CS 255 Business Requirements Document

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 is a company called Driver Pass
- They want to provide people with better driving training
- They want a system that can track and manage online training for users and on-the-road reservations for users
- Users should be able to complete online training
- Users and secretary(s) should be able to schedule reservations online
- Admin roles (Liam, Ian) should be able to access appointments, user data and reports.
- The system should be cloud based to reduce overhead and ensure access

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?

- They want a system where users can take online practice tests and courses
- The system should also manage scheduling and tracking in person training or reservations with driving instructors
- They aim to reduce the number of people failing their drivers' tests by providing better access to training
- They offer 3 kinds of training packages in a tier like system with one being the smallest and three being the largest
- The system should have minimal technical problems
- User actions such as canceling or rescheduling should be tracked
- It should be web/cloud based with backup and security taken care of
- There should be 4 roles, Liam, Ian, a secretary, and a user

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?

- Users should be able to schedule their own on the road training(reservation)
- Users should be able to track their progress online
- Secretary(s) should also be able to schedule reservations
- Liam should be able to access data anywhere online and download/print reports for offline use
- Liam should be able to monitor system usage and print reports
- Ian's role should have full administrative access to all accounts
- Each reservation should be 2 hours long. Packages differ in length, but they consist of multiple 2-hour long reservations
- Changes to reservations should be tracked and sent to a report that can be printed
- The driver and each car for each customer should be tracked
- Of the 3 available packages for users Liam wants to be able to disable it so no more users can register
- Each registration should have the user's first and last name, address, phone, state, credit card number, security code and expiration date.
- The registration should include a pickup and drop off location. Drop off should be the same as pickup.
- Users should be able to reset their own passwords
- The system should automatically get updates when the DMV makes changes to policy or rules

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 should be web based
- The system should be cloud based
- Minimal technical problems and fast response time
- Backup and security should be handled by third party (cloud based)
- The system should automatically update when the DMV makes changes to policy or rules

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 should run on any system including mobile via the web
- There will be a database of user actions (such as making a reservation or canceling) however this database is not needed for the system to run
- There will need to be a database to store user info
- There will need to be a database to store the online course information

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?

- The admin will get updates when the DMV makes changes
- The users will be distinguished by RBAC. Certain logins will invoke different privileges
- The reservations are split into 2-hour blocks

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 IT admin should be able to access all accounts
- The 3 packages should be able to be paused at any time (so no new users can register)
- The system should adapt to new updates from the DMV

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 an email and password to login
- A users account should be locked after 10 failed logins
- All data should be encrypted in some way. The cloud model should handle this but depends on the model.
- Users' can reset their passwords if they forget it, or the IT admin can reset it

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 track changes to a reservation including who made created it, changed it or canceled it.
- The system shall have an online section where students can take courses and practice tests
- The system shall allow students to track their progress and view driver notes
- The system shall be cloud based with minimal overhead
- The system shall separate users into different roles for security
- The system shall keep track of drivers and cars to prevent overlapping reservations
- The system shall allow data to be downloaded
- The system shall only allow 2-hour reservations (separate the three packages into 2-hour blocks)
- The system shall keep up to date with the DMV and inform the admin

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 system will allow users to schedule their own appointments
- The system will allow the secretary to schedule users' appointments
- The system will have 4 users; IT admin, student, secretary, and Administrator
- The IT admin should have full access to accounts
- The administrator role should be able to access the systems database
- The student role should be able to see their test progress (what they have taken and what they need to take).
- The system will display the test results (score and status, etc.)
- The user interface is web based so it should run on any web browser on any device
- The drivers will be able to leaves notes for students
- The student role should be able to see their scheduled reservations
- The system has no hardware other than the devices used to access the cloud model

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?

- A cloud-based model is purchased and is running
- The online courses are already completed (at least the content)
- The user can read English
- The user has access to the internet
- The user is using an up-to-date modern web browser
- The student is of driving age (15 and a half)

- The system assumes there will always be an available driver (what happens when the driving schedule is full?)
- The user has a valid credit card (the system mentions no other forms of payment)
- DMV Intergration is assumed to be automatic (with an API?)

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 system has no accommodation for people with handicaps (deaf, etc.)
- The system is only in one language (English)
- Without internet or the cloud provider the system will not function

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.