# CS 255 DriverPass Business Requirements Document

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## System Components and Design

### Purpose

* The client, DriverPass is a startup company seeking to provide quality instruction in the use of motor vehicles to prospective students.
* DriverPass desires a system that allows their customers to schedule in-person driving instruction sessions and engage in virtual learning courses and testing.

### System Background

* The client is concerned with the rate of failure among those who take the DMV-proctored motor vehicle test that is required for licensure.
* DriverPass desires a system that will aid them in providing learning materials, practice exams, and directed instruction in order to reduce the rate of failure.

### Objectives and Goals

* DriverPass desires a system that:
  + Allows users to schedule in-person instruction sessions, as well as modify or cancel reservations.
  + Utilizes a concurrent database which maintains information regarding appointment scheduling, instructors, vehicles, and courses.
  + Maintains an audit log of all database edits.

## Requirements

### Nonfunctional Requirements

#### Performance Requirements

* The system shall update the database in as close to real-time as possible, in order to avoid loss of data during system interruption.
* The system shall be accessible via web-browser both on a desktop computer and mobile device, regardless of web-browser.

#### Platform Constraints

* The system, being web-based, shall be fully functional within the confines of a web-browser and not require any additional software than is required by the web-browser itself.
* The system shall be supported by a database capable of supporting a wide variety and large quantity of information.

#### Accuracy and Precision

* Every user account shall be classified as a certain type in the database, restricting system functions based on type.
* The system shall generate a report when it encounters an error, saving it as a file to an internal directory, and alerting admin accounts that a new error report is available.
* All user input shall be validated, so that errors and data duplication do not occur due to case sensitivity or invalid or malicious input.

#### Adaptability

* The system shall be capable of creating, modifying, and deleting user accounts via interfacing with the database alone.
* The system shall not be affected by updates to the web-browsers on which it is hosted unless elements necessary for its function are altered.

#### Security

* The system shall require users to create a password with specific complexity requirements that will deter easy access.
* The system shall deny account access after multiple unsuccessful attempts to log in.
* The system shall require users to specify a method by which it may send instructions for recovering account access when the user account is first created.
* The system shall encrypt all data transactions when communicating between server and client in order to protect user data.

### Functional Requirements

* The system shall allow administrative accounts to add user information to the database without creating a user account.
* The system shall allow administrative accounts to create new reservations, add or remove users from reservations, and modify reservation details.
* The system shall archive reservation details after the appointed time has passed, preventing further edits.
* The system shall retrieve information from the DMV database regarding user registration when provided with supporting information from the user.
* The system shall log all changes to reservations, including what the changes were and which account made them.

### User Interface

* The system shall be accessible via web-browser both on a desktop computer and mobile device, regardless of web-browser.
* The system shall display relevant user information on their profile, including their license number, current reservations, progress towards tests or certifications, as well as instructor comments.

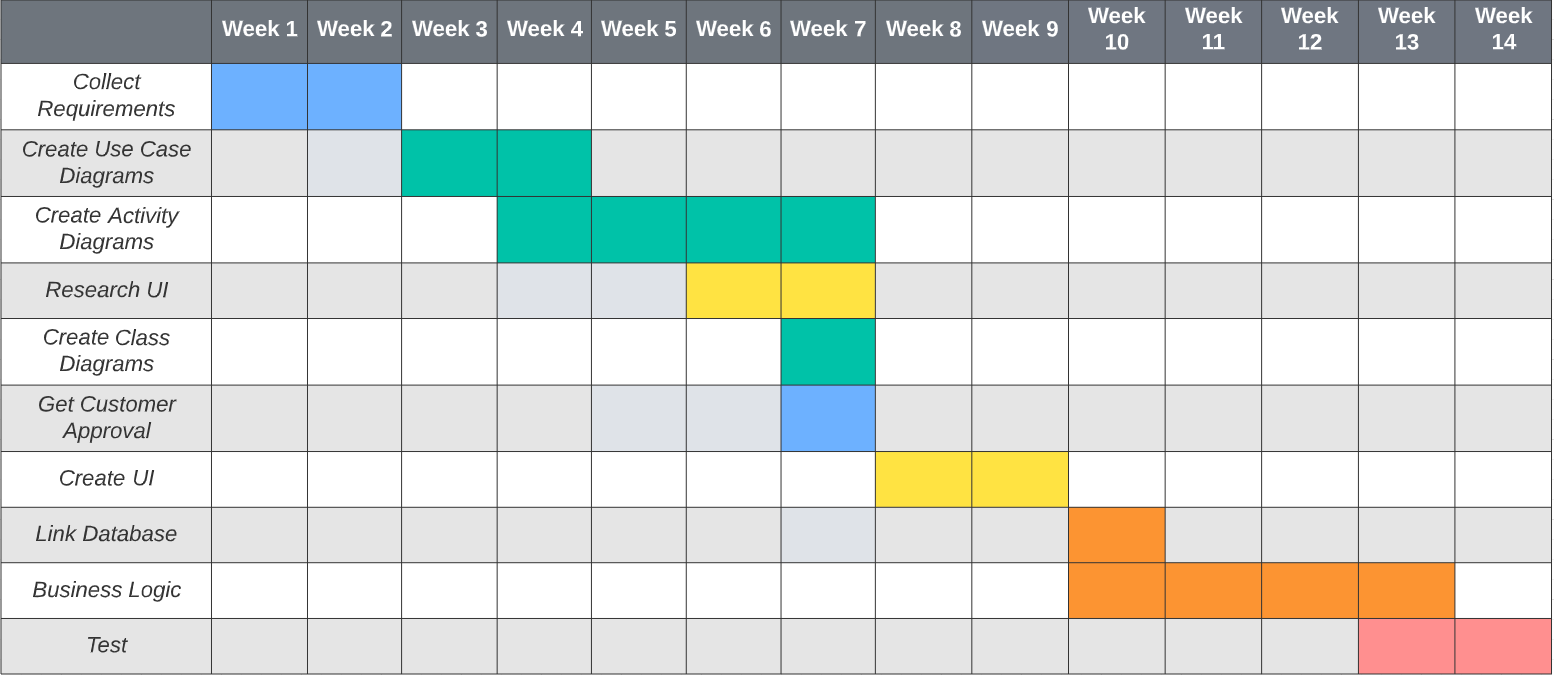
### Assumptions

* The users are assumed to have access both to a computer device that allows them to access a web-browser and the internet connection to do so.
* Users are assumed to have access to an email, phone, or other such method of being sent instructions for password resets.

### Limitations

* The system is vulnerable to changes in DMV rulings and policies as it cannot immediately account for them and requires administrator editing.
* The system will always require a developer or developers, who may not always be available, in order to make significant alterations to function or appearance.

### Gantt Chart

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