# 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?*

* Create an online system for DriverPass to provide driver training services to customers preparing for DMV driving tests
* Address the market gap identified by Liam where many people fail their DMV driving tests due to inadequate preparation
* Develop a web-based platform that integrates online classes, practice tests, and on-the-road training reservation management

### 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 to create a comprehensive driver training system to improve customer success rates at DMV driving tests
* The current problem is inadequate driver preparation leading to high DMV test failure rates
* System components needed:
  + Online class platform with learning materials
  + Practice test system with progress tracking
  + Reservation management for on-the-road training
  + User account management with different access levels
  + Integration with DMV for updates on rules and policies
  + Secure payment processing
  + Activity tracking and reporting capabilities

### 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?*

* Create a cloud-based system accessible from any device with internet connection
* Implement three distinct training packages with different service levels
* Enable customers to schedule, modify, and cancel driving lessons online
* Provide administrators with reporting capabilities for business analysis
* Track driver/car assignments for each reservation
* Implement security measures with role-based access control
* Allow automatic notification of DMV rule updates
* Create a user-friendly interface following the client's design specifications
* Enable seamless integration of online learning and in-person training

## 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 run over the cloud
* Interface should be responsive and work on both computer and mobile devices
* System should provide real-time updates when online
* Database should update in real-time to prevent data redundancy
* Reports should be downloadable for offline viewing in Excel format
* System should receive notifications from the DMV when rules are updated

#### 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?*

* System must be cloud-based to avoid internal backup and security management
* Backend must include database capabilities for storing user information, reservation details, and learning materials
* System must be compatible with web browsers on multiple platforms
* Mobile compatibility is required for all functions
* Excel compatibility needed for downloaded reports

#### 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?*

* System must track which user made or modified each reservation
* User activity tracking must include timestamps for all actions
* Driver-customer-car matchups must be precisely tracked for each reservation
* Test scoring must be accurate and show status (not taken, in progress, failed, passed)
* User identification must be secure and accurate with password protection

#### 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?*

* System must allow for package management (enabling/disabling packages)
* IT officer must be able to reset passwords and modify user access
* System must accommodate future modifications to training packages
* Interface should allow for updates based on DMV policy changes
* System should scale to handle increasing customer numbers and vehicle fleet

#### 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?*

* Different access levels for owner, IT officer, secretary, and customers
* Password reset functionality for forgotten passwords
* Secure storage of customer credit card information
* Activity logging for accountability and troubleshooting
* IT officer must have capabilities to block access for terminated employees

### 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 customers to create and manage their accounts online
* The system shall enable customers to select from three different training packages
* The system shall allow reservation of two-hour driving lessons with specific dates and times
* The system shall track driver and vehicle assignments for each reservation
* The system shall enable users to make reservations via web interface or through the secretary
* The system shall allow customers to modify or cancel their reservations online
* The system shall track all reservation changes with user identification
* The system shall provide online classes and practice tests with progress tracking
* The system shall generate activity reports for management review
* The system shall process and store customer information securely
* The system shall automatically notify users of DMV rule updates
* The system shall allow the IT officer to reset passwords and manage user access
* The system shall enable downloading reports in Excel format
* The system shall track and display test progress (not taken, in progress, failed, passed)
* The system shall allow owner to disable training packages without developer intervention

### 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.)?*

**User Interface**

* The interface must follow the layout sketched by Liam and be accessible via web browsers on both computer and mobile devices
* **Main Interface Components:**
  + Online test progress display (showing test name, time taken, score, and status)
  + User information section (first name, last name, address, etc.)
  + Driver notes area (comments and lesson times)
  + Special needs section
  + Driver and student photos
* **Interface Functionality Requirements:**
  + Forms for student information input
  + Contact functionality
  + Downloadable reports in Excel format
  + Responsive design for all screen sizes
  + Clear navigation between system sections
* **Role-Based Interface Access:**
  + Owner:
    - Full access to all data and reports
    - System-wide analytics dashboard
    - Package management controls
  + IT Officer:
    - User management and system maintenance access
    - Password reset functionality
    - User activity monitoring
  + Secretary:
    - Appointment scheduling interface
    - Customer registration capabilities
    - Reservation management tools
  + Customer:
    - Account management
    - Reservation booking and modification
    - Online course access
    - Test progress tracking
    - Payment processing
* **User Experience Considerations:**
  + Intuitive navigation for non-technical users
  + Consistent styling across all pages
  + Clear confirmation for all important actions
  + Appropriate error messages and recovery options

### 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 reliable internet access for online features
* DMV will cooperate with providing rule updates
* Customers have basic computer literacy to navigate the system
* Drivers will have devices to access the system for entering notes
* Secretary will have adequate training to use the system for scheduling
* Customer credit card processing will use industry-standard security
* The initial set of 10 cars and drivers will be sufficient for early operations

### 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?*

* System cannot modify data while offline
* Custom package creation requires developer intervention
* System is dependent on cloud service provider reliability
* Initial version cannot accommodate dynamic feature changes without developer input
* No integration with DMV systems for automatic test registration
* Limited to the three predefined training packages initially
* Time constraints per project schedule may limit testing time
* Business logic implementation is allocated significant time (22 days) which may impact other aspects of development

### 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 screenshot of a project

AI-generated content may be incorrect.*