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 develop a cloud-based system for DriverPass that provides customers with online and in-person driver training services.

- The client, DriverPass, wants the system to:
  - Allow users to register, schedule, modify, and cancel driving lessons.
  - Provide access to online courses and DMV practice tests.
  - Allow the business to manage drivers, vehicles, reservations, and packages.
  - Track user activity for auditing and accountability.

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 new company created to address the high failure rate for DMV driving tests.

- They want to provide online courses, practice tests, and in-car lessons.
- Current problem: There is no system in place to handle registrations, reservations, lesson tracking, or online content delivery.
- Components needed:
- Web-based interface for customers, secretary, and admin/IT staff.
- Reservation and scheduling system for lessons and packages.
- User management and authentication system with role-based access.
- Reporting and tracking system for reservations and activities.
- Integration with DMV updates for the latest rules and tests.

- Cloud-based hosting and data storage with backup and security.

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:

- Enable customers to create accounts, book, cancel, and reschedule lessons online.
- Support secure credit card payments and capture customer details.
- Track vehicles, drivers, and schedules to avoid conflicts.
- Maintain and update online learning modules and practice tests.
- Allow admins to manage users and reset passwords.
- Generate activity and reservation reports for auditing.
- Notify staff when DMV updates are available.

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 must be web-based and cloud-hosted. Users must be able to access the system from desktops, laptops, and mobile devices. System updates should occur without major downtime; routine updates can be monthly or quarterly.

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?

Web interface accessible from modern browsers on Windows, macOS, iOS, and Android. Backend requires cloud database and web server with automatic backups. Must support secure online payment processing.

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 must have a unique account with role-based permissions.

- Admins and IT staff can track who modified, created, or deleted records.
- System must log all reservation and account changes.

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 can add, remove, or disable training packages without code changes. IT admin can add, deactivate, or reset user accounts. The system must adapt to future browser and cloud updates with minimal maintenance.

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?

- Secure username/password login with HTTPS encryption.
- Automatic lockout after repeated failed login attempts.
- Users can reset forgotten passwords via email verification.
- IT admin can revoke or modify user access immediately.

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 register and create an online account.
- The system shall validate and store customer information securely.
- The system shall allow users to book, cancel, and modify driving lesson reservations.
- The system shall allow users to select lesson packages and process payments.
- The system shall allow admins to track drivers, cars, and lesson schedules.
- The system shall generate activity and reservation reports for admins.
- The system shall notify staff of DMV updates and allow practice tests to be updated.
- The system shall track and display student lesson progress and driver comments.
- The system shall provide secure login and role-based access (admin, secretary, customer).
- The system shall log all system activities for auditing.

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.)?

- Users:

- Customers: Create accounts, book/cancel lessons, view online tests and progress, reset passwords.
- Secretary: Create accounts for customers, manage lesson bookings, update contact information.
- Admin/IT: Full system access, reset passwords, manage packages, generate reports, revoke access.
- Interface Needs:
- Web-based, mobile-friendly dashboard for customers and staff.
- Clear scheduling interface with calendar for lesson booking.
- Progress tracking page for lessons and online tests.
- Admin panel for reports and user management.

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?

- Customers will have internet access and a modern browser.
- Credit card payment processing will be integrated via a third-party provider.
- The system will use cloud hosting with automatic backups.
- Future package or module changes will require admin toggling but not coding.

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?

- Initial release will not allow self-service package creation—only enable/disable.
- Custom mobile apps are not included; system is browser-based only.
- Limited by time and budget, so advanced reporting and future automation are deferred.
- DMV integration is notification-based only, not a live API connection.

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.

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CS - 255

Schedule Planning