# CS 255 Business Requirements Document Template

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?*

* Purpose:
  + Fill a gap in the driver education process
* Client:
  + DriverPass
    - Owner/Boss: Liam
    - IT: Ian
* System Ability:
  + Provide information/practice for those seeking a driver’s license
  + Connect Students with Drivers to accomplish training sessions
  + Provide practice tests and information to users
  + On the road training
  + Online/Offline

### 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 be able to better educate drivers and increase DMV pass rate
* The problem is failures of those taking drivers exams due to a lack of resources to prepare them for testing
* Components:
  + Security
    - Rights/Roles
    - Tracking Activity
    - Print an activity log
  + Reservations made by secretary/customers
  + Offer Purchase Packages
    - Three in total with an ability to turn off packages as needed

### 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?*

* Customer abilities:
  + Call to be registered
  + Sign-In to account (reset password automatically if forgot)
  + Pick one of three packages
    - Depending on package will determine what is available on app
  + Should be able to schedule a driving time
    - Enter a pickup location / drop off location
    - Time and day
    - Review Driver notes after the session
  + Go Offline and still access data
* Driver abilities:
  + Should be able to see when they are scheduled for a class
  + Be able to enter notes for the customer to see
* Secretary:
  + Be able to register new users
  + Schedule on sessions on customers behalf
* IT Officer:
  + Maintain System
  + Have access to all levels of system
  + Have the right to block other accounts
* Boss/Liam:
  + Have all rights
* There should be activity tracking at all levels so a printout can be done
* Should have user interface to that wanted by the client
* Should have roughly 3 pages that can be accessed by the user
* Below is a list of how the system construction will be built and measured
  + Collect Requirements 22-Jan 4-Feb
  + Create Use Case Diagrams 11-Feb 18-Feb
  + Build Activity Diagrams for Each Use Case 15-Feb 9-Mar
  + Research User Interface Designs 27-Feb 7-Mar
  + Build Class Diagram 1-Mar 9-Mar
  + Get Customer Approval 10-Mar 11-Mar
  + Build Interface 12-Mar 24-Mar
  + Link DB to Interface 24-Mar 3-Apr
  + Build Business Logic 5-Apr 27-Apr
  + Test System 27-Apr 7-May
  + Deliver System 8-May 9-May
  + Sign-off Meeting

## 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 preferably on the cloud
* Cloud based to alleviate the need for back up and security on the client’s end
* API response should be less than 2 seconds
* Should update online deleting any downloaded content that’s out of date
* Downloads/updates should be connected to the DMV information 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?*

* This web-based application will need to serve multiple platforms windows would be a good start as there web-based technologies support windows and Linux cooperatively
* Database will be required as there will be user data stored on the site as well as DMV information
* There will need to be the web server and an application server this will support user authentication and allow for user interface with the product we are creating to allow for the features of self-scheduling

#### 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?*

* Users will have accounts (Username and Password)
  + Passwords will need to meet 8 Characters long, one uppercase, and one lowercase, and a special character/number
  + Usernames must be unique (meaning it cannot have been used in the system before)
  + All inputs are case sensitive
* The system will maintain logs of any changes and will be displayed through the admin account
* If any problem is found throughout the system to include the database being out of date the admin should receive notification

#### 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?*

* Users will be able to have their passwords reset automatically
* IT admin should be able to reset all accounts if password is forgot
* IT admin should also be able to block accounts
* Blocking packages from being able to be bought is another feature
* However, to remove or add packages a programmer/software developer would have to change that

#### 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?*

* For first time registration users must go through the secretary to have an account created
* API token should be authenticated when the user inserts his username and password taking him to the html website for his profile
* If brute force is attempted accounts should lock after 4 miss password attempts and must be unlocked by calling the company and verifying information
* If a password is forgotten and automatic option for reset should be available

### 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 keep a log of all reservation changes
* The system shall provide a notification anytime the DMV database has updates
* The system shall validate user logins
* The system shall take customer inputs to create reservations
* The system shall verify the pick-up and drop off locations match

### 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 two main users of this interface will be the drivers and students and occasionally admins for updates and maintenance
* Abilities of the driver
  + Check to see if he is scheduled
  + Write in notes for the student to read after the session
* Abilities of the student
  + Schedule a driving lesson
  + Buy a package if they choose to do so
  + Take notes on the information provided
  + Download content
* The interface will be browser and have mobile capabilities

### 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?*

* All users will primarily be using their phones for this app making a mobile friendly version a must
* Users will have the ability to download study materials
* Accessibility should there be color blind/screen reader options built in

### 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?*

* Time roughly 4 months
* Start up company so money is limited
* Must be cloud based (customer limitation)
* Must be connected to DMV

### 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.*

Chart

Description automatically generated