# CS 255 Business Requirements Document

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## 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 client for this project is DriverPass. The ultimate purpose for DriverPass is to provide online training in preparation for the DMV driving test as well as scheduling for on-the-road training. They have found a hole in the market for an intuitive system that will allow new drivers to get private training in preparation for department of motor vehicles (DMV) driving tests. The purpose of this system is to provide an easy way for customers to get the training that they need to prepare for DMV tests, both the driving test and the written test.

### 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?*

* DriverPass wants us to build a system that will have different roles for different users, allowing customer users and secretary users to fill out customer information and set up appointments for private training sessions.
* This system will connect customers with drivers, time slots, and vehicles for scheduled appointments.
* The system will need to keep information in regard to user interactions and allow for reports to be created or pulled at any time against this information to resolve certain problems.
* The system will need to be developed over cloud computing to avoid any server maintenance or security
* The system should have different user roles that have different levels of access for security purposes
* There should be support for different levels of customer packages and these should be able to be removed at any time with room for additional packages to be added. These packages dictate the customers access to resources provided by DriverPass

### 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?*

* Customers / Secretary will be able to do the following:
  + Input customer information such as: first name, last name, address, phone number, state, credit card number, expiration date, security code, pick-up location, drop-off location
  + Set an appointment for a two hour time slot with a driver and a car
  + Reset their password
  + Have access to this all through an online portal
  + Pick a customer package to have access to different resources such as instructor time, DMV resources, practice tests
* System Admins will be able to do the following:
  + Get update notifications from the DMV whenever compliance polices change for the driving tests
  + Deploy updates and deploy updated tests for customers
  + Manage all users of the system
  + Pull reports from the database of the system on user activity and download these reports to look at them when there isn’t a network connection
  + Set and change user roles / block specific users if needed

## 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 shall perform on a web-based environment and should be accessible to anyone with a network connection.
* The system should be updated whenever the DMV has new updates for the driving tests
* The system should be responsive enough to allow reasonable loading times on most connection speeds

#### 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 system shall be built over cloud computing to avoid any server constraints
* There shall be a database of the different users to maintain user information such as payment, classes, schedules, etc.

#### 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?*

* The system shall have different users for customers, drivers, and admins
* The system should maintain a calendar of times with accurate time data for scheduling purposes

#### 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 shall allow for uploading custom made practice tests and allow for these tests to be updated whenever DMV updates become available
* The system should update, and change based on the new updates from the DMV
* Users should be able to be removed if needed or blocked from the system by an admin

#### 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?*

* The system shall be a secure system that contains customer payment information
* The system should have a password requirement along with strong passwords to prevent brute forcing
* The different users will have different levels of security clearance to the system, admins having the most

### 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 schedule times for drivers and customers to meet
* The system shall give customers practice tests to user in preparation for the DMV test
* The system shall generate reports about user interaction with the system
* The system shall allow the secretary user to create user profile for them
* The system shall have different level packages that provides different levels of resources

### 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.)?*

* Users should be able to schedule appointments through the interface, user practice tests, view progress for tests
* Different users should have different home pages based on their user type, admin, secretary and so on

### 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?*

* Users will have an internet connection
* Users will have the means to pay over the internet
* The DMV will have an API for sending updates regarding driving tests

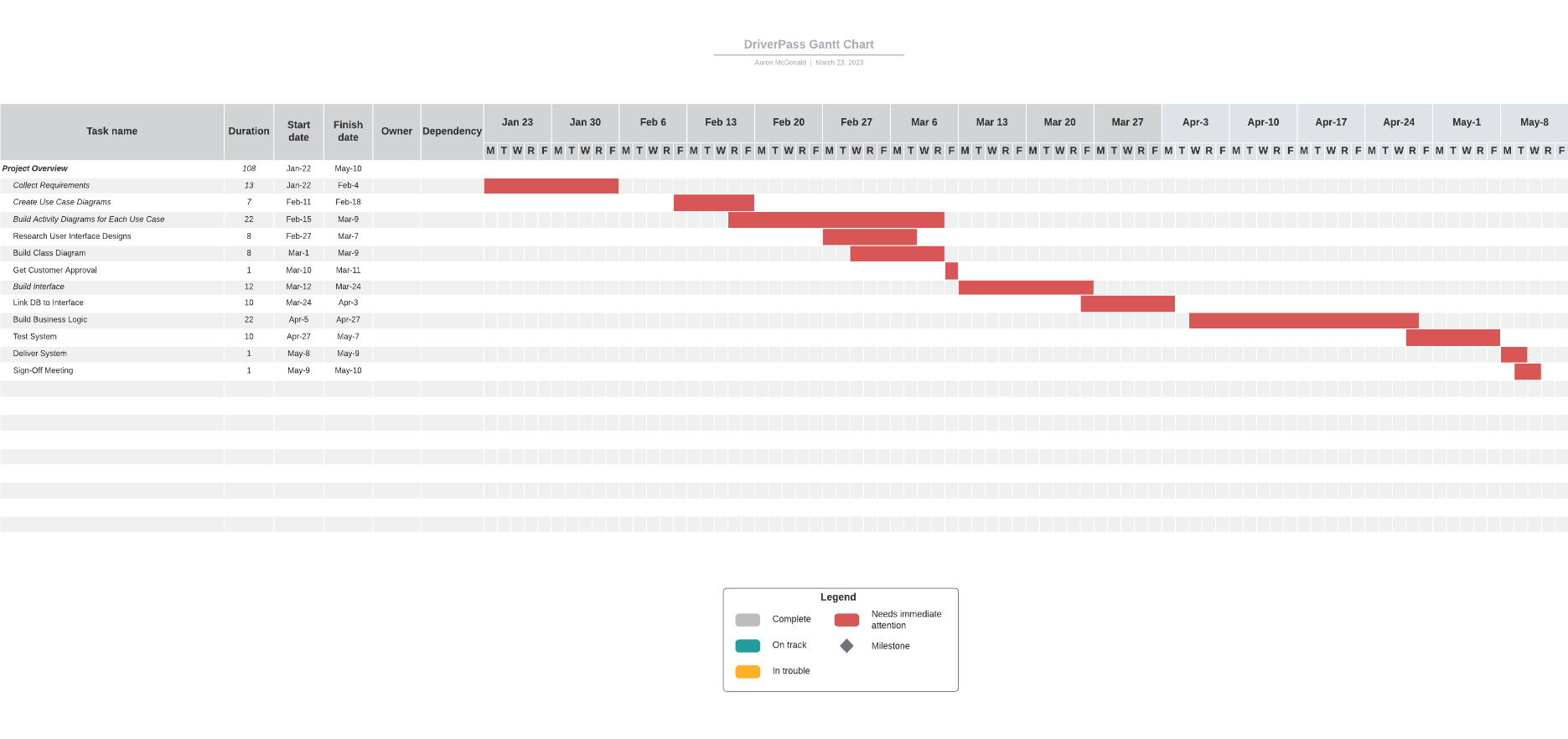
### Limitations

*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 make tests for the users, the tests must be provided
* The system will not guarantee users pass their tests
* Different users will exist in the system to fill the different roles, drivers, customers, admins are all dependent on the other existing for the system to function to the fullest expectations

### 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.*

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