# CS 255 Business Requirements Document – Elliot Putnam

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?*

* DriverPass wants to deliver a web-based product that can be an interface between the driver and the end user. This interface should have real time, online capabilities that cover tests for users, scheduling and reservations for in person driving tests, a web-based application that allows drivers to enter notes and see the end users information.

### 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 their system to provide online practice testing for end users as well as scheduling of in person driving tests to prepare users for their license test. They are trying to solve the problem of a high rate of failed tests and give users a tool to help be properly prepared for their driving test.

### 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?*

* stores and encrypts user data.
* Provides online training modules
* Reservation system for in person training
* Exportable documents for offline use
* Accesses DMV database
* Displays GUI that contains blocks like: driver notes, driver and student photo, student information, etc

## 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?*

* Web-based system
* Responsive and modern user interface (UI)
* Short load times (approx. 2 seconds or less.)
* Monthly updates
* Max 2-hour downtime between updates

#### 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?*

* Responsive UI (resizes appropriately to resolution)
* All major browser compatibility
* Database management tools for user information

#### 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?*

* Unique email login (not case sensitive)
* Intricate password requirements (capital letters, symbols, and numbers, 12+ characters)
* Backend debugging, logging, and comprehensive error handling logic

#### 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?*

* Functions to dictate user data changes
* Admin accounts require access database and server information
* Major platform changes may require new design, making API calls to approve new browser versions.
* Consideration of long term service (LTS) versions

#### 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?*

* Login attempt limitations (5 attempts)
* Reset password functionality, sending link to registered email
* Intricate passwords (12+ characters, Capital letters, numbers, symbols, no words)
* Two Factor Auth (SMS, email, or Applications like Google Authenticator or Microsoft Authenticator.)
* End to end encryption to secure data transfers

### 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 internally log each subsequent action for documentation and security
* The system shall prompt user to login
* The system shall deny attempts after X amount
* The system shall validate user credentials
* The system shall perform two factor auth if necessary
* The system shall decrypt user data
* The system shall retrieve all user data relevant to user (admin, customer)
* The system shall check for updates in Department of Motor Vehicle data
* The system shall update DMV data if necessary
* The system shall check appointment data is updated
* The system shall display available appointment data
* The system shall allow user to select appointment dates

### 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 needs to display all pertinent information for user
  + Admins must see relevant controls and information
  + Users must see scores, tests, calendars, upcoming appointments
* It must be reactive, meaning mobile or desktop will be detected and flex accordingly
* Touch controls and mouse clicks must respond accurately
* Users must have full compatibility on mobile devices

### 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 have device that is capable of running a web-based application
* Users have a fundamental understanding of technology and application use
* Users devices have a moderate and steady connection to the internet
* Users have access to email or phone
* Users understand English, or any provided languages
* Users can benefit from the DriverPass provisions

### 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?*

* 15 Week timeline
* Fixed team size
* Unable to predict / control browser updates

### 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 screenshot of a calendar

Description automatically generated