# 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?*

* DriverPass want’s a web system that can give online classes and practice tests to learning drivers. The system should allow the students to able to schedule on the road training. It should also allow employees with different roles and access to access, edit, download and remove data such as appointment, reports, and packages while saving those changes to a report that can be viewed. The packages’ prices and perks should be configurable. Lastly, the system should be able to track which car and driver are assigned to each individual reservation.

### 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 believes that there are not enough resources available to learning drivers that want to pass their test and they want to solve that. They want a web system that offers online classes, practice tests, and on the road training for these students. They want the students to be able to schedule on the road training either on the phone or through the website and then the appointment would be available in the 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?*

* The system should be accessible via the internet.
* Online classes should be listed and viewable from the website.
* Practice tests should be shown on the main page of the website, each test should have a status of not taken, in progress, failed, or passed.
* A form should be available on the website to schedule an appointment for on the road training.
* Employees should be able to login and have certain permissions based on their role.
* Packages should be able to be removed/modified.
* Reports should be made and downloaded when an appointment or changes to an appointment are selected for download.
* The system should show employees which car and driver are assigned for each appointment.
* Drivers doing on the road training should be able to input notes for sessions as well as the lesson time, start hour and end hour.

## 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 should be web based so it should run on a server using cloud computing or on a dedicated server in a data center.
* The system should be fast enough to load data for all users currently online without affecting the user experience. This usually should take no more than a few seconds.
* System updates should happen every time the client requires new features or bugs are found.

#### 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?*

* Many programming languages and web frameworks are designed to allow you to build for multiple platforms. However, Linux is the most popular and most supported operating system for web systems and so that should be the platform that the system runs on.
* The backend will require a database such as MySQL/MariaDB so that important data persists over system restarts.

#### 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 be able to register on the website with an email and password. The input will be case sensitive.
* The system will use roles (saved in the database) to distinguish between different types of DriverPass employees as well as students. The default role for a new registration would be student for security.
* The system will use a user’s email address and unique id in the database to distinguish them between another user.
* Admins should be informed immediately via email if a problem occurs with the system. The front end system should have a cached copy of admin emails so that an email can still potentially be sent if the database is down.

#### 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?*

* An authenticated admin can make changes to a user without changing any code or accessing database tables.
* The system will be built to be easy to update. When an update is ready. Files will be moved to the production server and a command will be run to build the code and run the web server. Updates will be done during scheduled times so users are aware of the temporary loss of service.
* The IT admin will need to full access to make the necessary changes to the server and files as well as remove lower level admins or staff members that are still in the system.

#### 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 must use an email and password to login to the system.
* The user will be able to attempt to login 5 times and then the user will be temporarily blocked from logging in.
* The password will be encrypted as well as the traffic when the data is sent to the server via SSL from HTTPS.
* If the user requests a password change, an email will be sent to their email address to confirm they are the real user.

### 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 the user’s credentials when logging in.
* The system shall identify the user’s role based on his or her email.
* The system shall display the UI elements based on user role and courses.
* The system shall allow only one connection per user at a time (can’t be logged in on your desktop and your laptop at the same time.)
* The system shall save on the road lesson reservations made by the user.
* The system shall host practice tests and classes.
* The system shall display the status of tests such as currently in progress or completed.
* The system shall show the driver assigned to a student’s reservation.
* The system shall offer three different driver reservation packages.
* The system shall offer a way to disable packages.

### 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 must allow the user to view/manage their reservations, tests, and classes.
* The interface must allow the DriverPass staff access, edit, download, and remove data such as appointment, reports, and packages while saving those changes to a report that can be viewed.
* The UI must be responsive to allow screens of all sizes to use the system.

### 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?*

* Internet and electricity are available 24/7.
* The students and staff have access to a laptop or other device to access the system.

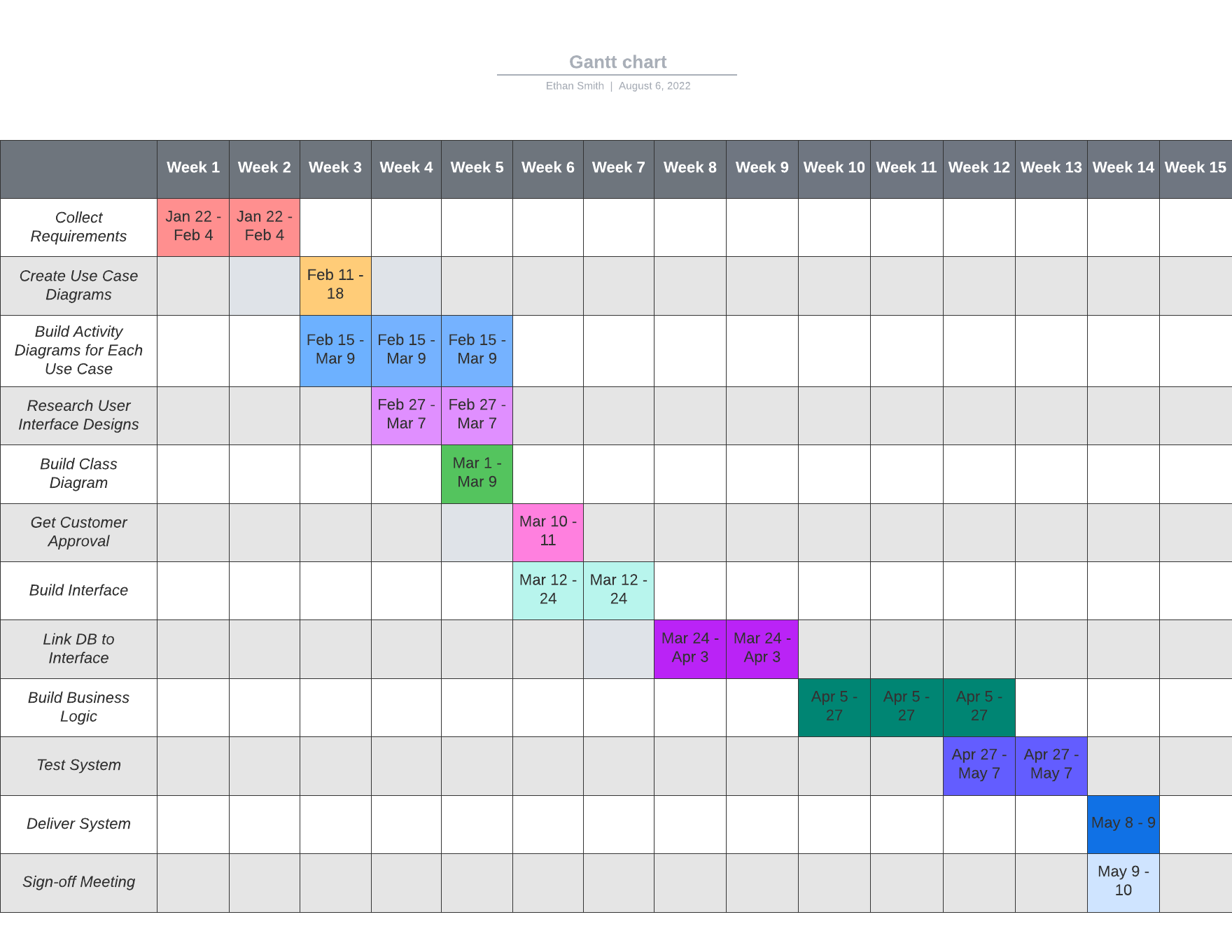
### Limitations

*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 system will need to be delivered in 5 months.
* The budget was not specified and so the technology requirements may not fit within the initial expected budget of the DriverPass company. If so, a new method of hosting the technology could be required.

### 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.*

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