# CS 255 Business Requirements Document William Tunstall

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 main purpose for this project is to increase passing rates of student drivers passing their driving tests.
* The client is DriverPass and they desire a website that will allow students to do preparation for their driving tests. The website is also needed to book scheduling for on-the-road training for students.

### 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?*

* The owner needs offline and online access to all data from anywhere.
* The product must have computer and cellular compatibility for the owner.
  + The modifying of data should be done online as it prevents the duplication of information on servers.
* The owner must have the ability to download reports imported to excel.
* The owner must have access to all accounts.
  + The ability to block users, reset passwords, change usernames, etc.
* The owner must receive notifications for on-the-road training (cancellations, newly scheduled training, or other changes to booking).
  + Users will need the ability to schedule and order training lessons through their accounts.
    - Three buying packages will be included in lessons(each package varies in price and lesson contents).
    - Users need to be able to add important personal information (full name, address, credit card number, etc.) to their account.
    - User must be able to include pick-up and drop-off locations.
  + The owner must have the capability to see which instructor is paired with which student.
  + The owner must also deny access to purchasing packages to avoid over booking a schedule that is already sold out.
* The company must stay up to date with driving practices, so owner must receive any legal changes from the DMV.
* This project must be done over the cloud.
* The Owner and the user must be able to track training progress, as well as view personal information, and training information.
  + The training progress should show the current training the student is completing, the score status of their training, and overall status of their training.
  + Instructor notes should show start time, end time, length of lesson, and comments about the lesson.

### 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 main functionalities of the system should allow students to take online tests, schedule driving lessons and reservations online and on the cloud and review their class progression as well as personal information.
* A task that should be focused on is the order and arrangement of the system.
* We will focus on the upmost important functionalities of the system.
* A timeline should be create in which we divide projects between groups as well as giving time tables for the completion of each project.

## 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?*

* This system needs to be web-based.
* The system must be accessible from a computer or any mobile device that can connect to the internet.
* The system must be cloud-based.
* Scheduling for training must be updated in real time.
* System must be updated whenever new policy is added/updated by the DMV.
* The system must be fast enough for seamless login/access of content.

#### 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 platform must be compatible with major Operating Systems to ensure access to all users.
* Must include a database to store user information and system logs.

#### 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 must create a distinct username and password.
  + Input for passwords and usernames will be case-sensitive.
  + Multi-factor authentication should be used.
* System should automatically notify admins of problems to allow for immediate correcting.

#### 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?*

* IT support must have full access to all user accounts.
  + Will have the ability to reset passwords or block malignant accounts.
* IT support will be in charge of maintaining and updating the system.
* Changes to users must be done with changing the code of the system.
* Developers or system analysts will be needed to add/remove future modules.
* Packages must automatically be disabled once purchased without changing code.

#### 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?*

* Each user will have unique usernames and passwords.
  + Login will include multifactor authentication.
* The cloud will handle all data transfer between the client and server.
* The system will lock user accounts after 4 unsuccessful login attempts.
  + Admin accounts will be locked after 3 unsuccessful login attempts.
  + When users are locked out of account, users should be notified by email or text that their account is locked and should be given link to reset password and unlock account.
* System must include reset password option on the login screen.
  + Must include authentication access via security question or verification through message sent to the contact associated with the users’ account.

### 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 must validate user credentials during login.
* System should provide practice tests, online classes, and other learning material.
* The system must provide 3 different driving packages.
* The system must run fast and efficiently enough to provide a smooth experience.
* The system must be able to create reservations for users and add them to a schedule.
* The customer should be able to see the driver they are paired with.
  + The driver should also see which student they are driving with.
* The system should mark the learning material that the student has completed.
* Finally the system should provide customized access based on the user (student, driver, admin).

### 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.)?*

* System must run on the cloud.
* User interface must include student information, learning materials, special learning or driving requirements, photo of student and employee/driver.
* Users of the interface are the customers/students, admins, and employees/drivers.
* Customers need the ability to select different packages, enter payment information, view/edit purchases, view/edit account information, choose pickup and drop-off locations, access learning materials, etc.
* Admins must be able to change/cancel the driving schedule.
  + Admins must also need to customer’s contact information.
* The company’s contact information should be available on the page.
* Users must be able to interact with the interface as well as access the system with any web browser and on a mobile device.

### 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 interface must allow for the customers to make reservations based on their driving package, as well as see their learning materials.
* Driver Pass employees must be able to make future updates and changes to continuously meet industry standards.
* The system should be compatible with multiple devices, cell phone, computer, tablets, etc.
* Everything will be within budget, because of the lack of a budget.
* All users will have reliable internet access, as well as an at home or mobile device capable of accessing the internet.

### 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 cannot be accessed without internet access.
* Real-time notifications are unavailable with a browser-based 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.*

A calendar with colorful squares

Description automatically generated with medium confidence