Southern New Hampshire University

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?

- Our client is the company DriverPass with Liam being the owner
- DriverPass has a vision for their new system to enter the market of training students for their driver's test.

(DeLong, 2023)

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 the system to provide training to customers by offering online classes, practice tests, and on-the-road training
- There is an empty space in the market for this platform
- Liam started DriverPass after he noticed how many student drivers fail their drivers test
- Hardware and software that can effectively solve DriverPass's problem are required
- Management of the system's processes, memory, and secondary storage is needed

(DeLong, 2023)

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?

- This system should be able to assist students pass their driver's test when completed
- Online classes
- Practice tests
- Offline/Online data access
- Three packages of driver lessons for the customer to choose from
- Tracking capabilities

- User Interface
- Cloud-based backend
- A database to keep track of reservations and hold customer information will be needed
- Encrypted communication between the client and server
- Different levels of authority are distributed to users/roles of the system.
- Students and secretaries can set up reservations
- Packages can be disabled at the owner's request
- The system must be connected to the DMV to stay up to date with their regulations.

(DeLong, 2023)

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?

- Web-based
- Should be updated when introducing new features
- The system should be fast enough, so that it waits on the user's request not the other way around.

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?

- Backend should run over the cloud to focus attention on business needs
- A cloud-based backend would require a reliable cloud service provider
- Client-side is ideally supported across mobile devices and popular operating systems

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 through a tracking system with an activity report and reservations
- The system should inform the admin of a problem when there are overlapping appointments, or a user forgot their password

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?

- We can add or remove modules with the help of a developer or system analyst
- The IT admin needs access to the system who is responsible for maintenance and modifications.

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 need a password to login
- To secure the connection, we could implement the SSL protocol to encrypt communication between the client and server.
- The account should be locked after a hacking attempt; Admins should contact the user and work with them to recover their account.

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 encrypt communication between the client and server
- The system shall allow online and offline data access
- The system shall assign roles with a certain amount of data accessible respective to the employee's position at a company.
- The system shall have tracking capabilities by keeping track of who made a reservation, cancellation, or modification
- The system shall track lesson scheduling between drivers and students to prevent overlapping lessons with the same driver.
- The system shall allow the secretary and users to create reservations.
- The system shall cancel a package at Liam's request
- The system shall enable customers to set up appointments over the internet
- The system shall automatically reset a user's password at their request
- The system shall be connected to the DMV so they can stay up to date with their regulations.
- The system shall allow the customer to choose one of three packages of driving lessons
- The system shall set the driving sessions for two hours in length

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 UI must include an input form to be filled out by either the student or secretary to set up a reservation
- The UI must include online test progress and the history of previous tests on the customer side

- The UI must include driver's notes that show lesson time, start hour, end hour, and driver's comments
- The UI must include a contact page
- The UI must be accessible through a browser on both mobile devices and computers.
- The UI must include student information, special needs if applicable, driver photo, and student photo
- The different users for this interface include students, drivers, and secretary

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?

- Customizable packages will be implemented in the future
- All users have access to a mobile device or computer
- Our team is familiar with the SSL protocol and how to implement it in our system design
- We have enough secretaries, admins, and driving instructors to support our system
- There is no budget for building the 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?

- A system running over the web will limit us to a selection of cloud service providers
- The system will not function if our cloud provider stops issuing service
- We don't have a developer or system analyst to remove or add system modules
- We have less than four months to build the system

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.

References

DeLong, Z. M. 2023. CS 255 System Components and Design [Unpublished paper]. Computer Science Department, Southern New Hampshire University