# CS 255 Business Requirements

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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 purpose of this project is to improve the way drivers are trained.
* The client is DriverPass and they want a system that is supposed to help more users get on the road sooner.
* There are many people who show up to the DMV and fail their tests.
* Online classes and practice tests would lower the number of failed tests.
* On the road training would also be provided.
* This system should be easy to access from any web browser.
* There should be advertisements through out different websites and forms of social media. These can redirect the user to the website or app store of their specific device.
* If an obvious decrease in failed driver exams are present from this project, it could expand to neighboring states and possibly through out the country.

### 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 the system to allow users to gain access their data from anywhere, both online and offline.
* Established a foundation on the cloud can help ensure this can happen.
* There is not a current system that is helping drivers pass exams properly
* This system will do just that.
* A database will be needed to help track driver data
* Primary keys and foreign keys with be used to connect data in different tables
* Mobile devices or computers should be able to gain access.
* Proper security measures will be in place to product every clients data.
* The information technology officer will have the ability to reset passwords if needed.
* An App should also be developed that can be downloaded through the Apple or Androids app store.

### 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?*

* Once completed, the system should allow users to download reports and other types of information.
* This downloaded content should be accessible by any mobile device or computer.
* There should be adequate means of tracking driver progress through the course.
* Payments should be able to be made through the software by credit card or back account #
* Scheduling through the website should be easy and adjustable.
* Cancelation through the system is allowed but will come with a late fee if within 24hrs.
* Users will be able to share their progress to different social media accounts if wanted
* The system will change and update accordingly to changes within the DMV

## 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 will run off a web based environment.
* It is preferred that it is run off the cloud.
* It should be updated frequently, to keep up to date with changes the DMV makes.

#### 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?*

* Windows would be the best platform for this system to run on. 80% of computer users are running some form of windows.
* The familiarity of the platform will require less training to understand.
* We will need a database to help store and organize the data of every user.

#### 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?*

* Different users should be assigned a driver ID number.
* This will keep organization simple.
* Primary and foreign keys in a database are best connected with a ID number as well.
* Their names will not be case sensitive. A loop will be put in place to make names in all caps.

#### 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?*

* We will use a binary tree to help add/remove/modify without changing code.
* The system will adapt to new updates gradually at the end of each life cycle.
* Previous systems will be saved for 2 cycles incase there are any errors with new content.

#### 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 IT officer will have access to every account. This way if a password is forgotten, that can be reset.
* If an employee is let go, their access can be blocked. Customers will also be able to reset their passwords online.

### 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 organize and track user data as they progress through the training.
* The system shall validate user credentials when logging in.
* The system shall accept payment by form of credit card.
* The system shall allow users to modify which package they prefer to have.

### 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 system will run off the web. It is preferred that it is run off the cloud.
* Backup and security should be taken care of.
* Users will see online test progress, driver notes, personal information, and special needs.

### 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?*

* The system should be assumed to run with no issues.
* As rules and requirements change. DriverPass with update accordingly.
* Users will always can contact customer support to help resolve any issues.
* The staff will operate in a respectable and professional manner.
* Cancelation of a lesson without proper notice will have a fee.

### 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?*

* Based on the number of instructors, the total number of users may be capped per period.
* To start, there will be a limit on how budget and technology, but as the company grows, so will the budget and resources used.

### Gantt Chart

A calendar with multiple colored boxes

Description automatically generated