# 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**
* Driving test training for their customers
* Provide online classes and practice tests
* Provide on-the-road training (optional)
* Access for DriverPass to data and downloadable reports
* User access controls
* Activity tracking and reporting
* User accounts with password reset capabilities
* Reservation system (2hr sessions) to request date and time
  + DriverPass ability to access and modify reservation
  + Tied to user accounts
  + Tied to DriverPass drivers and cars info database
  + Offer three package options (modifiable by developer/ DriverPass able to disable packages)
* Notification from DMV on any changes or updates
* Web access – cloud
* Use sketched design for interface
  + Driver notes
  + Student information
  + Driver contact
  + Student contact

### 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 noticed that many people fail their driving tests at the DMV and there is a need for better driver training. DriverPass started their company to provide this type of training for their customers. DriverPass will provide online classes and practice tests and optional on-the-road training.

### 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?*

* system for driving test training.
* system for online classes and practice tests
* option to Provide on-the-road training (optional)
* access for DriverPass to data and downloadable reports
* user access controls
* activity tracking and reporting
* user accounts with password reset capabilities.
* reservation system (2hr sessions) with date and time options
  + DriverPass ability to access and modify reservations.
  + integrated with user accounts.
  + integrated with DriverPass drivers and cars info database.
  + three package options (modifiable by developer/ DriverPass able to disable packages)
* notification system/process from DMV on any changes or updates
* web access for users – cloud-based
* use sketched design for the interface:
  + driver notes
  + student information
  + drivers contact system
  + student contact system

## 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?*

* Dependable cloud-based web access
* Fast connection needed to support interactive processes and training.
* Regular checks for updated information with DMV
* Periodic system updates or module changes/updates by developer or system analyst.

#### 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?*

* Cloud-based web-accessed applications should be accessible by all platforms, browsers and devices.
* A database will need to be implemented to store the various data of the application like student and driver info, schedules, testing, test scores, notes, etc.

#### 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?*

* Different permissions/access and unique ID’s will need to be set to accommodate the users like admins, office staff, and online clients/students.
* For overall system maintenance and added security, standard naming conventions should be implemented and enforced by system limitations for uniformity of data that is entered and used.
* Admin notification should be set up for downed connections or web access, failed login attempts, potential security threats, etc.

#### 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?*

* The users with the appropriate permissions will be able to add, remove and modify users of the system from the interface.
* Platform updates will need to be done during non-peak hours and/or may be offered as part of the cloud platform services.
* IT admin should have full access to all aspects of the application outside of code manipulation.

#### 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?*

* A username and password will be required for the user to log in after creating an account by providing their personal information.
* Encryption and TLS should be implemented to secure the connection and data exchange.
* If a “brute force” hacking attempt is made on a user account, it should be locked, and a notification sent to the user and the admins.
* User accounts should be recoverable by security questions or other measures and the ability to reset the password with the right credentials verified.

### 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 have user accounts with different permissions for different access needs.
* The system shall validate user credentials when logging in
* The system shall have change logs and tracking to see who and what changes have been made.
* The system shall have web access for students to make reservations, take tests, etc.
* The system shall have the ability to track students, drivers, cars and times and the interaction of those components.
* The system shall have different packages available to choose from for the student and those packages can be customized/modified by the developers or system analysts and disabled by system admins.
* The system shall allow online reservations, appointments, etc., and store user information like first name, last name, address, phone number, state, and credit card number, expiration date, and security code. Also, pick up location and drop off location and verify that they are the same.
* The system shall update rules, policies, sample questions, etc. whenever they are provided/updated by the DMV.
* The system shall be a cloud-based web access application.
* The system shall have an interface to represent the sketch provided by the client.
* The system shall monitor and record user access and progress for the various test, exercises, etc.
* The system shall allow drivers to make comments that are accessible by the student.
* The system shall show the student a report including the lesson time, start hour, end hour and driver comments, scores, status, progress, etc.
* The system shall have pages developed for each need of the client to include student information, progress/info dashboard, contacting DriverPass, etc.
* The system shall have a way for DiverPass to contact the students.
* The system should be adaptable and expandable to include new features and more in the future.

### 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.)?*

* Home Page
* Login/Create Account/Registration

- First Name, Last Name, Address, Phone Number, State, Credit Card Number, Exp. Date,

Security Code

- Password Reset

* User Dashboard

User Information

Online Test Progress (Name, Time Taken, Score, and Status: Not Taken, In Progress, Failed, or Passed)

Driver Notes (Table: Lesson Time, Start Hour, End Hour, Driver Comments)

Special Needs

Driver Photo/Student Photo

* About Us
* Contact Us
* Courses Offered
* Driving Packages *(description: Each driving session is 2 hrs. long)*

Pkg. 1 – 6hrs drive time w/trainer

Pkg. 2 – 8 hrs drive time w/trainer + in person lesson

Pkg. 3 – 12 hrs drive time w/trainer + in person lesson + access to online classes/practice tests

* Reservations/Schedule Appointments (Pick-Up/Drop-Off Location)
* Users would include:

IT/Developer/Analyst (full control) – System Updates, Add/Remove Modules or New Features

Admins (full control of user features/controls) – Generate/Download Reports and Tracking Logs, Add/Change/Modify Users and Permissions/Passwords, Add/Change/Modify Reservations, Disable Packages Offered

Office Staff (limited system access to read, write and modify) - Add/Change/Modify Appointments/Reservations

Online Clients/Students (limited system access to read, write and modify user content) - Add/Change/Modify Client Information/Password, Reservations, View Courses, Online Progress, Driver Notes and Interact with Tests.

Since the system will be web based, users should be able to access the interface through devices that offer that capability and should be responsive in design to accommodate those variations.

### 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?*

* Dependable, reliable, and sufficient internet connection/speed to access the system.
* DMV information will be consistently checked and updated
* DiverPass will have a way to contact the students directly
* Database relationships or some system will be in place to correctly schedule, update and synchronize the students, drivers, packages and times.
* A payment system will need to be integrated

### 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?*

* Web-based systems are dependent on an internet connection at least of minimum requirements.
* Cloud based systems are susceptible to data and privacy threats and attacks and down time.
* An app may need to be added later. It may work better and be easier for users especially in this demographic.
* Developer resources, time, budgets and technology needed will be a determining factor for the developed system to provide the functions/interactions requested by DriverPass. Storage/databases/backups will be necessary to record and store the information generated by the system.

### 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.*

Timeline

Description automatically generated