# 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, is requesting a web-based system to manage driving lesson scheduling, student progress tracking, and online practice exams.
* The system should allow customers to create an account, purchase packages, schedule lessons, and take online practice exams.
* The platform must be accessible from any device with an internet connection.

### 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?*

* Many students fail driving exams due to **lack of effective preparation tools**.
* DriverPass wants an **integrated system** to offer **practice exams, track student progress, and manage driving schedules**.
* The system requires:
  + **User authentication** (Students, Instructors, Admins).
  + **Lesson scheduling system** with real-time availability.
  + **Practice exam system** with immediate scoring and feedback.
  + **Instructor dashboard** for tracking student performance.
  + **Admin panel** for system management and user control.

### 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?*

* Many students fail driving exams due to lack of effective preparation tools.
* DriverPass wants an integrated system to offer practice exams, track student progress, and manage driving schedules.
* The system requires:
* User authentication (Students, Instructors, Admins).
* Lesson scheduling system with real-time availability.
* Practice exam system with immediate scoring and feedback.
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* Admin panel for system management and user control.

## 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 web-based and cloud-hosted for universal accessibility.
* The platform should support at least 1,000 concurrent users without performance issues.
* Database queries should return results within 2 seconds.
* The system must support real-time lesson scheduling updates.
* Regular system updates should occur every quarter for security and performance enhancements.

#### 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 system must be browser-based and compatible with Windows, MacOS, and mobile devices.
* The backend should use a secure relational database (e.g., MySQL, PostgreSQL).
* The website can be built using ASP.NET, Node.js, or Python frameworks.

#### 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?*

* User authentication should be case-sensitive and based on email addresses.
* Admin notifications should trigger for failed login attempts, system errors, or data breaches.
* Student scores and progress tracking must be accurate and stored securely.

#### 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?*

* Admins should have role-based permissions to add/edit/remove users via an admin panel.
* The system should be scalable, allowing additional servers or features without major redesign.
* The IT admin should have access to system logs, backups, and security configurations.

#### 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 system shall require password authentication for login.
* HTTPS encryption shall secure all data exchanges.
* Brute-force detection shall trigger temporary lockouts and notify admins.
* Users shall be able to reset passwords via email verification.

### 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 display a homepage with DriverPass information and navigation.
* The system shall allow users to register and log in.
* The system shall validate user credentials when logging in.
* The system shall allow students to book, reschedule, or cancel driving lessons.
* The system shall allow instructors to record student progress.
* The system shall administer online practice tests and store student results.
* The system shall allow administrators to generate reports and manage users.

### 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.)?*

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* The system shall allow users to register and log in.
* The system shall validate user credentials when logging in.
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### 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 will have internet access and a device with a web browser.
* Students will have basic computer skills to navigate the system.
* Admins will be responsible for user management and troubleshooting.

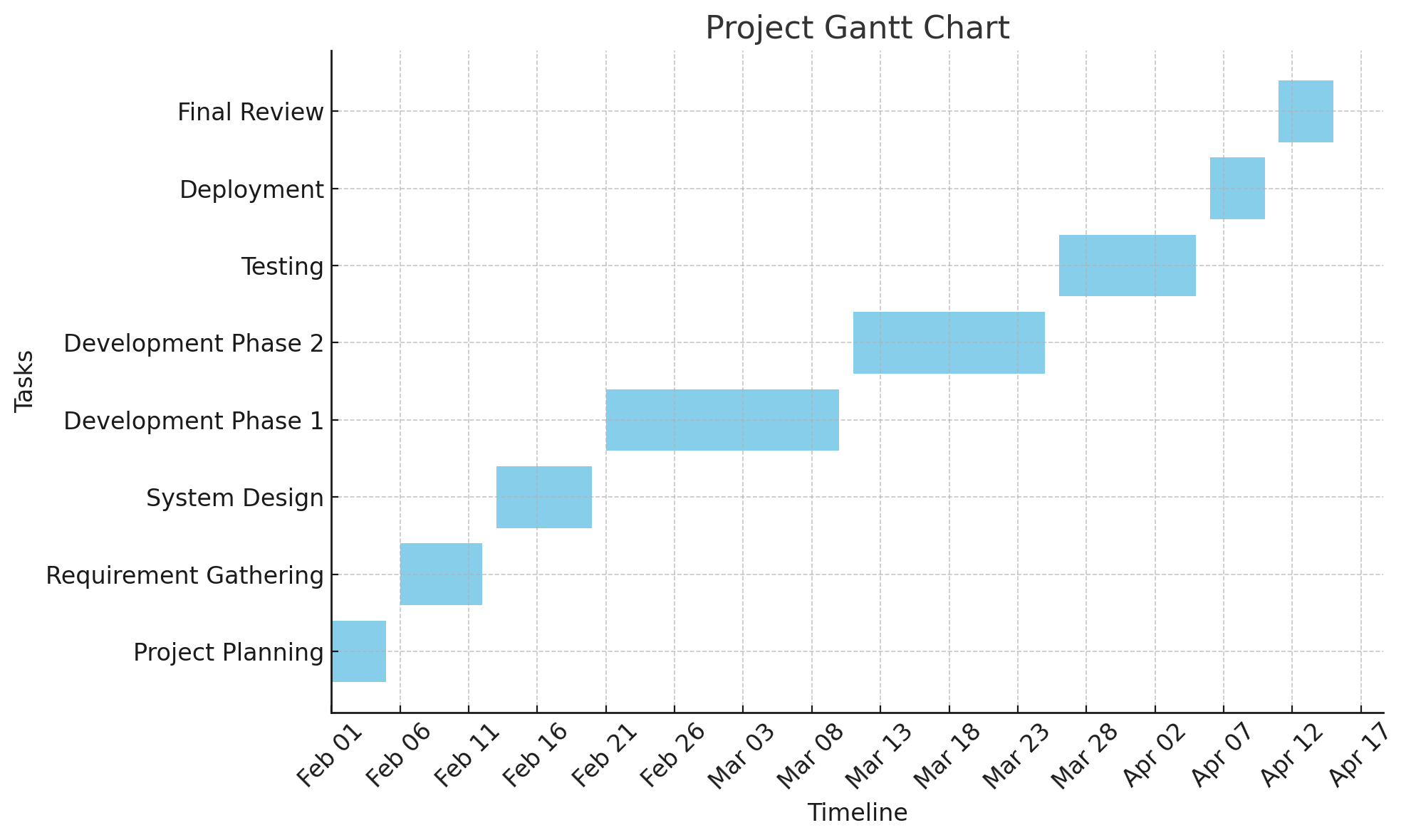
### Limitations

*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?*

* Limited offline functionality—requires internet access.
* Scalability concerns—if demand exceeds infrastructure.
* Security risks—mitigated by regular updates and monitoring.

### 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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