

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, wishes to take advantage of a potential market gap, where his product can help new drivers in preparing for their driving test, and avoid failing.
- He needs help setting up an online system for his users to access online courses, practice tests and be able to sign up for in person driving courses.
- DriverPass needs to be compliant with DMV regulations and rules so they can provide accurate materials and information.
- They want a well designed user interface based on the design given. This will show their users their current progress and notes in courses, their current info, and information about their needs and driver.

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 looks to assist new drivers who can benefit from help in regards to their upcoming drivers test.
- The system needs to provide practice tests, online classes, and allow users to book practice drives with teachers from the company. These features will be DMV compliant so the users get accurate information.
- There must be a user interface that shows the user their current progress in lessons and tests, as well as allowing them to book and edit driving lessons.
- The whole system will be online, allowing users to access it from wherever they need, and for the system to have a lower chance of going offline.

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 their system to be able to collect and hold information for their clients.
- They need this information to schedule appointments with drivers, give them access to training videos and practice tests.
- They need different levels of security and access for users and employees.
- Liam (the owner) needs the data to be accessible offline, as well as online so he can access it anywhere.
- For the users, they want to be able to keep track of who is accessing what, and who books certain appointments so they know who they need to help, and who is assigned to different drivers, times and vehicles.
- Users also need to be able to edit their appointments, so they can book, cancel or change any detail they may need such as time. As well as contact information for DrivePass.
- The system needs to be able to connect to other information platforms (namely the DMV) so they can keep their information and tests up to date for their users.
- They want their system to run off the cloud so they don't have to worry about backing up data or security issues. This also allows them to adjust their server plans as necessary as their business grows.
- The company should be able to edit user's information on their homepage, entering in all the relevant details about the user's info.

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 running in a web-based application on the client's website.
- This system needs to be capable of handling multiple users at a time, for each of the client's client's to have a secure and stable connection.
- There will not be a large amount of data being transferred but the amount of users could vary based on success.
- The system would benefit from an average speed to meet the client's needs and costs, and the system should be updated a few times a second as well for similar reasons.

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?

- I would recommend running on Windows, as it would be fairly easy for continued development by us or any other developers they bring it too. It has a lot of support and widespread knowledge on how it works.
- There are many backend tools that this system can benefit from as well.
- Databases for user accounts and progress, a remote server to host the website, and the customer side user interface.

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?

- Different users will have separate data tags associated with them for their role, either admin or regular user.
- There will be usernames and passwords for each account that is case sensitive and requires other settings such as symbols and letters. This improves the security for each account by widely increasing the possible ranges of passwords.
- The system should inform the admin of a problem as soon as possible by either generating a report on their home page, or sending them an email. This will help with noticing any possible problems to be corrected 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 admin role would be able to edit regular customer details as necessary by changing their data in the database.
- They should also be able to add or remove customers in a similar way depending on new or leaving customers.
- There would not need to be any changes to the code for each change, as they would just be editing a database in the back end.
- When this information is added or updated the server will update on the next cycle and the changes will take place immediately.
- The admin will need access to editing the database that normal users will not have so that the information is only changed when needed.

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?

- Each user, customers and admins will have a username and password to access their account.
- In addition for security, there should be some form of authentication for sensitive information passing between users and the server.
- For protection from brute force attacks, the account should shut out attempts after a certain amount of attempts, for example five tries.

- If a user forgets their password they can contact Driverpass to have them reset the password after 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 validate user credentials when logging in.
- The system shall display user information, appointments and account progress, and change when updated.
- The system shall keep track and display users progress when they finish tests and assignments.
- The system shall let the admin enter and edit details for users.
- The system shall let regular users book and edit their appointment times.
- The system shall keep track of user account details through a database.

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 different users that access this would be default users and admins.
- Users need to have their account details displayed: personal info, test scores, account progress, driving appointment details, items to study next, ways to contact Driverpass etc...
- Users also need to be able to access tests and assignments, test histories, previous notes and classes taken.
- Admins need to be able to access and edit any user they need (search bar or list view) displayed.
- Admins also need: system issues and reports on display, their own account details, and other necessary back end links to things they may need to edit.
- Users will be on browsers, with perhaps further development into a mobile app.
- There will be links and videos displayed for the user to interact with mouse and keyboard 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?

- Assumptions about the design would be having enough hardware to work for their clientele (having enough bandwidth and storage space).
- Assumptions about the users include: having working computers and a stable connection, enough understanding of web pages to navigate them successfully.
- In this vein, it would be a good idea to have a tutorial to explain the website on the landing page.

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 could hamper this project if not taken fully into account.

- Having an idea of their potential client base to estimate how much server space and bandwidth they would need without overpaying.
- The project itself should not take much more time than estimated, but they will need further development for any module they decide to change or add to their system.
- The budget should be fairly accurate to estimations on time and effort not withstanding unexpected circumstances.
- The technology they need could be rented from a server host, or cloud server to handle the databases and connections they will need to handle users.

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.

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Collect Requirements	22 Jan		4 Feb									
Create Use Case Diagrams					11 Feb 18 Feb							
Build Activity Diagrams for Each Use Case					15 Feb		9 March					
Research User Interface Designs						27 Feb	7 March					
Build Class Diagram						1 Mar	9 Mar					
Get Customer Approval							10 Mar 11 Mar					
Build Interface							12 Mar	24 Mar				
Link DB to Interface								24 Mar	3 Apr			
Build Business Logic									5 Apr		27 Apr	
Test System											27 Apr	7 May
Deliver System												8 May 9 May
Sign-off Meeting												9 May 10 May

Legend: ■ Sam Jennifer ■ Toni Clark ■ John