# CS 255 Business Requirements Document Template

## 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 is *DriverPass*
* They want to create an application to help new drivers pass their driving tests
* They want to offer a better experience for driver training
* They want client to be able to access real road instruction through the app

### 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?*

* Drivers Pass wants their system to
  + Offer driving training modules
  + Offer the ability to take tests
  + Offer “On the road training”
    - Three different packages
  + Ability to login as user
* Drivers Pass requires:
  + Login system for users and employees
  + Database to store creds and personal info
  + Scheduling system to check availability for “On the Road” training
  + Robust UI
  + Link with DMV to keep tests and training updated
  + Easily expandible solution for additional pages and additional vehicle capacity

### 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?*

* New user registration
* Login as User
* Login as Owner/Employee/Admin
* Validate different permissions as different company users
* Launch and successfully go through all training modules
* Launch and successfully take all tests with passing score
* Launch and successfully take all tests with failing score
* Schedule “On the Road” driving appointment
* Modify “On the Road” driving appointment
* Cancel “On the Road” driving appointment
* Attempt to schedule “On the Road” driving appointment for date with no availability

## 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 system should run on any browser as a web-based application
* System responses from customer requests should not take more than 3 seconds
* Online scheduler should be updated in real time for all users
* The system should be available 365 days per years 24 hours per day

#### 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?*

* Platform should be hosted on Linux system
* Back-end requires database to safely secure customer data
* Back-end requires scheduling system
  + System should validate availability when users try to schedule appointment and offer feedback if unable to schedule

#### 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?*

* All users will have username(no case sensitive) and password(case sensitive)
* User credentials will be authenticated during the login process
* The admin should be notified as soon as a problem arises (bug, stability). The admin can the determine the severity of the issue and take appropriate measures.

#### 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 will allow the addition, removal and modification of users without changing the code.
* Platform updates will be handled manually as new feature are added and fixes to existing code are made. Eventually we will move to a CI/CD pipeline and have planned production releases.
* IT is required to have full access to the system to handle any situations that should arise.
  + Access should be created when new employee is added and should be removed \*\*immediately\*\* when no longer required

#### 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 are required to register with the site and go through an authentication process (username and password) to login
* Our connection from client to server will be secured by leveraging rest endpoints, JWT’s, and SSL to confirm the user while they are on our website.
* Brute force attempts should be handled by locking out a user after 5 incorrect logins in 5 minutes
* There will be a forgot your password button when triggered the user will need to enter their username and email address. The system will validate these values match a user in the system and will send a reset link to the email address.

### 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 enable users to book appointments
* The system shall provide users with practice tests
* The system shall provide users with driving classes
* The system shall offer multiple driving packages
* The system shall read users role and show/hide data specific to them

### 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 interface must allow all users to login in -or- select forgot password
* The interface must allow user with customer role to login to the system, take online classes, take online tests, and book/cancel booking for in person training
* The interface must allow users with admin role to login to the system view and edit bookings, update/delete trainings and tests

### 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?*

* We are making an assumption that the tech stack we are using is chosen by us
* We are making an assumption that the budget includes the cloud environment, the data base and all the requires developers.

### 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 limitations we have are based on timeframe and budget.
* We have no proposed budget and we need X number of assets to build this in the allocated time frame. To determine if we will have enough resources we need an estimated budget.

### 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.*

