

CS 255 Business Requirements Document Template

System Components and Design

Purpose

- The client is Driver Pass. Liam the owner and Ian the IT officer have a vision for a new system that he wants to build. Driver Pass wants to build a system that will help train students for their driving test. The system in mind will provide online classes and practice tests, which are all included in package deals that may include on-the-road training if the customer wishes.

System Background

- The system should offer different packages dealing with different types of training options that include classes, practice tests and on-the-road training.
- The system should allow Liam or other authorized individuals access to data from anywhere and from any device whether online or offline.
- For the development of the system, proper security measures will need to be implemented such as access rights over accounts and the ability to block employee or customer access.
- Tracking features will also need to be implemented in the system to keep track of reservations, completed classes, any type of modification involving scheduling, training progress/digress, the number of cars available for on-road-training, available trainees for on-the-road-training etc.
- The system should be able to remove training package modules offered to the customer, add new user classes, customize user passwords for online access and scheduling, and update universal DMV changes such as new policies and rules.
- The user interface will run off the web and over the cloud so that Driver pass does not have to deal with back up and security.
- The user interface needs to be developed to the design that Liam has designed.

Objectives and Goals

- The system should be able to do everything listed in the requirements.
- The system should be able to do everything in the system background section above.
- The different scheduling tasks that will need to take place in reasonable time intervals to achieve successful development of the new system include:
 - 1) Building the systems use case diagrams and activity diagrams. This step will take about eight business days.
 - 2) At the same time user interface designs will need to be researched and planned. This step will take about nine business days.
 - 3) After the first two steps a meeting will need to be held to go over system development progress with the customer.
 - 4) Once work is approved, the next step is to start working on the actual interface.
 - 5) Next, database tables will need to be built and linked to the interface.
 - 6) Next, business logic will need to be added.

- 7) Finally, system delivery is next as well as the sign-off meeting to finish the project.

Requirements

Nonfunctional Requirements.

Performance Requirements

- One of the requirements that was mentioned in the interview is that Liam, the owner of driver pass wants his website classes to be available online and he wants his website to provide on-the-road training. This means that the different possible environments that will be available include:
 - Web-based
 - Applications
- The system should perform at efficient speeds. There should be minimal lagging and bugs for any environment. User interface interactions should be responsive and reliable.
- The system should be analyzed and updated on a regular basis and should be updated by request or use case scenarios.

Platform Constraints

- Any computer or desktop with Mac, Windows, Linux, Dell, Unix etc.
- Any portable device such as tablets, and phones including products by IOS, Android and Windows.
- Owners and project employees will need to be able to access data and websites through other applications like excel.
- Cloud computing may be necessary to allow cross platform data-transfers.

Accuracy and Precision

- To distinguish between different users, user authentication will need to be in place before accessing websites and applications.
- Web- browser and applications will offer student and admin login in options.
- All input for passwords and usernames will be case sensitive.
- Admin shall be informed of data breaches and incorrect password attempts.

Adaptability

- User shall be able to make changes to account data including:
 - Personal information such as name, DOB, address etc.
 - Username and password
 - Billing
 - Enrollment
- The system will adapt to platform updates in the following process:
 - Users shall be notified of updates and update details.

- Updates shall be planned on the best schedule opportunities.
 - Updates shall be done on web-browsers and mobile applications at the same time.
 - Users shall have the option to update at a convenient time.
- IT Admin access:
 - Shall have access to software and hardware components.
 - Shall have access to necessary data.
 - Shall have access to customer support notifications.
 - Shall be allowed to update web-browser and application content such as package updates.

Security

- system shall include data encryption, access controls, and protection against unauthorized access or data breaches.
- If there is a “brute force” hacking attempt on an account, the account needs to be suspended and locked by admin, and account member will need to be notified.
- If a user forgets their password, there will be options to reset the password through account email or account phone. If either option is not doable, admin or IT service will be available, and password can be changed with proof of identification.

Functional Requirements

- Administrator:
 - The system shall allow for students to be tracked.
 - The system shall allow user information changes.
 - The system shall support management of access, functionality, views, and security roles depending on user rights.
 - The system shall allow to be viewed before publishing.
 - The system shall support custom fields.
- User Registration and login
 - The system shall validate user credentials when logging in.
 - The system shall allow students to self- register into classes through the course catalog.
- Goal Setting and Tracking
 - The system shall allow administrators to track student progress towards curriculum completion and certifications.
 - The system shall allow administrators to give rewards and certifications online.
 - The system shall allow administrators to notify users of program progress.
- Tracking and Reporting
 - The system shall allow data to be imported and extracted through the user interface.
 - The system shall allow users to plan and track goals.

User Interface

Different users for the interface will include:

- Customers /driving class students:

- New
- Current
- Old
- Administrators:
 - Product team members
 - Tech support

User interface interactions:

- Non/ new/ current/ old students/ customers/ administrators
 - Shall be offered all available programs.
 - Shall have ability to search available programs.
 - Shall have the ability to view program schedules.
 - Shall have access to Driver Pass website and content via web browser and mobile devices.
 - Shall have ability to register for classes.
 - Shall have access to customer support.
 - If current or old student:
 - Shall have access to account information including:
 - Billing
 - Enrollment status
 - Program projections and status
 - Accomplishments/ Certifications
- Administrators:
 - Product Team members
 - Shall have access to website and mobile application interface and will be able to see all information and data that students/customers will see.
 - Shall have access to data based on access rights.
 - Tech support
 - Shall have access to data based on access rights.
 - Shall have access to software/ hardware components.
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All interface interactions will be run over the cloud to minimize back up and security complications.

Assumptions

- Sufficient hardware infrastructure and building.
 - assumption of access to hardware resources, like servers, storage, and network infrastructure.
 - assumption of cheap resources and cheap labor.
 - assumption that hardware engineers will have required skills.
 - equipment will be in good condition.

Limitations

- Limited integration capabilities
 - may have limited data exchange and interoperability with other educational or other external systems.
- Technical constraints
 - may have a tight or seemingly unachievable time limit.
 - may have limited resources.

- may have limited project development expertise and physical capability.
- may have insufficient funding.

Gantt Chart

GHANT CHART- DRIVER PASS

Sean Toon

	January	February	March	April	May
Collect Requirements	Jan 22 - Feb 4				
Create Use Case Diagrams		Feb 11 - Feb 18			
Build Activity Diagrams for Each Use Case		Feb 15 - Mar 9			
Research User Interface Designs		Feb 27- Mar 7 Text			
Build Class Diagram			Mar 1 - Mar 9		
Get Customer Approval			Mar 10 - Mar 11		
Build Interface			Mar 12- Mar 24		
Link DB to Interface			Mar 24 - Apr 3		
Build Business Logic				Apr 5 - Apr 27	
Test System				Apr 27 - May 7	
Deliver System					May 8 - May 9
Sign-off Meeting					May 9 - May 10