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 the DriverPass system is to design a cloud-based platform that enables customers to prepare for DMV driving tests through online practice exams, online coursework, and scheduled on-the-road driving lessons.
- The client, DriverPass, wants a system that allows customers, the secretary, management, and IT staff to access features related to scheduling, reporting, system administration, and training resources.
- The system must allow access from any computer or mobile device with secure login capabilities.

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 identified a market need due to the high failure rate of DMV driving tests (over 65%) and wants to provide improved training tools.
- The system must provide online classes, practice tests, and the ability to schedule training lessons with drivers and vehicles.
- Components needed include:
    - Customer accounts
    - Scheduling/reservation system
    - Online test module
    - Training package management
    - Driver/car management

- DMV update integration
- Activity tracking and reporting
- Secure user administration

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 allow customers to register, log in, purchase training packages, and schedule or modify lesson appointments independently.
- The system should track all appointment changes, user activities, and test progress.
- The system must permit the secretary to input customer data and schedule lessons manually.
- The IT officer must be able to reset passwords, modify accounts, and block access when needed.
- The system should receive DMV updates and notify users of updated policies or test questions.
- Overall goal: Fully support DriverPass operations while improving customer performance and training experience.

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?

- Must run as a cloud-based, web-hosted system accessible via modern browsers.
- Users should experience page loads under 3 seconds.
- Reservation, test results, and account lookups should process within 2 seconds.
- System updates should occur without disrupting active users.

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?

- Must run on any browser-compatible device (Windows, Mac, Linux, iOS, Android).
- Back-end requires a relational database system capable of storing user data, scheduling data, and test results.
- Cloud platform should handle security, data backup, and uptime requirements.

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 properly distinguish users based on roles (customer, secretary, owner, IT officer).
- All inputs, especially personal data and credit card data, must be validated for accuracy.
- System should display warnings when incorrect or conflicting data is submitted (e.g., overlapping appointments).
- Admin should be notified when data integrity issues occur.

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?

- Packages should be easily enabled or disabled by authorized personnel without rewriting system code.
- IT admin must have full access to system settings, user account control, and system permissions.
- System should adapt to platform updates from the cloud provider without service disruption.

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 using a secure authentication system.
- All communication must be encrypted (HTTPS/TLS).
- System should prevent brute-force login attempts by locking accounts temporarily after repeated failure.
- IT officer should be able to reset passwords or block accounts when needed.
- Customers must be able to reset passwords automatically if forgotten.
- Sensitive customer data (credit card, personal info) must be encrypted in the database.

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 login credentials.
- The system shall allow customers to create accounts and reset forgotten passwords.
- The system shall allow customers to schedule, modify, and cancel reservations online.
- The system shall allow the secretary to register customers and enter their personal and payment information.
- The system shall track all reservation changes, including who modified, canceled, or created appointments.
- The system shall allow administrators to block or reset user accounts.
- The system shall store and display training packages and allow administrators to disable packages.
- The system shall assign lessons to car/driver combinations and validate driver/car availability.
- The system shall present online classes, course content, and practice tests to eligible customers.
- The system shall record practice test progress, scores, and statuses (not taken, in progress, failed, passed).
- The system shall receive DMV updates and notify staff or customers about changes.
- The system shall produce printed or downloadable activity reports.

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.)?

- Interface must run in any modern browser and be mobile-friendly.
- Customers need access to scheduling tools, practice test modules, and training package information.
- Secretaries require forms for entering customer information, scheduling appointments, and viewing driver availability.
- IT administrators need dashboards to manage user accounts, reset passwords, and view system logs.
- Owners require access to business reports, audit logs, and high-level metrics.
- Interface must include tables for test progress and driver notes as shown in the client sketch.

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?

- All driving sessions are exactly two hours.
- Pickup and drop-off locations are always the same.
- Each car is assigned to one driver and remains consistent.
- DMV updates will be sent in a compatible electronic format.
- Users maintain internet access to modify or update data. Offline access is read-only.

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 will not allow non-developers to add or remove system modules; only package enabling/disabling is supported.
- Offline operation cannot support updates due to risk of data redundancy.
- Budget and time frame prevent mobile app development in this phase.
- System relies on third-party cloud services for uptime and security.
- Only core features requested by the client are included—no advanced analytics or automation in 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.