# CS 255 Business Requirements Document

# Heath Banak

# heath.banak@snhu.edu

# Southern New Hampshire University

## 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 owner of DriverPass wants to take advantage of a void in the market for training students for the driving test at local DMVs.
* DriverPass wants to provide online training through classes and practice tests as well as on-the-road training through driving lessons.

### 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 owner of DriverPass observed many people fail their driving tests at the DMV. The company wants to offer a solution in the form of a digital system that gives users access to online coursework and in-person driver training.
* The company would like users to be able to access coursework and progress and register for lessons from anywhere through an online interface. They also want to remain connected to the DMV to keep their coursework and practice work up to date.
* DriverPass wants employees to be able to access data and make edits from anywhere. They want the system to reside on the cloud so they can focus on the business rather than security and backup.

### 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?*

* Track changes to user data: reservations made, edited, and canceled; reservation time; reservation driver and car; coursework data; and personal information.
* Allow customers to purchase their choice of different training packages.
* Allow customers to create a driving lesson reservation.
* Allow communication to and from company and customer.
* Company receives notification of any DMV updates.
* System is accessible through the web by customers and employees.
* Allow customers to automatically reset their password.
* Allow customer and company to enter new customer information
* Allow customer to add and edit pickup and drop off locations.
* Web interface displays online test progress, customer information, driver notes, and special needs.
* Allow company to disable customer access to packages.
* System prints activity report.
* Company can download reports and information using Excel.

## 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 should be web-based
* The system should be updated at least once every month
* The system should update automatically when there is a change in the DMV database
* The system should be designed for mobile and desktop size screens

#### 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 customer requests that a cloud platform support the system
* The system requires the following databases
  + Customer information
  + Employee information
  + Appointments
* Individual students will each have a data structure to store progress

#### 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?*

* Each user will have a unique ID
* Each user will have a username and password
* System input is case-sensitive
* The system should inform admin of a problem if one of the following occurs
  + The system is due for an update
  + Attempted security breech

#### 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?*

* Users can make changes through a user interface
* System updates will be integrated into the existing system
* IT admins require username and password; both are provided by the company
* Employees have an employee PIN

#### 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?*

* Each user requires a username / email and a password
* Data is encrypted between client and server
* Users are able to request a password reset through email
* Accessible user information is contained in a temporary object that securely updates a stored object
  + Temporary object is deleted upon hack attempt

### 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 validate user credentials when logging in
* The system shall store student progress
* The system shall store user information
* The system shall support student and instructor communication
* The system shall notify users of upcoming changes to the system
* The system shall notify users of upcoming assessments
* The system shall include accessibility features for all features

### 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 student must have access to their personal information, assessment information, and schedule through a user interface
* The student must have an interface for completing assessments
* The student must be able to request driver appointments through an interface and view driver information
* The student must be able to communicate with their driver through a user interface and vice versa
* The student or employee must be able to input new student information on a form through a user interface
* The driver must have access to their personal information, information of their students, and their schedule through a user interface
* The driver must be able to communicate with admin through a user interface
* The driver must be able to update their schedule through an interface
* Student and Driver interfaces should be accessible by mobile browser
* The admin must have secure access to user information and curriculum through a user interface
* The admin must be able to update the system schedule through a user interface
* Admin interfaces should be accessible by web browser

### 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?*

* All users have sufficient technology and skills to access and operate the system
* All users will take part in system training
* Messaging between users will be appropriate
* Students have a set curriculum
* Students may choose different drivers
* Drivers will regularly update their schedules
* Payment will not be made online

### 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?*

* The system must be complete by May 10
* The company has a limited budget
* The system must be accessible through the most popular web browsers and mobile browsers
* The company has a specific interface design in mind
* The company has requested the system be deployed on the cloud

### 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.*

Chart, timeline

Description automatically generated