Southern New Hampshire University

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 create a comprehensive web-based platform for DriverPass that will help students prepare for their DMV driving tests.
• The client, DriverPass, wants their system to offer online classes, DMV practice exams, and allow customers to schedule in-person driving lessons.
• The system must allow staff (admin, secretary, and instructors) to manage appointments, track activities, and access reports.

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 fix the high failure rate of driving tests by providing better training through a combination of online and on-the-road education.
• The system must allow customer registration, package selection, lesson scheduling, online testing, and report generation.
• Key components include user login, instructor assignment, vehicle tracking, test performance dashboards, and secure admin access.

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 students to choose from 3 training packages.
• Students should be able to book, cancel, or modify lessons online.
• The system must allow instructors to provide feedback and track lesson progress.

• The admin and IT officer must be able to manage users and monitor changes.
• The system should show test progress with clear status indicators (not taken, in progress, failed, passed).
• Reports should be downloadable in formats like Excel.

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 accessible via web browsers and mobile-friendly.
• Pages should load within 2 seconds under normal load.
• Updates must be made quarterly or sooner if DMV regulations change.

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?

• Platform must run on modern browsers and support Windows, macOS, Android, and iOS.
• Backend must use a relational database like MySQL.
• Hosted on the cloud with scalable infrastructure.

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?

• Role-based logins must clearly separate admin, student, instructor, and secretary users.
• Input validation must enforce formatting (e.g., case-sensitive passwords).
• Admin must receive alerts for suspicious activity 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?

• Admin should be able to enable/disable packages from the system dashboard.
• System must be modular for future package or feature updates.
• IT admin should have access to system logs, account recovery, and user control features.

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?

• Login requires secure credentials with optional 2FA.
• HTTPS must be used for all communications.
• System locks accounts after 5 failed login attempts and notifies the IT admin.
• Password recovery through secure email verification.
• Sensitive data (e.g., credit card info) must be encrypted and follow PCI compliance.

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 students to take DMV-aligned practice exams.
• The system shall enable students to schedule, cancel, and reschedule driving lessons.
• The system shall match students with available drivers and cars.
• The system shall track and log all account activity (e.g., changes to appointments).
• The system shall generate downloadable reports for management.
• The system shall notify users of DMV updates and changes to test content.
• The system shall allow instructors to record lesson times and comments.
• The system shall support password recovery via email.

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.)?

• **Students** will need to: register, view packages, schedule lessons, take tests, and track progress.
• **Instructors** will need to: view assigned students, record lesson times, and provide notes.
• **Secretary** will need to: input customer details and make bookings over the phone or in person.
• **Admin/IT** will need to: manage users, permissions, and monitor system activity.
• The interface must be accessible on browsers and optimized for mobile devices.
• Interface must be user-friendly, ADA-compliant, and have a clean layout based on client sketches.

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 basic computer/mobile skills.
- The secretary and instructors are trained on how to use the system.
- DMV will provide timely updates that the system can integrate with.
- Credit card payment gateway will be set up by a third-party service.

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?

- Customizing packages beyond enabling/disabling will require developer involvement.
- Real driving sessions cannot be virtualized or handled remotely.
- Budget may limit the initial scale of infrastructure (e.g., number of concurrent users).
- Integration with DMV APIs depends on DMV availability and cooperation.
- Future features like chat support or app versions may be out of scope for the first release.

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.