

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 is a company that wants to help student drivers pass their driving exams. They want their system to be able to provide practice exams as well as schedule on-the-road training sessions for student drivers.

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 its system to be able to provide practice exams as well as schedule on-the-road training for new drivers. DriverPass wants to add additional features to its system to help new drivers pass their driving exams. The additional components needed for this system are online/offline access, a scheduling function, direct communication with up-to-date DMV standards, a database of customer information, ability to add and disable packages and modules, and a cloud 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?

- System Goals: The system should run on the web, preferably through the cloud for lower upkeep obligations for DriverPass. The system should be portable for computers as well as mobile optimization. System must be connected to DMV for updates regarding new driving rules, policies, and standards.
- Security: Several roles of access need to be created, we will refer to these roles as master, administrator, and user. The master role will have full access and will be reserved for the owner and IT officer. The administrator role will have access to user information and have the ability to schedule training with drivers. The user role will be designated to the customers and will allow

for user profile management, scheduling of on-the-road training, and the access of materials such as practice exams.

- User profiles will need to be implemented in order to store customer information such as identification information, address, and billing information.
- Scheduling: The administrator role should be able to schedule, change, and cancel on-the-road training appointments. The format of this information should be date and time of appointment. Reports should be created regarding the scheduled appointments. There should be three packages for schedules: six hours on-the-road with a trainer; eight hours on-the-road with a trainer and an in-person lesson explaining DMV rules and policies; and twelve hours on-the-road with a trainer, an in-person lesson explaining DMV rules and policies, and access to online classes with all up-to-date content and material as well as practice exams. Each package should be divided into two-hour segments. There should be an ability for the master and/or administrator roles to add and remove packages. The system should track and document which customer is assigned to which driver.
- The system should provide access to practice tests. These practice tests should record and display the test name, time taken, and status of the test (in progress, not taken, passed, or failed).
- The system should provide a driver notes section allowing drivers to input data regarding their assigned customer's performance.

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?

- This system will be web-based and should be accessible on all traditional computer platforms and operating systems as well as mobile optimization. This access can be implemented through a Linux server.
- The system speed would be described as moderate. The system does not need to process data extremely fast; however, it should run fast enough to allow an enjoyable and beneficial experience for the user.
- User information will be updated to the database as profiles and appointments are created. The information used for courses and practice exams will be exported from the DMV and updated in the system any time DMV rules, policies, or standards are changed.

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 web-based nature of this system allows for flexibility for the platform. Unix will be the best option.
- A database will be needed on the back end in order to hold user data, packages, billing information, and transaction history.

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 distinguished by non-case sensitive usernames and access will be authenticated through a case sensitive password.
- The system should inform the administration of problems through the generation of daily reports. Crucial errors should be identified and addressed 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 add, modify, and remove functions of user accounts can be implemented without changing code with a POST request form sent to the server.
- System will be updated when platform updates are available. The implementation of these updates will have to be scheduled during non-peak in order to avoid issues for the user.
- IT administration will have full access to the systems components such as the database, the server, and account information of customers and employees.

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 will be required to provide a username and password to log into the system
- If the Cloud is implemented, they will be responsible for the data exchange between the client and server. If the cloud is not implemented HTTP network requestes can be implemented to provide a secure exchange between the client and server.
- Accounts will be locked after four incorrect login attempts in order to combat “brute force” hacking attempts.
- An option will be implemented on the login screen to allow the creation of a new password in the event of a forgotten password. This will be implemented by either sending a message to the linked mobile phone number or an email to the linked email address of the user which prompts the user to a password modification function.

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 user credentials when logging in.
- The system shall schedule on-the-road training when prompted by the user.
- The system shall provide courses and practice tests when prompted by the user.

- The system shall record and show the driver each customer is paired with.
- The system shall display three driving packages.
- The system shall have roles based on needed access.
- The system shall create reports while online.
- The system shall show tests and courses completed, in-progress, and not started by the user.
- The system shall allow administration access to user contact information.
- The system shall allow contact between DriverPass and the user.
- The system shall allow access to driver notes for the user.
- The system shall allow for the creation of user accounts.
- The system shall allow users to update and change their passwords.
- The system shall allow for the creation, modification, and cancellation of appointments.

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 will need several base pages to function properly and intuitively. These pages are as follows: home page with login, account information page, course pages, drivers notes pages, customer profile, contact information page.
- There will be several user roles as identified above. The owner will have a master role which will allow access to the entire system with permissions to add or change contact information for users and employees. The IT officer and administration will also have a master role which will allow access to the entire system with permissions to add, change, and remove appointment packages. Workers will have an administrator role which will have permissions limited to the addition, removal, and modification of user accounts and appointments. Customers will have access to a user role which will have permissions to modify or add personal information to their associated account, access materials purchased through DriverPass, and add, modify, or remove their appointments.
- While on a traditional computer-based browser, the user will interact with the interface through mouse and keyboard inputs. While on a mobile-based browser, the user will interact with the interface through touchscreen inputs.

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?

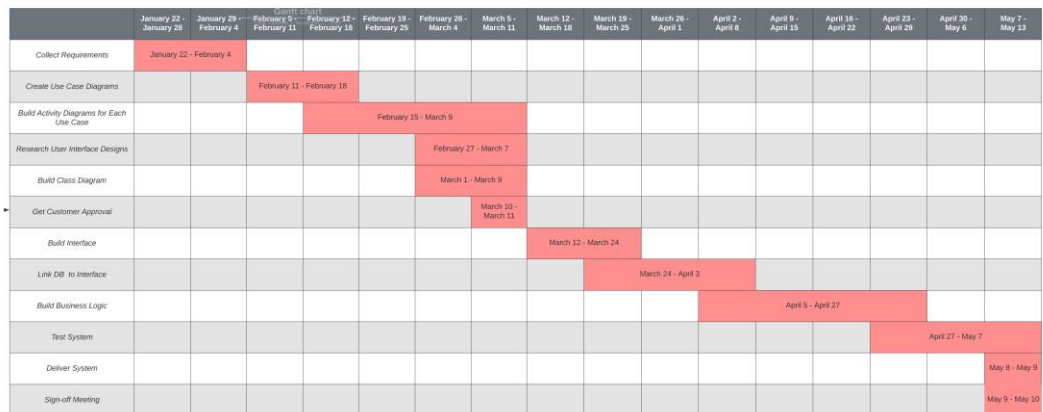
- Every user will have internet access.
- Every user will have an email address or mobile phone number.
- All requirements to develop the system will be within the budget.
- We will work in a Linux environment.
- The cloud will be implemented.
- DMV policy changed will be updated quickly and information given by the DMV will be current.
- The system will be accessible regardless of time or date.
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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 five-month timeframe of this project will require obstacles and challenges to be overcome quickly and efficiently.
- While the budget is not explicitly given, the project will have to remain at a scope which can be covered by the given budget.
- The hardware used for the current system is not given but the current hardware could create challenges depending on how outdated it is.
- The size of the development team will limit the scale and scope of the project.
- The system itself is limited due to internet access for the user regarding purchasing and accessing content.

Gantt Chart



Learn how to edit tables

1. Select the table and then use the advanced shape bar at the top of the canvas to:
 - a. **Add rows and columns** where you'd like using the insert options.
 - b. **Delete specific rows and columns** by selecting the row/columns you want to remove and then using the delete options.
2. Click on a cell and **add text** to it by typing.
3. Select cells you would like to **merge** and then click "Merge" on the advanced shape bar at the top of the canvas.
 - a. To **unmerge** cells, click on the cell and then click "Unmerge" on the advanced shape bar.
4. **Change the color of cells** by selecting a cell(s) and then clicking "Fill Color" on the properties bar.

Pro tip: Toggle the column and row option on the advanced shape bar to quickly adjust your table.

Tutorials

(hold Shift + W or Ctrl, then click)

Read how to use tables

Watch Lucidchart basic tutorials