# CS 255 Business Requirements Document Template

## System Components and Design

### Purpose

* This project is for our new client, an online training or Learning Management System Institution called DriverPass. The purpose is to create an online driver training system in the form of a website that will provide students with online practice exams, and the ability to book on the road training.

### System Background

* The client asked that we build a website/system that will allow customers to take online classes, practice tests, as well as provide them with on-the-road training if they wish. The website is a way to provide better training that will help solve the issue of so many people failing their driving tests at the DMV. The client in essence wants to take advantage of a void in the market and train students for the driving test at their local department of motor vehicles (DMV) due to lack of tools available to help people pass their driving test. The client also wants the system to help them access their data from anywhere, online as well offline.
* The system will focus on fixing the problem of people failing the DMV driving test.
* The website will provide online practice exams, classes, and the ability to book on-the-road training through the system.
* The system will allow users to access data from anywhere as long as internet connection is available.
* The system is expected to also have proper security features in order to grant access to different users based on privilege or access rights in order use the system.
* The system will track all reservations, cancelations, modifications, and offer three different packages to choose from for on the road training.

### Objectives and Goals

* The system shall provide users with the following functionalities:
* Create an account
* Book on-the-road driving test or a training session
* Modify on-the-road driving test a training session
* Cancel on-the-road driving test a training session
* Access User Account data
* Take Practice test and class(es) online
* Only grant certain access to specific employees to make needed changes or to make improvements in the system
* Cancel an account

## Requirements

### Nonfunctional Requirements

* Website must lock account after three failed attempts to enter correct combination of UserName and Password
* Provide per-user pricing
* The website must be responsive, always online/accessible to users at all times.
* Website must be secure and in compliance with standard security protocols
* Users with previledge access should have single sign on.

#### Performance Requirements

* The system should be web-based website over the cloud.
* The time it takes to connect to any training or testing module/class, retrieve information, and display it to the customer should not exceed 10 seconds.
* Updates to the training website should be pushed from a central database or server system with the presence of a technician for backup.
* The website should be compatible with all secure/popular web browsers.
* The website should be check for and perform updates at any time and/or as the client sees fit and/or when they decide to add new features.

#### Platform Constraints

* The platform should run on a Linux operating system.
* The website will be cloud-based which will also take care of the databases required for back end processes. This does not eliminate the need to build database tables to link to the interface.
* No database or the need for one will exist on local (client) devices, but it will connect to the central cloud that has all the proper APIs necessary to perform the needed functions.

#### Accuracy and Precision

* Each user will have the ability to create a username and password for their respective user account upon accessing the website for the first time. The input should be case-sensitive. In addition, the system should have two factor or multi-factor authentication to make it more difficult to hack into an account.
* The Website should distinguish On-The-Road Test users from regular users. On-The-Road Test users are not charged a subscription fee if they pay in full for a complete training plan with DriverPass.
* The Website should identify a technician user when the technician enters the proper UserName, Password, and uses the proper (special) Admin account.
* The system should immediately inform the admin (IT Officer) of any (maximum) failed login attempts, problems, glitches, or bugs with the website in order to troubleshot and restore services promptly.

#### Adaptability

* The system should allow modifications to be made to users, and/or remove users without any code changes or code deployment required.
* The system should adapt to weekly updates received from Linux. The Website should have no problems downloading and installing Linux updates as/or when they are released from Linux.
* The system should (by way of Maintenance Control or Patch Management etc. from the cloud service provider) be strategically introduced into platform updates with the help of an in-house developer or system analyst as need be. This will follow a detailed organizational process.
* The IT admin will have full (read/write) access over all accounts in the system in order to modify, maintain, make any necessary changes as well as remove former employees who should no longer have access.

#### Security

* The user will require a username and password to log in, along with multifactor authentication for added security.
* The system should allow user to try the UserName and/or Password combination three times. After three failed attempts, the website will block the user’s access (account).
* The user must contact the Access Management (Help Desk) by phone or email for UserName/Password reset or account restoration.
* The cloud will be responsible for the data exchange between the client and server.
* The website should log each active session and automatically save data in the event there is a website failure.
* The system should have a strong password policy and the ability to automatically disable an account after three incorrect login attempts in order to prevent brute force attacks.
* If a user forgets their password, they will be prompted to enter the email they used to set up their account, and a password reset link will be sent to that email address.
* The Access Management team should be alerted immediately there is a failed login attempt.

### Functional Requirements

* The system shall validate user credentials when logging in.
* The system shall provide practice tests, and classes.
* The system shall offer three different training packages.
* The system shall show and pair the customer with a driver.
* The system shall book reservations made by the user.
* The system shall show the tests activity and the work the user has already completed
* The system shall run fast and efficiently.
* The system shall block the user after four failed log-in attempts
* The system shall send a password reset link to the user’s valid email address.
* The system shall provide custom access based on the user and their privileges.
* The system shall show customer the following options: resume training, take test, start new lesson, retake training, cancel training.
* The system shall allow only one training or class per login/session. If more than one class is required, the login details must be entered again.

### User Interface

* The website consists of a landing page (which is also a login screen), a help tab, a details tab, a login tab, and a ‘contact us’ tab (to call customer service).
* The User Interface must provide the customer the ability to:
* Create a new account
* Register for lessons
* Make reservations for driving appointment packages.
* Take online classes and/or take tests.
* The User Interface must allow existing users the ability to make changes or update the system (respective user account) as needed.
* The user should be able to interact with or access the interface from a mobile phone, laptop, computer, or any device that is capable of running a web browser.

### Assumptions

* The user has a valid, state or school (not expired) Identification card to sign up.
* We were not given a timeline nor were we given a budget for the system. Due to this, we are making assumptions that all the time, resources and tools being used to build the system will be within “dateline” and at a non-specific cost. That includes using the Linux environment and using the cloud as well as following the timeline we set internally.
* User has access to the internet at all times.
* We are also assuming we have easy access to all of this technology

### Limitations

* The system is not handicap driver friendly.
* We have roughly five months to build this system and were not given a timeline and/or budget.
* One major limitation we have is the ability or lack thereof to do capacity planning such that our team is adequate for the project.
* We have no deliverable dateline.
* We do not know which cloud service provider the client is going to choose. We will need to know to make sure we do not run into compatibility issues during (cloud) deployment/migration etc.

### Gantt Chart

