# Driver Pass Business Requirements Document

## System Components and Design

### Purpose

* This project is for the owner of DriverPass, Liam. Liam is in need of a new system that allows users to pay for driver-training modules. The system must also be able to schedule live training sessions with a driver and a student.

### System Background

* DriverPass wants the system to be directly connected to the DMV website. This will allow the system to update the trainings and tests as needed, to reflect the most current driving policies. It also must show the students progress and test scores. DriverPass wants to offer three packages so there must be a way to update the description of the packages, add packages, or disable packages. The system must be able to securely store personal information such as student name, user photo, driver name, and payment information. Lastly, it must also be able to process payments securely.
* The different components of the system are as follows:
* o If a user does not have an account a registration process must take place.
* o Separation of roles and duties. Different users have different privileges and are limited to certain data. For example the IT Officer, Ian, may have access to update or modify the system but is not able to see the user’s payment information. The finance officer has access to the payment information. The student only has access to modules they have paid for, or to schedule or change appointments for themselves. Students are also allowed to see the appointments that are filled but not the student that has the slot. Students are able to view past driving appointments but have read-only access. A student can also update their user profile. The secretary has access to see and update schedules for the driver and student. A driver has access to their own schedule and can edit notes that they wrote in the student portfolio. Drivers are only able to edit notes for students that they were scheduled with. The owner, Liam, has access to view everything but not edit.
* o Security. Secure coding standards will be used and this system will ensure confidentiality, integrity, and availability. Input validation will be used to prevent attacks like SQL Injection or cross-site forgery. This will ensure that no one can exploit the system and obtain data they should not be able to. Passwords, personally identifiable information, and payment information will be stored via encryption. Only  hashing algorithms and encryption algorithms that are NIST standard will be used (ie SHA 3 & AES 256). This system will use load-balancing to ensure availability is met.
* This system must use cloud instead of an on-premise solution, which will eliminate the need to purchase and maintain hardware. Microsoft Azure or AWS will be used for this system.
* There is a void in the market when it comes to teaching individuals how to drive. DriverPass would like to resolve this issue by creating a new system.

### Objectives and Goals

* This should be able to cater driver-training to students that need it. It will connect to the DMV website and reflect any up-to-date policies. This will deliver training modules for users that paid through the system, and it will also schedule driving training sessions for a student and driver. The system will also be able to provide tracking information. Finally, it will show the students progress and any no-shows to appointments.

## Requirements

### Nonfunctional Requirements

#### Performance Requirements

* This system will be able to have cross platform use. This system should work on all browsers and have application available for Apple iOS, iPad OS, and android iOS.
* This system will utilize multiple servers and implement load balancers to ensure availability of the system.

#### Platform Constraints

* This system will be able to have cross platform use. This system should work on all browsers and have application available for Apple iOS, iPad OS, and android iOS.

#### Accuracy and Precision

* This system will use authentication and account services to distinguish the role of different users.
* This system will use SSO, OAuth 2.0 to enable easy user access and authentication.
* This will send special reports to IT admins for any server errors or issues.
* This system will sync to online DMV services to ensure all the module trainings are up to date on current policies.
* This system will log everything and will send report to ITadmins. This report will highlight any DDOS attacks that this system might have encountered and block.

#### Adaptability

* The IT admin will implement separation of duties and user roles. They will be able to modify any user role and what they can access.
* The system will adapt to platform updates by pushing out any patches and updates needed.

#### Security

* This system will use CASb since it will be implement on cloud services.
* This system will have secure coding standards when developed. Only NIST recommended encryption and hashes will be used when reveling this information system and any updates it has. This system will implement input validation on the sever side.
* This system will eliminate any DDOS attacks by implementing Proper security measures.
* If a user enters a password incorrectly three times it will lock the account and notify the IT department of suspicious activities. This will mitigate brute force attacks.
* Another way it will eliminate brute force attacks is by implementing two factor authentication. The user must use there email or phone. The system will send a OTP to the email or 5ths phone number. The user must put the one time pin in the system in order to access their account

### Functional Requirements

* This system shall let Student driver use service to be able to buy modules for training and schedule appointments with drivers for hands on practices of driving.

### User Interface

* This system will have the following users:
  + Driver instructor: The driver instructor will be able to view their profile and any scheduled appointments with student. The driver will only be allowed to edit student notes if they are assigned to student driver. They will only be able to write notes about a student and upload it to the the session of a student for a certain time. They will be view the student profile if they are assigned to that student.
  + Student driver: they are only allowed to edit their payment and personal information. They will be able to view there appointed and drive instructor notes but not edit it. They may schedule an appointment with a driver instructor. They may see if a slot is available or unavailable but may not view who has the slot scheduled. They do not have elevated information system access. They are allowed to see which instructor has a time slot but not the specific student user. Student users may only view modules that they pay for.
  + Secretary user: allowed to view the schedule and see who has the time slot for both student and driver instructor. They will be able make process schedules for driver instructors and student users.
  + IT Administrator: Allowed to edit user role functions and give user rights. They are not allowed to view payment information of any user. They are allowed to make any changes of the modules and the services that the company wants to offer.

### Assumptions

* All equipment is is good standing,
* All team members have the required skills.

### Limitations

* Since this system is cloud based, the limitations include internet services. In order to access the system a user may need internet. However they can download the modules they paid for to view during offline use. This feature is only allowed in application for mobile and os. They may also download modules off browser.

### Gantt Chart

