# 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?*

* Throughout this project we hope to be able to provide the client with a fully functioning server less web application to their specifications.
* The client , DriverPass, is a company who specializes in online and in person training for driving and passing driving tests, according to the protocols of the DMV.
* They want to make the process easier for people looking for online classes and practice tests to take online, and be able to book, manage, and take in person driving lessons with a driving instructor to prepare for their local drivers license test.
* They also want to be able to manage and view the information that happens throughout the application.

### 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 saw that there were lots of people failing their driver license tests, and wants to make an easy and accessible way to:
  + Take online classes
  + Take online practice tests
  + Get information on driving protocols
  + Take in-person driving lessons, so that people can be ready for their tests and be less likely to fail
* They want to be able to allow everyone who needs practice driving, to be able to access it readily wherever they are located, and be ready to comply with the DMVs rules of the road.
* The system should have security for specific users based on their authorization.
* The system should be able to monitor the processes of the application itself and the users that initiate the 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?*

DriverPass wants a system that will be specified for each of its users and what they need:

* There needs to be a login system with that is case sensitive, with a password reset if needed, that allows for the users to access the information that is specified to their account.
* When logged in the user should be able to navigate through their dashboard and input personal info.
* Users should be able to manage and take online classes.
* Users should be able to access practice tests that log in the system and display the users progress.
* Users should be able to schedule and book in person driving lessons.
* Users should be able to view any comment or notes the instructor made.

DriverPass wants a system that allows its team to monitor and manage the application and its users securely:

* There needs to be a login system with that is case sensitive, with a password reset if needed, that allows for the team to login and view their dashboard.
* Liam needs to be able to download logs of the data on the system.
* Liam and Ian need to be able to modify users access to the system.
* Liam and Ian need to be able to monitor the users scheduling actions of the application.
* Team members need to be able to have drivers and users matched so the scheduling functions properly.
* Liam and Ian need to be able to change packages available on the application.

### 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 should be running in a cloud based, distributed web environment that allows for the main application to run, but with access to the API for mobile applications, or external users.
* When submitting a request to post information to the database, the other users of the application (that need to be able to see it) should see it updated after they refresh their current page.

#### 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 platform should use a cloud based environment to help with the management of the server and its connections.
* The system is going to need to connect to a database with different information of the system components.
* I think the backend should also encompass a REST API that allows for the mobile users to execute functions and retrieve information that way.

#### 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?*

* The system should distinguish the users by using their login information which should be case sensitive.
* The system will assign specific roles to the users when their accounts are created.
* The administration would be informed of a problem though a monitoring system that sends errors to the administration account 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?*

* The system should be able to handle updates to user accounts based on the role of the initiating party, and accommodate the changes to the database accordingly.
* The system will need the IT manager to change the needed information if they want to update or change modules.
* The admin needs to have access to the database in order to make these changes.
* In the future a system can be put in place to accommodate easier management to user and course info.

#### 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?*

* The user needs to login with their email, and a password that they provided when creating an account. The instructor will use a company email.
* The connection between the client and system will be secure using an HTTPS connection.
* The system will use a Single Sign On feature to assure account security.
* If there is a brute force account attack then the users single sign on connection will be cut, and the user will be required to create a new password using their email.
* If the user wants to manually change their password they can do it using their email.

### 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 users based on their login credentials and their authority role and fetch their information to render on the dashboard screen.
* The system shall keep track of the students course projects and compile the data to be shown in different ways on the screen based on if the user is on the dashboard or specifically looking in their progress.
* The system will allow for the student to take practice tests that are given by their instructor that they can find in their courses.
* The system will allow for the instructor to post notes for specific student, and allow the student to see that updated information.
* The system shall allow for the user to book an appointment for driving with an instructor using a schedule system for the given instructors availability. The user can also call the companies booking phone number.
* The system should allow for the administration of the company itself to have access over accounts of all users including customers and instructors, in order to block access, retrieve passwords, or change modules.

### 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 user interface needs to include a login page for any user to sing into their account.
* When a student is logged in they should be able to see and access their information through a main dashboard page. The dashboard includes online test progress, student personal information, driver notes, special needs, and driver and student photos.
* When an instructor Is logged in they should be able to see the students that they are teaching and when that student is clicked it should show the students dashboard, but still logged in as an instructor.

### 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?*

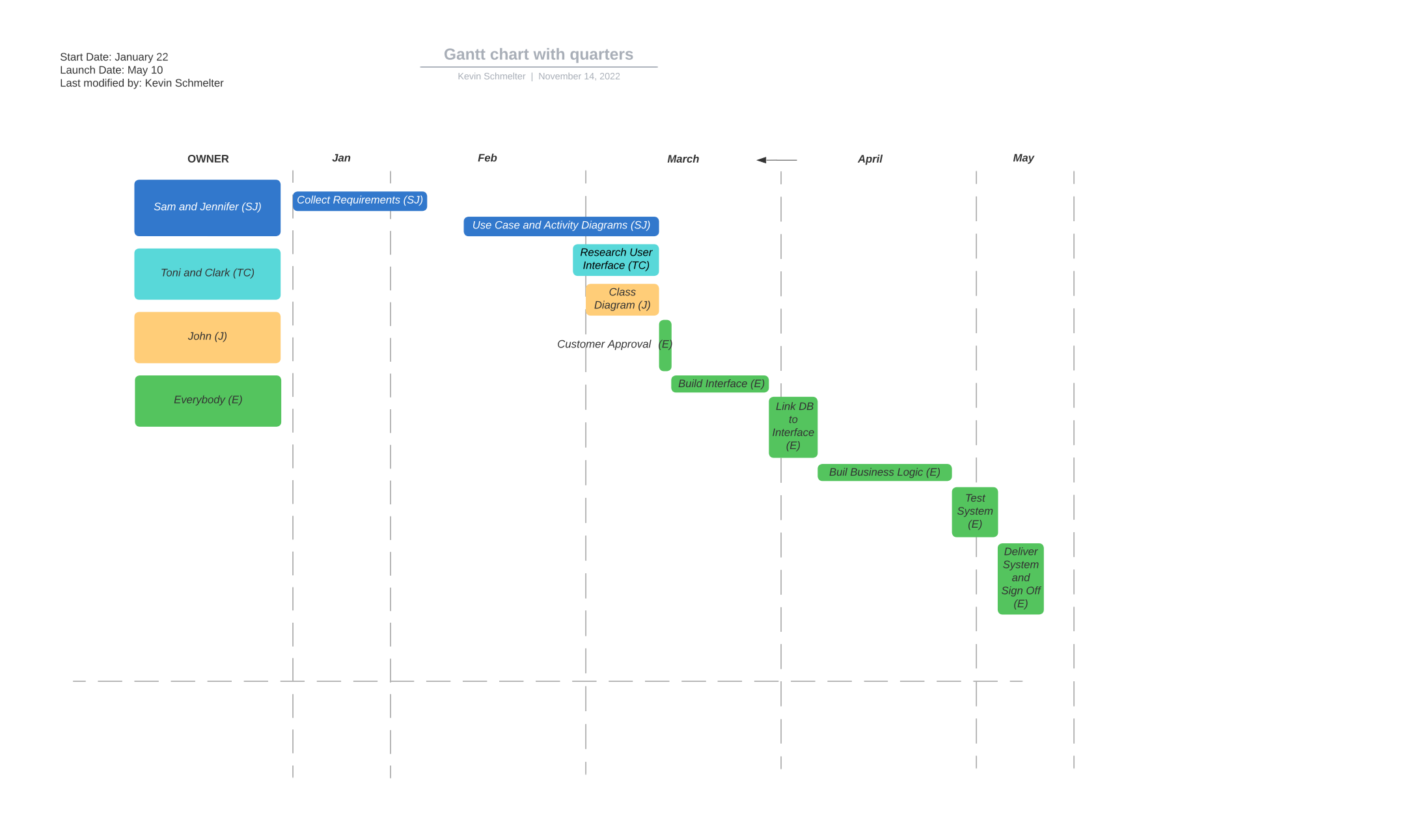
* Assume that the user is connected to the internet if they want updated course info.
* Assume that the user has the information and credentials to sign up with organization.

### 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?*

* A specific LMS instance doesn’t work for all universities and organizations.
* Not all information will be accessible while not connected to the internet.
* A user can only be idle without sending a request, for 30 minutes, without having their session timed out.

### 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.*