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CS-255

# CS 255 Business Requirements Document

## 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?*

* To enhance students' preparation for driving tests, this project aims to design a system for DriverPass, a company specializing in on-the-road driving training and online practice exams.

### 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?*

* In order to address the lack of training tools for preparing for driving tests, DriverPass wants to offer online practice exams and on-the-road training sessions.
* Due to inadequate preparation, driving license exams have high failure rates.

Components:

* Practice exams can be taken online.
* Training scheduler for on-the-road sessions.
* Administrators, instructors, and students can all manage their users using this system.

### 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?*

* Online practice exams should be available through the system.
* Training sessions on the road should be offered by the organization.
* Passing rates for driving tests should be raised.

## 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?*

* It is recommended that web-based environments run smoothly with the system.
* Interactions with the system should be responsive within a few seconds.
* Content relevance and functionality should be ensured by regular updates to the system.

#### 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?*

* There should be access to the system from multiple platforms, including Windows, Mac OS, iOS, and Android.
* The administration of users, the content of exams, and the scheduling of exams require the use of a database.

#### 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?*

* Accurate and distinct user identification is essential.
* In the event of a technical issue or abnormality, the system should notify administrators immediately.

#### 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?*

* It should be possible to manage users without modifying the software's underlying code.
* Adaptability to platform updates is essential to ensure compatibility.
* Configuration and setting information should be available to IT administrators.

#### 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?*

* It is recommended that usernames and passwords be required for user login.
* Data exchange should be protected by secure encryption protocols.
* It is a good idea to lock the account temporarily in case there is a brute force hacking attempt.
* It is important to have mechanisms in place to help users recover their passwords if they forget them.

### 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.”*

* User credentials must be validated during login.
* A practice exam repository shall be accessible through the site.
* Student training on the road shall be scheduled via the system.
* Students and instructors will be able to communicate more easily.
* Users' progress and performance will be reported by the system.

### 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.)?*

* Students, instructors, and administrators need to be catered to in the interface.
* An exam scheduling tool, reporting capabilities, and exam access should be available to each user.
* Mobile devices and desktop computers should be able to access the interface via web browsers.

### 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?*

* Technology and internet connectivity are available to users.
* Regional training sessions may be limited by instructor availability at the beginning.

### 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 availability of time, budget, and technology may impose limitations.

### 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.*

