# CS 255 Business Requirements Document - Jordan Bankston

Complete this template by replacing the bracketed text with the relevant information.

This template lays out all the different sections that you need to complete for Project One. Each section has guiding questions to prompt your thinking. These questions are meant to guide your initial responses to each area. You are encouraged to go beyond these questions using what you have learned in your readings. You will need to continually reference the interview transcript as you work to make sure that you are addressing your client’s needs. There is no required length for the final document. Instead, the goal is to complete each section based on your client’s needs.

**Tip:** You should respond in a bulleted list for each section. This will make your thoughts easier to reference when you move into the design phase for Project Two. One starter bullet has been provided for you in each section, but you will need to add more.

## 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?*

* This project aims to create a thorough driver training system so users may more effectively get ready for their driving tests. By offering an online platform where users may take practice tests, book in-car lessons, and access study materials to raise their driving skills, the client, DriverPass hopes to lower the high failure rate of DMV driving tests.

### 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 intends the system to be one-stop shopping and scheduling tool for students for all-in-one instruction. The lack of efficient tools for new drivers' preparation is the present issue they aim to fix. Online practice exams, schedule for in-person driving lessons, and a safe user management system have to all be part of the system. Important elements include data security, user role management, a cloud-based architecture, and an easy-to-use scheduling system meant to simplify processes.

### 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?*

* Easy scheduling and flawless access to training materials should be given to users by the system. It has to let users log advancement and complete practice written tests. It should also use an interactive interface with driving simulations, quizzes, and video training. Along with providing password recovery and account management for security and user convenience, role-based access control must be merged to safeguard private information and define rights. Keeping a user-friendly interface will help to improve accessibility and involvement.

## 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 run fast with minimum loading times to enhance user experience and be web-based to guarantee access across several devices. Regular implementation of updates helps to preserve material accuracy and security requirements conformance.

#### 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 be housed on a cloud platform to offer scalability and remote access and be compatible with Windows, macOS, and Unix-based machines. Data storage and retrieval call for a database management system—like MySQL or Postgresional.

#### 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?*

* Clearly defined user roles—administrator, instructor, student—help to prevent inappropriate behavior. When needed the system must show case sensitivity and authenticate input data. Maintaining system integrity and user safety depends on the administrator being fast informed in the case of an error or security breach.

#### 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?*

* Administrators have to be able to create, change, or delete user accounts without depending on code changes. The system needs to change with platform changes and keep compatibility with modern browsers and devices. The IT manager has to have total access to system setups so that roles and permissions may be managed properly.

#### 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?*

* Users must identify using a safe username and password. SSL/TLS mechanisms must encrypt data flows between clients and servers. After enough failed login attempts to stop brute-force attacks, a lockout mechanism must turn on. Password recovery has to be done by email, so identification confirmation before credential reset is necessary.

### 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 will let users schedule driving lessons with current teachers. It will track and show user development in driving education and on practice tests. Users of the system will be able to book, cancel, and change their appointments online. Lesson notes should be updated by instructors, who should also review student performance. Role-based permissions will be used by the system to let managers supervise user access and lesson availability. The system must also interact with DMV databases to obtain updated exam materials and provide a safe login and authentication mechanism for every user.

### 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.)?*

* Both desktop and mobile browsers must let users easily access the interface. The dashboard has to show test results, course schedules, and user advancement. Different users—Students, Teachers, Administrators—would have different access levels commensurate for their different jobs. The interface has to be dynamic and user-friendly so that all stakeholders may use it without problems.

### 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?*

* It is presumed that users will own internet-enabled devices, like PCs, laptops, or mobile phones, to engage with the system. Furthermore, users are anticipated to possess a fundamental comprehension of surfing web apps. The system will depend on third-party integration, including DMV updates, to ensure test correctness. Ongoing maintenance will be necessary to facilitate future feature enhancements and maintain system stability.

### 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?*

* Some users might not have enough technological knowledge to properly negotiate the system. Financial constraints could limit the initial scope and delay the application of advanced capabilities. Time constraints could influence development and call for small-scale implementations of particular functionalities. The operation of the platform depends on internet access, hence its utility in places with unstable service could 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.*

