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 project's purpose is to create a system for the client that helps provide students with access to online practice exams and on-the-road training to better prepare them for driving tests.

⦁ The client is DriverPass and they want their system to be able to provide online classes and practice testing for their customers. They want the system’s data to be able to be accessible anywhere online and offline.

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 system should provide practice tests and classes and allow the user to reserve driving lessons. DriverPass has seen a void in the market for training students in driving and would like to help the students get better at driving so they can pass the tests. The components needed for the system are online courses, scheduling for driver tests, online and offline access for DriverPass to data.

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 provide an online database of practice exam questions to the user.

⦁ A scoring system to check the users answers on the practice exam, so they know what they need to work on.

⦁ Allow the user to track their progress.

⦁ Allow the user to sign up for on-the-road training by DriverPass’s instructors.

⦁ Show reports on performance and progress from the instructors.

⦁ The system should offer different package options. Package 1: six hours in a car with trainer. Package 2: eight hours in a car with a trainer and an in-person lesson where we explain the DMV rules and policies. Package 3: Twelve hours in a car with a trainer, an in-person lesson where we explain the DMV rules and policies—plus access to our online class with all the content and material. The online class also includes practice tests.

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?

⦁ System Speed, the system should run fast as it will be accessed online and must send information to the user and back to the servers when it comes to the users taking online exams.

⦁ Web-based, the system must be web-based so that the users and administrators can access it from anywhere.

⦁ System Updates, this will make sure that the system will be updated often and allow for the system run smoothly with minimum bugs.

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?

⦁ Since the system will be web-based then it should be able to be accessed on any browser and interacted with, the system will run through a server and accessible through any browser.

⦁ The backend will require a database to store information and require a server weather that be their own or a cloud system.

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?

⦁ Login credentials should be used to identify a user and their unique profile.

⦁ For security reasons the input should be case-sensitive to protect the users and their information

⦁ The system should inform the admin if the credential of a user is used incorrectly too many times, or if a password/username is requested to be reset.

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 systems code should include controllers and POST requests so there would be no need to change code when adding, removing, or modifying user's profiles and information.

⦁ The system will adapt to platform updates through developer requests, any system update should be done by bringing the server offline to test for bugs before launching again.

⦁ The IT admin needs full access to the whole system so they can work on the system as 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?

⦁ The credentials are required for the user to log in, their unique username and password.

⦁ To secure the data exchange between the client and server the system would use HTTP.

⦁ If there is a "brute force" hacking attempt it will alert the administrator for the failed attempts, or request for credential change on the login, if there are too many failed attempts at logging in the account will be temporarily suspended.

⦁ If the user forgets their password, they can request a password change, even though the admin was alerted to the request the user will get an email for a password change requiring them to acknowledge that they made the request then allow them access.

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 be online accessed only through the web-based servers, with some offline functions such as admin access to account information and user access to studying information.

⦁ The system shall confirm user details when creating the account.

⦁ The system shall show the user package options for the course they want.

⦁ The system shall confirm user package option.

⦁ The system shall confirm login credentials for user and admins

⦁ The system shall allow for credential changes for the user in case of forgotten credentials.

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.)?

⦁ Needs of the interface are:

a. Account creation

b. Home screen

c. Account information

d. Grades

e. Practice exams/Exams

f. Access to feedback from instructors

g. Customer support

⦁ The different users of the interface are the student, the instructor, the administrator, and the IT technician.

⦁ The users should be able to create an account with credentials and personal information, access to home screen anywhere from the website, access to their profile with personal information, access to grades and practice exams, access to feedback, and access to customer support

⦁ The browser interface should be the same on any browser, in the case of mobile browsers the interface should be scaled to the native screen size.

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?

⦁ The users will be students wanting to learn how to drive.

⦁ The users do not have licenses.

⦁ The systems will stay up to date to any law or DMV guideline changes.

⦁ The system will be accessible at any time on any browser.

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?

⦁ An internet connection is required to access the system.

⦁ The budget of DriversPass

⦁ The global effect, the system is being used for their local DMV, and some requirements will be left out for other DMV's

⦁ The number of students that can be taken on, currently DriverPass only has 10 vehicles so there is only enough for 10 students at one time.

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.

