# 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?*

* The client *DriverPass* has asked us to help them create a system that helps them to provide customers with a website that provides services to students that are looking to prepare for their driving tests.
* *DriverPass* has determined that there are not many solutions to help students prepare for their 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?*

* The website that DriverPass wants to implement will provide students with a way to schedule appointments for driving tests, study for upcoming exams, take online practice exams, and cancel appointments.
* DriverPass is looking to help provide a solution for the higher rate of people failing driving tests by allowing them to study a prepare for upcoming exams using their system.
* *DriverPass* wants the system to allow users to access their data from anywhere they are so long as internet permits.
* *DriverPass* wants the system to have a proper security feature in order to allow different users to access their data securely and prevent the likelihood of potential data breaches on users’ private data.
* *DriverPass* wants the system to allow the owner to download all data in regards to the *DriverPass* application.
* *DriverPass* wants the system allow secretaries to assist customers by creating an appointment as well as canceling the appointment at the request of the customer.

### 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 completed system should be a functiong website that allows the customers to schedule appointments, modify current appointments, cancel appointments for their on-road driving tests, modify payment methods, and make payments.
* The completed system needs to allow secretaries with *DriverPass* to schedule, modify appointments, and cancel appointments for customers at their request.
* The completed system needs to allow IT Administrators to reset users passwords should a user forget their password by sending reset prompts to the customer's email and setting the new password as the customers credentials.
* The completed system needs to allow the *DriverPass* owner to download all the data related to the system and its users, such as appointment.
* To begin development on the system we must first implement object models, process models, UML diagrams, and business requirements documentation to help developers visualize the clients intents with the systems.

## 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 be a web-based application that is networked via the cloud and proper internet service.
* The system should function quickly and smoothly to mitigate user frustration and provide a user-friendly environment.
* Updates should be allowed to be implemented at any time at the discretion of the client.

#### 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 platform must run on all major platforms, Windows, MacOS, and Linux. The system should also have a web database so it can be accessed from anywhere if internet connection permits.
* The system’s database should allow for the collection and storage of data. The data base must operate via the cloud and also have a security measure in place to protect client information on the backend of the application.

#### 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?*

* Each user must have different unique username that is protected via a user set password when they first access the site. The input for the username and the password will be case sensitive. The system will also implement a multi-factor authentication to mitigate the risk of a possible data breach.
* The system should provide 5 attempts for a user to log into their account before locking an account and notifying the user via email and the IT administrators.
* Users should be allowed to reset their password in case they forgot. This option will send an email to the users personal account as authentication.
* Security features to protect will include security questions when resetting passwords, and two-factor authentication when accessing user accounts.

#### 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 allow *DriverPass* usersto make modifications to user’saccounts such as removing users without effecting the outcome of the code.
* The system should be capable of implementing new features whenever *DriverPass* releases new updates or features.
* IT Admin will be provided full access to the system to make changes that may be necessary such as removing permissions for former employees or assisting customers with troubleshooting their account issues.

#### 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?*

* When accessing user accounts, a user must first have an account with *DriverPass.* These accounts could be customer, secretary, IT Admin, or owner account(s). These will each require a two-factor authentication on top of knowing the username and password associated with the account.
* Failure to successfully access the account via the above measures after 5 attempts will result in the users account being locked, the users email receiving a notification, and a notification being sent the IT Admin accounts.
* Using encryption methods, the data exchange can be conducted and confirmed between the client and the server. This protects the user’s private information from being accessed via a third-party resource. If a third-party manages to access the information, it will be encrypted making it more difficult to access user private information.
* If a user forgets their password, they can choose an option to reset their password. After answering their security questions correctly, the user will be sent an email to their email associated with their account with a link to reset the password. Once reset the password will officially change to the users new password.

### 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.”*

### 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 system needs to allow users to schedule practice exams, make reservations on appointment driving packages, and take online classes
* The interface must allow DriverPass employees with the appropriate privileges to make changes to the system, user appointments, download data, and conduct updates as necessary.
* The user should be able to access the system via Windows, MacOS, Linux, and Mobile so long as internet connection permits.

### 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?*

* Something that was not specifically addressed during the analysis was the budget. I am assuming that the client will provide the adequate budget required in order to complete this system development.
* We will also assume that the development understands their own limitations and capabilities. I am also assuming that the development will all be sufficiently experienced in what will be expected throughout the development process of this system.

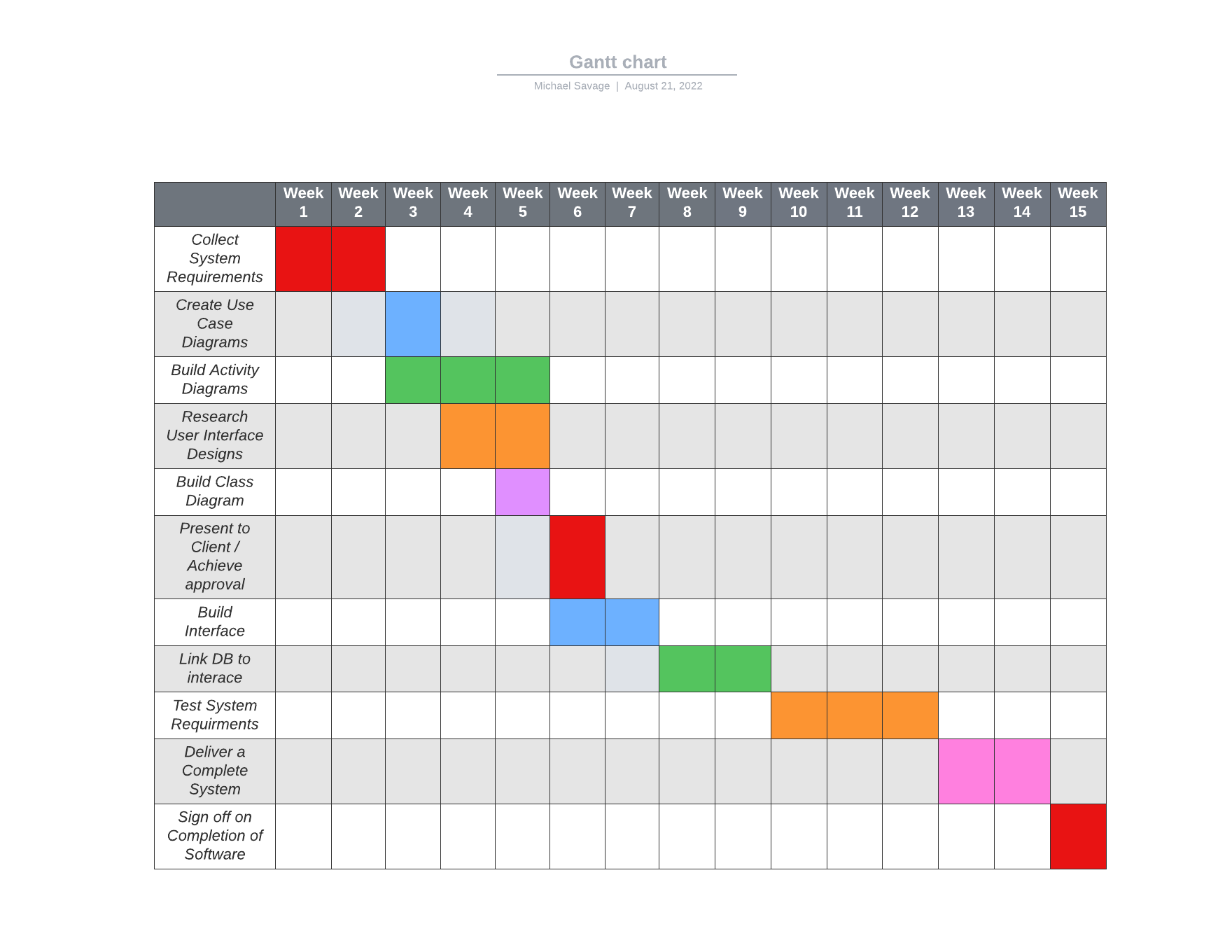
### Limitations

*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?*

* Limitations that we will face will be a tight time constraint. Given that we will only have five months to complete this system we may be limited in the amount of time we can contribute to each phase of the software development process.
* Another limitation we will face will be our team size. Given our currently team size, the deadline, and the size of the system we will need to grow our team significantly. This will cause an increase in the overall budget which was not discussed.

### 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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