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CS255 System
Analysis and Design
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CS 255 Business Requirements Document Template

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?

- Driver Pass is the client trying to achieve safer driving conditions by creating an application to train drivers with online tests and on the road training.
- In previous conversations with Driver Pass's stakeholders, they had requested users have a profile for their status, communication and exam results.
- Administration requires contact info for users and database access to confirm or update appointments and exam information.
- The owner of Driver Pass requested and contacts page in the application.
- Tracking info for reservations of driving lessons
- Account security management based on roles and responsibilities
- Three different driving test packages
- Administration to confirm, cancel and update appointments
- Notifications from DMV about new driving test information
- Driving exam administration comment section
- Input form for student information and exam results

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 requires customer profile data and administrative access controls for appointments, contact info and exam results.
- Driver Pass is requesting live updates from the DMV regarding new exam material
- Stakeholders will be assigned security access based on roles and responsibilities
- Driver Pass want to provide improved on the road testing and exam preparation for its customers based on statistics that describe failure due to outdated test preparations
- The components will require storage, databases, access control, a contact page, and user profiles

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?

- Updated exams for customers to pass driving tests
- Security access assigned by the manager for administration
- Contact info for customers to communicate with employees at Driver Pass
- Remote access for the owner
- Appointment modification for users and administration
- Comment section for on the road exam proctors
- Accurately publish the application into the cloud for larger network

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 may need daily updates for customer appointments and exam results
- It is expected to provide quick responses for higher workloads and connections
- It will run and be stored on the cloud
- The application will have live updates from new DMV exams and information
- It should have data to track on the road exams

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 will be developed on Windows, but could be created with any development software
- It needs multiple databases to effectively run the application
- The application should have security credential access and built in firewalls
- The code information in the application will be stored in the cloud

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?

- Security access is assigned by management and is created by the manager with separate account controls, similar to a user profile
- Case-sensitivity is required to authenticate controls for enhanced security
- Java is capable of creating controls and security notifications

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?

- Database administration updates user requests with a command
- Certain credentials are required to access the database at Driver Pass

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?

- Code in applications are designed to create accounts and password security
- If there is a brute force attack, it is most likely that the owner will need to seek professional help to resolve the hacking attempt
- When users forget their password, they may call Driver Pass administration to update it, create a new account or request a password reset on the login page
- Password security is usually handled by Java in most applications

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 create customer profiles
- The system shall provide user support for administration and customers
- The system shall assign security access to modify customer information
- The system shall host exams
- The system shall provide exam results
- The system shall schedule on the road driving exams
- The system shall enable comments for the instructor to provide helpful info to the customer
- The system shall enable security features for the application
- The system shall provide database controls for administration
- The system shall include a contacts page

- The system shall send messages from the DMV about updated exam information

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.)?

- Includes logo
- Online test progress
- Driver notes
- Customer information
- Special needs information
- Driver photo
- Student photo

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 assume that the user has a preferred operating system
- There should be clean interior for network connections
- Comments throughout code to inform other developers of what information is included
- Basic administration knowledge to update the database

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?

- Storage limitations are set by the cloud providers, necessity and expenses
- Reliance on the DMV messaging updates may have a time limitation of when the organization updates exam information
- Schedule conflicts may be a limitation for Driver Pass to assess on the road testing

- Confidentiality and security are risk factors that are measured by employee awareness of safeguarding data and information
- The development team has created a timeline to organize tasks and send stakeholders an informed estimation for application delivery

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.

DriverPass Application Gantt

