# CS 255 Business Requirements Document

## 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 the DriverPass system, which aims to streamline the process of managing driver’s license applications and renewals.
* The client is DriverPass, and they want their system to enable users to apply for, renew, and manage their driver's licenses online efficiently.

### 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 the system to provide an intuitive interface for users to apply for and renew driver's licenses, eliminating the need for in-person visits.
* The problem they want to fix includes long wait times, inefficient processing, and limited accessibility for users.
* The system components needed include:
  + User registration and authentication module
  + Application processing module
  + Payment processing system
  + Notification system for updates and reminders
  + Admin dashboard for managing applications

### 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?*

* This system should be able to handle user registrations, application submissions, payment processing, and notifications.
* Measurable tasks to achieve include:
  + Users should be able to complete the application process within 10 minutes.
  + The system should process applications and send notifications within 24 hours.
  + An admin should be able to manage applications with an efficiency rate of 90% or higher.

## 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 needs to run as a web-based application accessible from multiple devices.
* The system should load within 3 seconds for all users.
* The system should be updated quarterly to incorporate user feedback and address any security vulnerabilities.

#### 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 system should run on both Windows and Unix platforms.
* The back end requires a relational database to store user data and application information.

#### 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?*

* Users will be distinguished by unique usernames and email addresses.
* The input should be case-insensitive to enhance user experience.
* The system should notify the admin of issues such as repeated failed login attempts or system errors.

#### 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 allow admins to add, remove, or modify user accounts without code changes through a user management interface.
* The system should adapt to platform updates by adhering to responsive design principles.
* The IT admin should have access to user data and system logs for monitoring.

#### 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?*

* Users will need a secure username and password for login, with options for two-factor authentication.
* Secure Socket Layer (SSL) encryption will protect data exchange between the client and server.
* If a “brute force” attack is detected, the user account will be locked after three failed login attempts.
* Users will have the option to reset their password via a secure link sent to their registered email.

### 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 credentials when logging in.
* The system shall allow users to register for an account.
* The system shall enable users to submit applications for driver’s licenses.
* The system shall process payments securely.
* The system shall send notifications to users regarding application status.
* The system shall provide an admin interface for managing applications and users.

### 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 needs to be user-friendly and accessible for users of all ages and technical backgrounds.
* Different users include applicants, admins, and customer support representatives.
* Each user needs the ability to:
  + Applicants: submit applications, check status, and make payments.
  + Admins: manage applications, view reports, and handle user inquiries.
  + Customer Support: access user applications to assist users with questions.
* Users will interact with the interface via a web browser and mobile app.

### 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?*

* Users have access to the internet and are familiar with basic online transactions.
* The technology stack chosen will be supported by the organization’s infrastructure.
* Users will provide accurate information during registration and application submission.

### 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 may face limitations in terms of user capacity, depending on server resources.
* There might be a budget constraint affecting the ability to implement advanced features like AI for user support.
* Time limitations may impact thorough user testing before launch.

### 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.*

A gantt chart with multiple colored bars

Description automatically generated