# 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 design a system for DriverPass, a transportation company. The client wants their system to be able to manage driver licenses and vehicle registration information, as well as provide real-time updates to users.

### 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 is a system aimed at improving the experience of drivers on the road. The problem that DriverPass wants to address is the difficulties drivers face when accessing their driving information. This information, such as traffic fines, vehicle registration details, etc., is usually scattered across multiple government departments and organizations. As a result, drivers have to spend a lot of time and effort to gather this information, which can be a frustrating and time-consuming experience.

DriverPass aims to provide drivers with a centralized platform where they can access all their driving information in one place. The system will integrate with various government departments and organizations to gather the required information, and provide drivers with a unified and simplified view of their driving information. The different components needed for this system are:

* 1. Integration with government departments and organizations: DriverPass will need to integrate with various government departments and organizations to gather the driving information.
  2. Driver Information Management System: DriverPass will store the driving information gathered from different sources in a centralized database.
  3. User Authentication: DriverPass will need to authenticate users to ensure that only authorized individuals can access the system.
  4. User Interface: DriverPass will need to provide a user-friendly interface where drivers can view their driving information.

### 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 securely store and manage user information, provide real-time updates to users, and enable efficient and effective communication between users and the transportation company. Measurable tasks to be included in the system design include user authentication, database management, and real-time updates.

When outlining the objectives and goals of the system, it is essential to consider the following:

1. Measurable Tasks: The system should be able to perform specific, measurable tasks that meet the needs of the end-user. These tasks should be clear and concise, and be able to be easily tested to ensure that the system is functioning correctly.
2. User Expectations: The system should be designed to meet the needs and expectations of the end-user. This means considering factors such as the user interface, security, and performance requirements. The system should be designed with the end-user in mind to ensure that they are able to use it effectively.
3. Technical Considerations: The system should be designed to meet the technical requirements of the project, such as platform constraints and security considerations. This means that the system should be designed with the technology available in mind and be able to run efficiently and securely.
4. Measurable Outcomes: The objectives and goals of the system should be measurable, so that the development team can monitor and evaluate the system's performance once it is completed. This will help to ensure that the system is delivering the desired outcomes and meeting the needs of the end-user.

## 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 DriverPass system must be able to run on different environments, such as web-based, application, and so on, in order to cater to the needs of different users. The system must be accessible from multiple devices, such as desktops, laptops, tablets, and smartphones. The DriverPass system must be fast and responsive, providing quick access to the user's data. The system should load quickly and perform all the necessary tasks efficiently, with minimal delays or lag. The DriverPass system must be updated regularly to ensure that it is up to date with the latest technologies and functionalities. The frequency of the updates will depend on the advancements in technology and the changing needs of the users. It should be updated frequently enough to ensure that the users have access to the latest features and functionalities.

In conclusion, the performance requirements of the DriverPass system are critical to its success, and must be carefully considered during the design and development phase. The system must provide a smooth and seamless user experience, with quick access to data and efficient performance, in order to meet the needs of its users.

#### 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?*

* Operating Systems: The system should be able to run on both Windows and Unix operating systems to accommodate a wide range of users.

• Back End Tools: The back end of the system may require a database, such as MySQL, to store and manage data.

• Other Requirements: Other constraints may include specific software, hardware, or network requirements necessary for the system to run properly.

#### 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 must be able to distinguish between different users accurately and precisely to ensure the security and privacy of the user's data. This can be achieved through proper authentication and authorization mechanisms, such as login credentials, biometric authentication, or security questions.

The input system should also be case-sensitive, as it adds an extra layer of security to the system. The system should also inform the administrator of any problems that might arise, such as incorrect login credentials or unauthorized access attempts, in real-time to ensure the timely resolution of security incidents.

Moreover, the system should provide accurate and precise information to the users, such as their driving history, traffic violations, and license expiration dates, to ensure that they are always up-to-date and aware of their driving status.

#### 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?*

* The system should also be able to adapt to platform updates by having a mechanism for updating itself as new updates become available. This can help ensure that the system remains compatible with new technologies and platforms over time.

IT admins will need access to the system in order to perform maintenance and updates, as well as to make changes to user information as needed. The level of access required by IT admins will depend on the specific requirements of the system and the level of control required by the organization. In general, IT admins will need at least read and write access to the system's user information, as well as the ability to perform updates and upgrades to the system as required.

1. User Management: The system should allow the IT administrator to add, remove or modify user accounts without having to change the underlying code.
2. Platform Updates: The system should be able to adapt to new software and hardware updates, including updates to the underlying platforms such as Windows or Unix.
3. IT Admin Access: The system should allow the IT administrator to have appropriate access to perform necessary updates and maintenance tasks.
4. System Configuration: The system should be configurable so that it can be adapted to meet the changing needs of different users, organizations or environments.

In general, the adaptability of the DriverPass system will ensure that the system remains relevant and usable in a constantly changing technological environment, and that it can be tailored to meet the specific requirements of different users and organizations.

#### 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 security of the DriverPass system is an important nonfunctional requirement to ensure the protection of sensitive user information. To meet security requirements, the system should have the following features:

1. User authentication: A secure mechanism is required to log in to the system, such as a username and password combination or two-factor authentication.
2. Data encryption: To protect data exchange between the client and the server, the system should use secure protocols such as HTTPS and SSL to encrypt data transmission.
3. Brute force protection: The system should have measures in place to detect and prevent brute force hacking attempts, such as limiting the number of login attempts or locking the account after multiple failed attempts.
4. Forgotten password recovery: A mechanism should be in place to allow users to reset their password if they forget it.
5. Access control: The IT administrator should have the ability to manage and control access to the system, including setting user permissions and revoking access if necessary.
6. Regular software updates: The system should be updated regularly to address any security vulnerabilities and maintain the highest level of security.

It's important to prioritize security in the development process to ensure that sensitive user information is protected and to maintain user trust in the system.

### 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 allow drivers to securely log in to their account using a unique username and password combination.
* The system shall provide a user-friendly interface for drivers to view and manage their driving information, including past violations and points on their license.
* The system shall allow drivers to update their personal information, such as their address or contact details.
* The system shall allow the administrator to access and manage all driver information and reports.
* The system shall enable the administrator to add, remove, or modify information for any driver account.
* The system shall allow the administrator to view and track all driving violations, including the number of points assigned to each driver's license.
* The system shall provide automatic notifications to the administrator in case of any driving violations or license suspensions.
* The system shall automatically calculate the number of points assigned to a driver's license based on the type and severity of each violation.
* The system shall store all driver information and driving history securely and ensure data privacy and protection.

### 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.)?*

* For the user interface of the DriverPass system, it is important to consider the different needs of the users who will interact with the system. The different user groups for the interface can include drivers, fleet managers, and administrative staff.
* For drivers, the interface should be simple and user-friendly, allowing them to easily log in, view their driving history, and update their personal information. They should be able to interact with the system using either a mobile device or a web browser.
* Fleet managers will need to have access to more in-depth information about their drivers, including driving history, driver performance, and violation records. They should be able to access this information quickly and easily and should be able to search for specific drivers or filter the information in a variety of ways.
* Administrative staff will need to be able to manage the information stored in the system, including adding and removing drivers, updating driver information, and tracking usage statistics. They should also be able to generate reports based on the information stored in the system, such as driver performance reports or violation reports.
* In terms of the overall design of the interface, it should be visually appealing and easy to navigate, with clear, concise labeling and organization of information. The interface should also be responsive, adjusting to different screen sizes and resolutions. The system should also include various security features to ensure the protection of sensitive information, such as user authentication and authorization, secure data storage and transmission, and protection against hacking or other malicious attacks.

### 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?*

* Some possible assumptions are:

1. The users have basic computer literacy and are familiar with using web-based applications or mobile applications.
2. The users have access to the required technology and hardware to use the system, such as a device with an internet connection.
3. The users have a valid email address and phone number to register for the system.
4. The system will only be used for legitimate purposes and in accordance with applicable laws and regulations.
5. The security measures and data protection policies in place will be sufficient to protect sensitive user information.
6. The system will be continuously updated and maintained to ensure optimal performance and security.

These assumptions could be re-evaluated and revised based on feedback from users and stakeholders, or as the technology and requirements evolve.

### 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?*

* Limitations of the system design could include limitations in terms of technology, budget, time, or resources. For example, the system may only be able to run on certain platforms or may not be able to scale to handle large amounts of data. The design may also be limited by the available budget, which could impact the quality or features of the system. Time limitations could also impact the development and deployment of the system, potentially leading to a rushed or incomplete product. Additionally, the design may have limitations in terms of the available resources, such as a lack of experienced developers or limited access to necessary tools and technologies.

### 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.*

Please rotate the chart as it is too big to fit horizontally

*Graphical user interface, application, Word

Description automatically generated*