# CS 255 Business Requirements Document Template

## 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 the project is to design a system for DriverPass that facilitates student registration, lesson scheduling, and online learning for driver’s license preparation.
* The client is DriverPass, a company offering driver education services, including classroom learning, behind-the-wheel training, and test scheduling.
* DriverPass wants a comprehensive platform where students can sign up, manage lessons, access online materials, and track progress, while instructors and staff can manage schedules and view student records.

### 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 facing issues with scheduling, communication between students and staff, and record keeping.
* The system should allow students to sign up for packages, take online classes, schedule in-person driving lessons, and receive notifications.
* Instructors should be able to view their schedules, student progress, and log driving hours.
* Admin users need access to manage users, create and disable packages, assign instructors, and generate reports.

### 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 support seamless online student registration and package selection.
* Flexible scheduling and rescheduling of driving lessons.
* Instructors and students should receive automated notifications and reminders.
* Admins should be able to enable and disable specific services and manage users without developer intervention.
* Measurable goals include:
  + Students can register within 5 minutes
  + Admins can generate user activity reports.
  + 100% system uptime during peak registration times.

## 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?*

* System must be web-based and mobile-accessible.
* Page loads should occur in under 2 seconds on standard broadband.
* System updates should occur during off-peak hours and not exceed 10 minutes of downtime.

#### 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 major operating systems, including Windows and MacOS.
* A relational database is required for user, lesson, and package data. (e.g., MySQL).
* Backend should be compatible with standard web servers. (e.g., Apache).

#### 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 authenticate users with unique usernames and passwords.
* Input fields will be case-sensitive where applicable. (e.g., passwords).
* The system should alert admin upon repeated failed login attempts or data inconsistency.

#### 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?*

* Admin users must be able to add, remove, or update users and packages through the admin interface without altering code.
* The system should be build using modular components to accommodate updates with minimal disruption.
* IT admins will need elevated access for backups, updates, and configuration.

#### 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?*

* All users must log in using secure credentials.
* Data transmission should be encrypted using SSL or TLS.
* Account lockdown can be triggered after 5 failed login attempts.
* A secure password reset mechanism must be in place via verified 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 allow students to register and choose from available packages.
* The system shall allow students to view and schedule driving lessons.
* The system shall notify students and instructors about upcoming lessons.
* The system shall allow instructors to log student progress and driving hours.
* The system shall allow admins to enable/disable packages and assign instructors.
* The system shall generate reports on student progress and instructor schedules.

### 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 should be intuitive and responsive for students, instructors, and admins.
* Students must be able to register, schedule lessons, and access online materials via desktop or mobile browser.
* Instructors should be able to log in, view schedules, and enter progress reports.
* Admins should have access to a dashboard for managing packages, users, and system configurations.

### 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 a stable internet connection and a modern web browser.
* All users will have unique email addresses for account identification.
* The company has access to a web hosting provider capable of supporting the system’s demands.
* Staff members have basic digital literacy to navigate the interface.

### 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?*

* Budget constraints may limit the scope of custom features during the first development phase.
* Limited development time may restrict full testing of all possible user interactions.
* Some legacy systems or processes may not be compatible with the new platform.
* System performance may vary based on user load until further optimization.

### 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.*

