Southern New Hampshire University

CS 255 Business Requirements Document

System Components and Design

Purpose

- Our Client DriverPass, wants to create a system that will digitalize the face to face work needed for driving school. DriverPass expects their students to excel in the classroom due to alternative and innovative learning methods.

System Background

- Many student drivers fail their test on their first try. DriverPass has identified a void in the market for online driving classes. DriverClass wants the system to be able to allow students to access the web to allow students to excel in drivers' education compared to the traditional methods that are taught in classrooms. Components needed will be the access to quizzes, courses, booking systems, and a lesson tracking system. With these components, DriverPass will be the leader in online drivers education programs.

Objectives and Goals

- When this system is functional, the secretary would ideally start off by taking a phone call from a new user waiting to register for the website, she then should have the credentials to create a user account with the following information (first name, last name, address, phone number, state, and their credit card number, expiration date, and security code) as of right now, the owner of Driver Pass only wants the students to call in to register their account. The student also should be able to view and select one of the following packages offered if not disabled by the owner. -Package One: Six hours in a car with a trainer (3 x 2hour sessions) - Package Two: Eight hours in a car with a trainer and an in-person lesson where we explain the DMV rules and policies (4 x 2hour sessions) -Package Three: Twelve hours in a car with a trainer, an in-person lesson where we explain the (6 x 2hour sessions) DMV rules and policies—plus access to our

online class with all the content and material. The student needs to be able to schedule their selves for a session with a behind the wheel driver, and be able to select their available time, with a reservation form set for 10 drivers. Sessions are 2 hours long regardless of the packages.

- Drivers pass should use industry best practices to create a innovative alternative to drivers education with a higher success rate than traditional in class methods that have historically been limited to the amount of practice and resources the students have.
- Driving instructors are expected to track their work with the following statistics: Lesson Time, Start Hour, End Hour and Driver Comments. The driver then should be able to report the session in a chart below.

Lesson Time	Start Hour	End Hour	Driver Comments

Requirements

Nonfunctional Requirements

Performance Requirements

- DriverPass would excel as a web-based application. If there is an influx of students, there it will scalability will be easy, as we could allocate more memory and storage through cloud based platforms to ensure that storage is not limited to company hardware servers. DriverPass will only need to pay for the storage that they need.
- A web platform will offer reliability, as students are able to access content whether if they are on a private computer, mobile device, or using a public device. There is no need to install a application directly to your device.
- The system would ideally run through the day and have maintenance scheduled for times when there is a low number of users. This will ensure that students are able to access DriverPass as much as possible.

Platform Constraints

- DriverPass will run great on any operating system that offers access to a web browser, as a web based platform will offer the greatest amount of accessibility.

Accuracy and Precision

- A user identification system can be implemented to create a unique identifier for each user. Ideally a numbering system would work best. Whenever an account is entered into a system, it will be matched with its very own number. To differentiate instructors, administrators, and students a identity holder would work best. If an admin account is created, the user ID will be a 10 digit code starting with 3 (3XXXXXXXXX), instructors will start with 2 (2XXXXXXXXX), and students will start with 1 (1XXXXXXXXX).
- If there is an error with creating/logging into an account (other than incorrect credentials), or if there are no more user IDs the Administrator will be contacted via an automated emailing system.

Adaptability

- DriverPass should have a add and modify function that an admin can access. This will allow the creation of accounts and the ability to set them inactive after a certain time frame or if their membership expires. This will ultimately be determining and regulate who can login and see certain permissions. Deleting functionality should be included and left to the admin incase if x number of years go by accounts can be deleted. This will free up space in databases and use less storage.

Security

- DriverPass will use SSL to encrypt user data before transferring information to websites. In addition to this users can set up multi factor authentication (MFA) to prevent unwanted access, as they will need to provide information from a phone number / email.
- During hacking attempts, accounts will have a limit of login attempts until the account is locked for x amount of time. This can help with brute force hacking attempts.
- For password resets, admins can have the functionality to request passwords. Additionally users will be able to reset their own passwords with methods such as an automated email link.
- Payment methods can be protected with a tokenization method that would convert the customers primary account number (PAN) or use 3rd party payment methods such as PayPal.

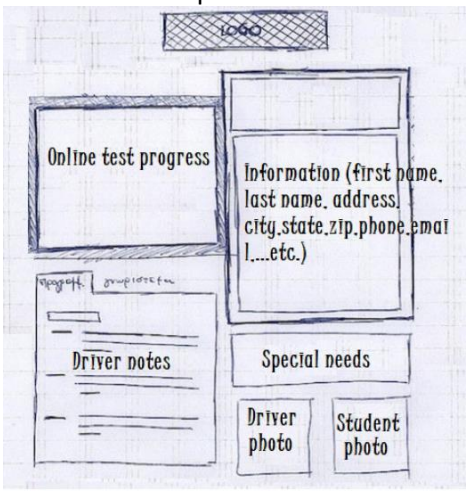
Functional Requirements

- The system shall allow user logins.
    - User logins will allow each person to keep track of their own classes and keep separate permissions from different users.
    - Logins attempts should validate user credentials
- The system shall include a homepage module.
    - A homepage would allow a more personalized experience for each user.
    - This home page should also include a section for notifications of changes and posts that instructors make.
- The system shall have course modules that break down the processes of driver's education
    - Course modules will be linked from the homepage
    - It will include instructor lead courses and bookwork.

  - From a admin prospective it would have an edit option to add and delete materials.
  - It will also have functionality for admins to see historical student statistics.
- The system shall have a calendar module that doubles up as a booking system
  - The calendar module would be an extension of most learning platforms notification module
  - This calendar will also notify you about the start of the week, agenda and assignment due dates.
  - The calendar should include the ability for admins to add office hours to show, so students would never be confused on when they can contact their instructors.
- The system shall have a Support Module
  - A support module would offer third party help if when the student needs.
  - This could be an extensive library of study materials,
    - Examples include Shapiro library, tutoring, a mentorship program and resources for personal growth.

User Interface

- The User Interface (UI) has been sketched out by Liam, the CEO of DriverPass.
- The UI should show tests that the customer took on the home page.
- The UI should show completed and courses that are in progress.
- THE UI should show scores and status of completion.



Assumptions

- Users are able to call the receptionist and set up an account by phone.
- Users will need to pay by card.
- Users also should have a device has a web browser installed.
- Users will have the ability to learn by themselves from a computer
- User will be able to access the internet daily

Limitations

- Users will only be able to view work on learning modules when connected to Wi-Fi.
- Scalability will be limited to the amount of storage purchased by admins
- The only way to currently create an account is through a receptionist.
- Learning is limited to the resources given to the students.
- One on one learning is limited due to the screen time

Gantt Chart