# 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?*

* DriverPass has reached out to our company requesting assistance in the development of a cloud-based training program. This system will provide online training as well as scheduling for on-the-road training to students. If they prefer, students can call into DriverPass’ office to schedule their on-the-road training, which DriverPass secretaries can schedule.
* Package plans will be available, which students can pay for to “unlock” special features of the system such as online training and practice examinations.
* “Offline work” availability with input tracking utilizing cloud programming.

### 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 develop a cloud-based training system for individuals preparing for driving examinations given through their local Department of Motor Vehicles or equivalent. This online training market is currently “untouched”. DriverPass believes that implementing a cloud-based training platform will greatly increase their revenue and the overall scores of individuals preparing for driving examinations. The system background is as follows:

* Cloud-based training system that allows students to schedule on-the-road training
* Secure system able to handle user data and payment information.
* User-friendly interface per DriverPass Owner specifications.
* Training maintained up-to-date.
* Overall increase in user pass rate for driving examinations.
* “Offline” usability in that forms and documentation can be downloaded and viewed when not on company hardware.
* Accessibility – Owner, IT Officer, Secretaries, Instructors and Students
* Three separate “packages” available, with additional features available at a later date.
* System will run on the cloud with all security and backups being performed by our company.

### 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 DriverPass system should be able to provide training and schedule “on-the-road” training sessions for individuals preparing to take their Driver’s Examination and provide cloud-based instruction and practice tests to the student based on the student’s package selection. DriverPass wants to enter an untouched market and increase the overall pass rate of individuals taking drivers examinations up from 35%.

## 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?*

* The DriverPass system should be cloud-based. It should have the capability to run on various devices such as Mobile, IOS, and Windows based products.
* The system should be able to handle multiple users interfacing with the system at one time, and continuously update the “on-the-road” training session calendar. Training modules should not lag between slides or animations.
* The training modules should be readily updateable as it will be updated as requirements within the Department of Motor Vehicles (or equivalent) are updated.

#### 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?*

The DriverPass system should run on Mobile devices, IOS and Windows products as well as Linux based OS. It will require a backend with databasing capabilities in order to log the training schedule, who set the appointment, the last person to modify it, the selected driver and associated car number.

The system should have a training tool supported, one that allows for training videos or lessons as well as practice examinations. Lastly, the system should work with major credit card processors to simplify the package and payment selection process.

#### 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?*

There will be the following users within the DriverPass system: Owner, IT Officer, Drivers, Secretary, and Students.

* Input for reservation will be based on calendar dates and will be “selectable” from a displayed calendar to the individual making the appointment. They will then select the desired time of training from a dropdown menu. From there, the appointment maker can select their desired driver from toggle boxes, if the individual is previously scheduled, they will be greyed out and not able to be selected for the desired time and date. Finally, there will exist a comment box that will not have any case-sensitive input but will only allow 500 characters. Both Students and Secretaries will have the ability to schedule “on-the-road” training.
* The system will track who created the reservation, who made changes to the reservation, and if canceled, who canceled the reservation. This activity report will be printable.
* Input for Student information will be case-sensitive, additionally, addresses will be checked against known addresses.
* The Owner, Secretary, and Drivers will have the ability to view and print the schedule for the day/week/month to assist in planning.
* The IT Officer will have rights to all accounts so they can reset if someone forgets their password, or disable access if someone is let go from the company.
* All parties will have the ability to reset their own passwords as necessary but notification via email or text.
* Drivers will have access to student profile sheets that show the training completed by the student, past test performance, other driver notes, student photos, and any special needs, as well as general information about the student such as last name, phone number, etc.
* The IT Officer should be informed of any unauthorized access attempts and excessive failed entry attempts.

#### 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 system should be able to add, remove, or modify user information without the need for coding. Student users should be prompted for information as they login for the first time. Secretaries will have the ability to add/modify/remove existing student accounts as necessary. Back-ups should be made on a daily basis to prevent losing vital information.
* The initial iteration will be version 1.0, with minor updates following the .1, .2, .3 etc. format. Major updates will change the version. Updates will be pushed to the cloud, all users will be notified of updates prior to pushing them with expected down-times. Updates will be performed after normal hours as to affect the smallest group of individuals. All individuals logged into the system will be logged out prior to pushing updates.
* The IT Officer will have the ability to push updates, modify user accounts, remove member access, and modify the system as necessary. They will be allowed to either use the provided user interface, or code within the program to reach the desired outcome.

#### 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?*

* To log in, we will require a username and password. The username and password will be created during account creation.
* We will be utilizing Secure Sockets Layer (SSL) or Transport Layer Security (TLS) when transferring any data between the client and the server.
* If there is a “brute force” attack, the account will become locked out and the IT Officer will be notified of the attack. During login, the member will have 3 attempts to gain access to their account before it becomes locked out. At that point, the individual will either need to reach out to IT, or follow the account unlock process to unlock their account.
* In the event that someone forgets their account password, they can either reach out to IT to request an account reset, or they can follow the account unlock process by sending a temporary password to their selected communication method. Following unlocking their account via the temporary password, the user will be prompted to reset their password.

### 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.”*

* Cloud based system that allows students to schedule on-the-road training.
* Information collected from student during package selection will be:
  + First Name
  + Last Name
  + Address
  + State
  + Phone number
  + Credit card number
  + Expiration date
  + Security code
* Interface created per owner specifications as below:

Logo

Information (first name, last name, address, city, state, zip, phone, email etc.)

Online Test Progress

Driver notes

Special Needs

Driver Photo

Student photo

|  |  |  |  |
| --- | --- | --- | --- |
| **Lesson Time** | **Start Hour** | **End Hour** | **Driver Comments** |
|  |  |  |  |

\*Example Driver notes table

* Notification to training department anytime DMV receives an update.
* Permissions set as follows:
  + Owner – view, download and upload capabilities
  + IT Officer – ability to reset employee passwords, block users, maintain/update and make changes to the system
  + Drivers – view schedule, view student information to include class status, previous drivers and comments, update driver comments and driving times.
  + Secretaries – schedule student on-the-road training
  + Student – schedule student on-the-road training, perform online training and practice examinations, automatic reset of password if necessary.
* Scheduling will include:
  + Student name
  + Date
  + Time – each on-the-road training session is 2 hours long.
  + Driver ID
  + Car ID
* Schedules should be made available to employees so that all parties are aware of employee location training time.
* The system will track reservations and print to an activity report. Tracking will include who scheduled the appointment, who canceled the appointment, and who was last to modify it.

### 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 will be created to the owner’s specifications. The interface should be different between customers and employees. The customers should be shown their current learning, learning modules, upcoming training sessions, exam scores, and practice exams; while the employees should see the progress of the student, upcoming training sessions scheduled for the drivers, driver notes, student information, and any student special needs.

The users will interact with the user interface via both mobile devices and web-based browsers.

### 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?*

The following assumptions will be made:

* The users will have adequate access to the internet.
* The users will have access to devices that are able to interact with the DriverPass system.
* Training will be created and implemented by a third party.
* Practice examinations will be handled either by DriverPass, or an external party. Our company is not liable for exam security.
* Updates to training standards will be handled by the DriverPass system.
* DriverPass will pay for third-party applications or licenses as necessary, additionally, they will pay for any cloud-based costs.

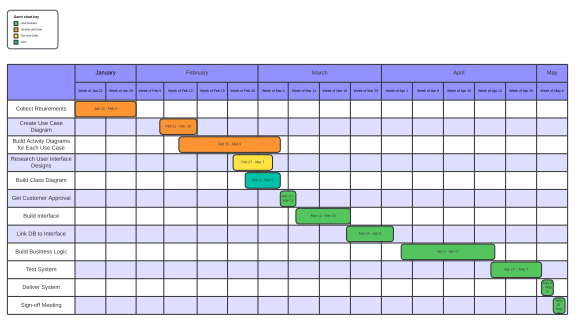
### Limitations

*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?*

* The system will be down for maintenance and will not be accessible during maintenance or when updates are being pushed.
* The project will be limited by the DriverPass budget. Items to consider will be external expenses such as cloud-based operations or testing programs as well as our company's cost.
* Time spent on the creation of the programming will be agreed upon by both DriverPass and our company. Time constraints will be enforced. The expectation is that at the end of the assigned period the first iteration of the DriverPass program will be complete and implemented.

### 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.*

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