# 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?*

* Client: DriverPass
* Offer students online classes and practice tests
* Offer students on the road training
* Schedule driving appointments over the phone, in person, online
* Assign drivers and cars to appointments
* View feedback from past driving appointments
* Log edits to appointments and users
* Store students information for communication
* Access data from computer or mobile device
* Update new DMV rules, policies, sample questions
* Users: Company boss, company IT officer, secretary, customers

### 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?*

* Create website users can log in, create profile, view information, make driving appointments
* Track driving appointments: (who changed what)
  + Reservations
  + Cancellations
  + Modified data
* Store customer information:
  + First and last name
  + Address
  + Phone number
  + State
  + Credit card: number, expiration date, security code
  + Pickup and drop-off locations (same location)
* Track 10 cars and 10 drivers for driving appointments
* Offer three different purchasable packages that can be disabled at any time
* Store information on cloud that can be accessible at any time
* Provide different access levels for website: admin, secretary, customer

### 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 web-based interface to:
  + Schedule driving appointments day and time from personal account
  + Schedule driving appointments when customers call or stop in (secretary)
  + Input, view, edit personal information
  + View completed and in-progress testing
  + Links to classes and tests
  + View notes from driver
  + View driving lesson times
  + Contact company
  + Contact students
  + Automatically reset lost/forgotten passwords

## 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?*

* Able to run on any computer and mobile device
* Normal user experience with response time, pages load within a few seconds
* System updated at regular intervals
* Security updates as soon as available (24-48 hours)
* Updates from the DMV as soon as possible (24-48 hours)
* Maintenance and updates during off peak times

#### 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?*

* Platforms:
  + Windows
  + Linux/Unix
  + MacOS/iOS
  + Android
* Database
* System and database should be stored on a cloud service
* Continuous Integration tool for automatic testing when systems and platforms update

#### 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 has unique username and password
* Dedicated username and password for:
  + Admin/Owner
  + IT
  + Reception
  + Drivers
* Input is case-sensitive
* General user can reset password themselves through the system
* Dedicated user must notify Admin or IT for password problems via internal communication
* If user has technical issue, puts in ticket and system will notify Admin

#### 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?*

* User may be added, removed, or edited through the system interface without changing internal code
* Use continuous integration software tools to automatically adapt system when platforms update
* Protocol for when new updates fail or cause defects in the system
* IT Admin should have access to all parts of the system

#### 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?*

* User have unique username and password to log in
* Passwords must be strong: upper and lowercase, number, character
* If user forgets password, can be reset through the system via a reset link and security questions or verification code
* Two factor authentication for more secure log in and for when password is forgotten or hack attempt
* Use of secure communication protocols, such as encryption when transferring data over the internet and when accessing data from the database
* If user enters password wrong 6 times account will be locked and notification to user and admin sent
* User can unlock account the same way as reset password, password will need to be reset after account is unlocked

### 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 process payments when packages are purchased
* The system shall post links to courses and practice tests when purchased and show progress
* The system shall track 10 cars and drivers for driving appointments
* The system shall reserve driving appointments when purchased and chosen
* The system shall run CI software when platform updates happen
* The system shall track when driving appointments are modified in any way
* The system shall notify Admin when account locked or customer has submitted technical issue
* The system shall post driving notes after driving appointment complete
* The system shall update database when user information has been modified
* The system shall update policies, procedures, and practice questions when DMV updates
* They system shall notify admin of any security, platform, or DMV updates happen

### 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 has several pages:
  + Log in
  + Input student information (Reception can add many, student can add once)
  + Contact, student and company
  + Main Page:
    - Student:
      * Online test progress with links to courses and tests
      * Student information
      * Driver notes
      * Special needs
      * Driver and student photos
    - Reception:
      * Input to look up specific student
      * Shows same information as student, but in a simpler format for quick viewing and editing
* Admin and IT has same view as reception with added pages of tracking, any communications received from students, notifications of updates and lock outs
* Driver has same view as reception with separate page to view upcoming and past appointments, and section to add comments to past appointments
* The users will interact with the interface via the web and the system will be compatible with all major web browsers for desktop and mobile devices
* The interface will be responsive to adapt to many different screen sizes and orientations

### 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?*

* Assumption that IT Admin knows how to work CI software tools
* Assumption that the system will support user loads of a local area
* Assumption that user profiles will be deleted after an amount of time has passed, otherwise stored in the database
* Assumption that client does not want a separate mobile application
* Assumption that when a student buys package over the phone or in person, reception will set up the online profile and give student their username and temporary password

### 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?*

* Scalability: this system is built to handle a local area, may need to be expanded in the future
* Integration with DMV systems: formatting or timing may be different and further interventions may need to be put in place
* Admin, IT, Reception, and Drivers may need to be trained on how to use the system
* Security: advanced security measures may need to implement in the future
* Maintenance: IT Admin needs to know how to troubleshoot the system and make sure updates go smoothly

### 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 diagram with multiple colored boxes

Description automatically generated with medium confidence*