

CS 255 Business Requirements Document Template

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CS-255

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 reason DriverPass wants to create a product on the market to help people pass the drivers test more easily is because they think there is not enough resources or help available. They want to give students a platform online to practice exams, read and schedule appointments to practice driving.

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 to help people by reducing the number of people who fail the driving test with the use of a system. The system would be online and would provide practice tests, have classes with teachers and to schedule an appointment to practice driving. The system should allow the user to access data from anywhere there is internet. The system should track and log bookings, cancelations, changes to the bookings and needs to offer 3 packages to the student.

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 be able to let users create an account on the DriverPass website, choose a package from 3 options, let users take practice exams, learn from teachers, make an appointment to practice driving and access the materials from anywhere that has internet. For the administration users, the system should allow them to make changes to improve it and pull data to make business decisions. To create this system, the tasks we need to complete include creating an object and process model. Making a UML diagram will help the development team create the software so they can visualize the program. Once this is finished, then we should pick a platform to develop this system and the desired language to write it.

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 environment should be a web-based system and operates with the cloud. The system should be fast because we will not want any interference with the students learning. The system should be able to update as soon as an admin adds new features.

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 platform should run on Linux because it is fast and secure. For the backend of the system, we would require a database so that this application can store lessons, videos and exams for students to interact with.

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?

- We will differentiate users by userId and username. Users may make any username they wish to choose but each user will have a unique userId. Input should be case sensitive for the password, but not for the username. The system should notify admins as soon as problems occur such as a glitch, freeze or bug.

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 system should let the user add/remove/modify information about their account and let them delete it. The system should include platform updates slowly so that the chance of bugs become minimal and as the need increases. DriverPass should have the ability to add features as they wish and platform updates will follow. IT admins will need full access into the system so that they can access information that may cause system outages or to take away access to users who no longer work at DriverPass.

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 should be required to have a unique userId and password that are case sensitive. Multi-factor authentication can be enabled for extra security if the user wishes to do so. To keep data exchange secure we should encrypt the data on the users system, when its called and when its stored. Using a cloud database should also add more security to data. The system should disable the ability to login after 5 failed attempts to prevent a brute force attack. Since the user seems to have forgotten their password, the user will need to enter their email address that was used to create the account and a password reset link will be needed to reset their password.

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 allow user to modify their information.
The system shall offer 3 learning packages.
The system shall have practice exams, lectures, and the ability to message teachers questions.
The system shall allow the user to schedule appointments to practice driving.
The system shall let the user pick their driving instructor.
The system shall be fast and efficient so students wont get interrupted.
The system shall have different users to allow for students, teachers and admins.
The system shall let admins make changes to the system and add new features.
The system shall let teachers add lessons and exams for students.
The system shall let students take exams and lessons based on their package.
The system shall let teachers and admins view students progress.
The system shall include a payment processing system.

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 interface needs to be easy to read so students can focus more on learning. The users will be the students, teachers and admins that will need this interface. For the teachers, it will need to be easy for them to upload course content and for admins it will need to be easy for them to get specific data and to make updates so that the business can change how it adapts over time. The user should be able to interact with the interface through browsers, phone and tablets to provide a convenient platform for the users as long as they have internet. Buttons and layout should conform to the screen size for easy readability.

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?

- I do not remember a certain budget for all the technology going into this application. I also do not know if users who will be interacting with this system will have technology capable of running this application. Lastly we do not know if DriverPass will have a sufficient amount of employees in order to keep the system in operation. I will assume that all employees will have access to the software.

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?

- 4 months and 19 days is our time constraint with currently no budget for spending so I will assume it's as much as needed. A limitation for this application is going to be do we have enough developers to support the time constraint?

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.

