# CS 255 Business Requirements Document Emily Cruz

**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 develop a system for DriverPass to help students better prepare for their driving tests.
* The system will provide online courses, practice exams, and on-the-road training scheduling.
* The client, DriverPass, aims to bridge the gap in driver education and reduce failure rates among students taking their driving exams.

### 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 has identified that a significant number of students fail their driving exams due to inadequate preparation.
* The system needs to provide an online and offline solution for users to take courses, complete practice tests, and schedule in-person training.
* Key components include:
  + User account management
  + Online training modules
  + Exam simulation
  + Scheduling system for on-the-road training
  + Tracking and reporting capabilities
  + Secure access and authentication

### 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?*

* Provide an interactive online learning experience with practice exams.
* Enable students to book in-person driving lessons through the platform.
* Maintain records of all bookings, modifications, and cancellations.
* Ensure that IT administrators and managers can manage accounts and track system activities.
* Establish secure access with role-based permissions.
* Integrate a reporting system for user progress tracking.

## 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 shall be web-based and accessible via mobile and desktop browsers.
* The system shall provide real-time updates for appointments and test scores.
* Updates should be applied with minimal 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 shall be cloud-based to reduce maintenance overhead.
* It must support Windows, Mac, and mobile operating systems.
* A relational database will be required to store user data and test results.

#### 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?*

* Each user role (student, instructor, administrator) must have clearly defined permissions.
* All entries should be validated for accuracy (e.g., test scores, appointment details).
* System alerts should notify administrators of discrepancies or suspicious activity.

#### 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 administrators to disable or enable training packages.
* IT administrators should have the ability to reset passwords and manage user roles.
* Future scalability should be considered for adding new features without extensive code modifications.

#### 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 must log in with a secure authentication process.
* Password recovery must be available for users who forget their credentials.
* The system should lock an account after multiple failed login attempts to prevent brute-force attacks.
* Secure encryption methods should be used for storing sensitive data (e.g., credit card information).

### 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, log in, and manage their profiles.
* The system shall allow users to schedule, modify, or cancel driving lessons.
* The system shall provide online practice exams and track user performance.
* The system shall allow administrators to reset passwords and manage user accounts.
* The system shall generate reports detailing user progress and activity history.
* The system shall integrate with DMV updates to ensure compliance with current regulations.

### 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 system shall have a web-based interface optimized for mobile and desktop usage.
* Students should be able to view their scheduled lessons, practice test results, and available training packages.
* Administrators and instructors should have dashboards displaying user activities, appointments, and reports.
* The interface should include a progress tracker for online tests and training sessions.

### 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 will have a stable internet connection for accessing the platform.
* The client will provide test materials and training content for integration.
* The system will be hosted on a secure cloud platform.
* Training session locations and availability will be predefined by 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?*

* Customization of training packages will require developer intervention.
* The system will not support offline test-taking (only downloading reports).
* Budget constraints may limit additional feature development in the initial release.
* The system will not handle payment processing initially but may integrate it in the future.

### 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.*

