# 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?*

* DriverPass wants a user-friendly and secure platform where students may have access to online practice exams, track their learning progress and schedule on-the-road training.
* DriverPass is looking to fill the gap in the market for driver training and improve the success rate of students taking the driving test at the DMV.

### 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 has identified that many students are failing their driver’s test.
* DriverPass wants to offer online training, practice exams, and on-the-road training.
* Components needed:
  + Cloud hosting
  + Accessible from mobile devices
  + User authentication
  + Data privacy
  + Reservation and schedule databases
  + Integration with DMV (for updated policies and/or rules)

### 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?*

* Allows the end user to choose between different learning packages that include (on-the-road training, online classes, practice exams).
* Has a scheduling system for on-the-road training
* Online access from mobile devices
* Track and log user activities
* Security for data privacy

## 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?*

* The system must be web-based
* The system should be able to handle multiple users
* The system should be updated as needed, i.e., as DMV policies change, as packages offered update

#### 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 should run on a windows machine utilizing cloud services
* The system will require databases to store customer information, student information, testing scores

#### 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 will have unique login credentials
* Usernames and passwords will be case-sensitive
* Admin will be notified immediately in any case of errors or suspicious activity

#### 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?*

* User (add/remove/modify) will be possible without changing code
* System updates will not affect database stored information
* IT admin should have full access to system and user accounts

#### 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?*

* Username and matching password is required for user login
* Using HTTPS or SSL encryption ensures a secure connection and data exchange between client and server
* The account should be allowed 3 – 5 attempts to login successfully before being locked out
* User will select an option to reset their password through secure email practices.

### 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 validate user credentials when logging in
* The system shall allow new user to create a new account
* The system shall allow users to reserve and cancel driving lessons
* The system shall produce reports of user tests and lessons
* The system shall assign administrators, instructors and users to different access levels

### 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 interface should be accessible via the web and mobile
* Administrators will have full control of the system via the interface
* Instructions should be able to view scheduled lessons as well as leave feedback to students through the interface
* Students should be able to schedule lessons, view grades and progress through the interface

### 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 assumes that the users will have reliable access to internet
* The system assumes that the users will have capable knowledge to navigate the system

### 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?*

* Data backup and security may be dependent upon 3rd party services if cloud hosting
* Building and testing of the system may be limited

### 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.*

A graph of progress on a white background

Description automatically generated