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?
- Client is DriverPass with Liam the owner and Ian the IT officer as main contacts.
- The client believes that the failure rate among DMV driving tests are much too high.
- To combat the failure rate, DriverPass will offer multiple programs for preparation.
- The preparation tools will be easily accessible to any and all future drivers.
- The client hopes to take advantage of a void in the market when it comes to training students for the driving test at their local department of motor vehicles (DMV).

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?
- Online classes, practice tests, and on-the-road training available will better prepare drivers.
- A web-based interface will easily enable drivers to reserve any of three lesson packages.
- Drivers will reserve quickly and securely online and be able to modify their reservations,
- When the client facing portal suffers downtime, personnel will be available to reserve lessons via phone.
- UX will be current and informative, displaying driver statistics like testing progress and upcoming lessons.
-

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?
- Lessons and practice tests will align with the DMV's most current regulations.
- Role-based permissions will provide security to ensure employees have access only to what the need.
- Data will be accessible from any device and offer download capability to use data in 3rd part application.
- All reservation actions will be tracked in a central log so that the data is secured, organized, and accessible.
- The program will allow for future modifications for the addition and removal of program modules.
- Collect requirements
- Create use case diagrams
- Build activity diagrams for each use case

- Research user interface designs build class diagram
- Build interface link database to interface
- Build business logic
- Test and deliver system

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 application that users will access through any web browser
- System updates will be evaluated and made every 12 hours
- Private cloud model will be used so that DriverPass can maintain their own servers on site

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?
- Near universal performance since the program is accessed through a browser
- Large, static platforms (MS, Linux, etc.) will have full access to the applications capabilities
- Mobile OS platforms will have limited access to program functions

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?
- All users will be designated as one of two categories: client or employee
- Clients will undergo multi-factor authentication including a case-sensitive alpha-numeric password plus their choice of secondary authentication through e-mail, text, or a 3rd party token
- Employees will be compartmentalized into different levels of access that will be initially set when IT director configures their account
- The application will auto shut off after 90 consecutive minutes of inactivity unless user intervenes
- Users will be limited to three password attempts before the account locks
- Users must change password every 180 days

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?
- Compatible file interpretation so the LMS interprets, copies, reads, and displays all file types that users upload including PDF, JPG, DOC, XLS, etc.

- Redundant database/data files so that all servers and databases that support the LMS will adhere to a backup schedule across different locations to safeguard student data from being lost
- IT admin will have full access to update or modify records within the database without changing code

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?

- Multi-factor authentication to maintain the integrity of ensuring that student activity is recorded for the correct user
- Users can opt for email verification to reprogram their password if it was forgotten
- Full IPSec and TLS with handshaking will be used to secure connection between clients and DriverPass

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."

- [Insert text]

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.)?

- Programmed learning model that provides a built-in, structured learning applications based on eLearning, instructor-led, or blended modules.
- Analytics/performance reports with data visualization and user query interfaces will be used to provide access to user's grades, progress, and alerts
- All access will be provided through the web browser of the client's choosing
- Mobile OS platforms will have limited functionality

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?

- DriverPass has sufficient hardware and on-site infrastructure to maintain its program
- Clients are tech savvy enough to successfully used the program from a computer or mobile device

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?

- Technology will be limited to what DriverPass currently has on-site
- Updates, patches, installations will be managed resources based on the operating budget
- The educator team is comprised of people who possess a vast array of different technical savvy; there will be educators who will require training on the system before it goes live

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.

TASK LIST	PHASE	PROGRESS
Collect Requirements	1	0%
Create Use Case Diagrams	2/3	0%
Build Activity Diagrams for Each Use Case	2/3	0%
Research User Interface Designs	2/3	0%
Build Class Diagram	2/3	0%
Get Customer Approval	2/3	0%
Build Interface	3	0%
Link DB to Interface	3	0%
Build Business Logic	3	0%
Test System	4	0%
Deliver System	4	0%
Sign-off Meeting	4	0%

Months shown: JANUARY, FEBRUARY, MARCH, APRIL, MAY

PHASE 1 - PLANNING | PHASE 2/3 - ANALYSIS & DESIGN | PHASE 4 - IMPLEMENTATION | PHASE 5 - MAINTENANCE