer permissions will allow for full access to the servers and cloud environment. Security policies and permissions will be limited to this role
* The Secretary permissions will be able to modify data within the servers
* Preferably, the users will use a web browser to interface with the systems.
* Mobile applications can be developed for monitoring and viewing of reports

### 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 we will integrate with a cloud identity management solution, for simplicity and not to re-invent the wheel
* I am assuming that the term ‘User’ refers to the employees of ‘DriverPass’
* I am planning on using the Azure environment, as they have flexible spending plans and include a wide range of backup and security solutions to take the burden off 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?*

* Depending on cost, licensing may be difficult to achieve for popular software such as SQL databases or Windows Server 2022 licenses.
* We may be limited to the number of features we could reasonably implement without using already created solutions, such as Azure AD.

### 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.*

