# 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
* Provides online classes and practice tests to prepare DriverPass customers to pass their drivers test at the DMV

### 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 needs a system to schedule customers for physical driving lessons
* DriverPass needs a system for customers to take online lessons and practice tests
* DriverPass needs an administrative section to allow modification of packaged lessons
* DriverPass needs an administrative access to help users register and manage 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?*

* Online system, with ability to create excel and reports for offline consumption
* System needs RBAC (role based access control)
* System needs audit records of changes in the data, including reports for audits
* Customer attributes storage and editing
  + Firstname
  + Lastname
  + Address
  + Phone
  + Cc number + expiry date (no securitycode)
  + Pickup location
* Customer/administrative security
  + Authentication
  + Password reset
* System needs reservation functionality for driving lessons
  + Customer reservations can be created by administrative staff on behalf of a customer
* System needs scheduling to match a car and lesson driver with a reservation
  + Three packages
  + Limit total reservations to 10, as only 10 cars in fleet
  + Scheduling based on hours of chosen package
* System needs to be able to edit packages
  + Enable/disable
  + Change total hours available
  + Change tests/lessons available
* DMV policy interface to receive policy changes

## 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?*

* DriverPass will be web based
* DriverPass will be hosted at a standard cloud vendor
* DriverPass will require all operations to complete within one(1) second
* DriverPass software should expect to have quarterly updates

#### 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?*

* DriverPass will target Java using DropWizard web framework
* DriverPass will execute on Linux Debian
* DriverPass will utilize PostgreSQL running on Linux Debian

#### 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?*

* Users will be identified by their registered email address
* Input is case insensitive
* All input screens will check user input client side for errors
* Server-side errors will be reported immediately to the user with the original form filled in
* Server-side errors will be logged, and a daily log report will be emailed to the administrator
* Tracking, an audit record (who, what, when) will be recorded for all 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?*

* Users can register themselves
* Users can be registered over the phone by an administrator
* Users can modify their own details (except email) CC number, address, phone, etc
* Administrators can modify user details
* Existing packages can be disabled and enabled
* New packages add be added via a code change and deployment
* IT admin can upgrade application software via package

#### 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 will register and generate a password
* Users email will be validated by emailing the user a generated code
* User will authenticate using their unique email and previously supplied password
* After authentication users can change their password
* Password changed notification will be emailed to the user
* Users can reset their forgotten password using an emailed password reset link
* All communication will be security using HTTPS and TLS 1.2 certificates
* User accounts are locked for 15 minutes if there are three failed login attempt with 15 minutes
* All IT access shall be audited for access control

### 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 provide a registration form
* The system shall provide secured authentication for user and administrators
* The system shall provide learning for driver’s tests
* The system shall provide immediate drivers test lesson feedback
* The system shall provide interface for choosing available packages
* The system shall provide scheduling interface for booking driving lessons
* The system shall provide administrators schedule view to assign drivers to students
* The system shall provide administrators will view of recent errors
* The system shall provide administrators will view of tracking audits
* The system shall provide administrators with view to enable/disable package
* The system shall provide the user with view of the online test status
* The system shall provide user with view to input driver notes and comments

### 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.)?*

* The user interface shall be web browser based with accessibly tags for viewing with mobile devices
* The DriverPass logo shall be displayed at the top of all pages
* The user’s view of the test status shall include, test status, user’s demographics, special needs, photo of self, photo of assigned driver, and driver inputted notes.
* The administators input screen shall have ability to upload driver photos and input for notes from the driver during the lession

### 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?*

* Chosen IT hosting vendor shall provide automated backups and SLA uptimes of 97%
* Chosen IT hosting vendor shall provide secured facility with biometrics access, and access audit
* Web browser shall be modern and have cookies and JavaScript enabled
* User and administrators shall have greater than 1 Mbps internet upload/download speed

### 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 can support a given number of concurrent users
* Upgrades of software will require downtime of system
* Pricing of IT hosting vendor is unknown
* Any changes to the schedule to add/change/remove functionality will put the project in jeopardy
* The Schedule is waterfall based and not iterative

### 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.*

Chart

Description automatically generated