Southern New Hampshire University

CS 255 Business Requirements Document Template

System Components and Design

Purpose

- DriverPass is a new company that wants to help people actually pass their driving tests instead of failing like 65% of students currently do
- The owner Liam noticed there's basically no good training out there - people just study old tests and then bomb the real thing
- They want a system that lets students take practice tests online AND book actual driving lessons with real instructors
- Basically trying to fill a gap in the market where proper driver training doesn't really exist

System Background

- The main problem is that current driver training sucks - students fail because they're not properly prepared
- DriverPass wants to fix this by offering both online study materials/practice tests AND hands-on driving lessons
- The system needs to handle user accounts, scheduling for driving lessons, payment processing, and keeping track of student progress
- They also want integration with the DMV so their practice materials stay current (which is pretty smart actually)
- Users should be able to access everything online, make appointments, and track their progress

Objectives and Goals

- Let students take practice tests that actually reflect what they'll see on the real DMV test
- Make it easy to schedule driving lessons with available instructors and cars (they have 10 cars total)
- Keep track of everything - who made appointments, who canceled, scores on practice tests, etc.
- Work on any device so students can study/schedule from anywhere
- Automatically get updates from DMV when rules change so content stays relevant
- Generate reports so Liam can see how the business is doing and catch problems early

Requirements

Nonfunctional Requirements

Performance Requirements

- Has to be web-based and run in the cloud (they don't want to deal with backups and security headaches)
- Should work on computers, phones, tablets - basically any device with internet
- Need to be able to download reports and data to work with in Excel offline
- Can only update data when online to avoid having duplicate/conflicting data on different servers
- Should load fast enough that users don't get frustrated waiting

Platform Constraints

- Web browser based - needs to work on Windows, Mac, mobile browsers
- Backend database in the cloud to store all the user info, schedules, test data
- Has to integrate with DMV systems somehow to get regulation updates
- Support exporting to Excel format for offline analysis
- Payment processing integration for credit cards

Accuracy and Precision

- Different user types need different access levels - owner, IT guy, secretary, regular customers
- Form validation to make sure required fields are filled out correctly
- System needs to alert admins immediately if something goes wrong
- Prevent double-booking of instructors/cars for the same time slot
- Practice test scoring has to be accurate and give useful feedback

Adaptability

- Admin should be able to add/remove users without needing a developer
- System should automatically update when DMV changes rules
- IT officer (Ian) needs full admin access to reset passwords, disable accounts, etc.
- Liam wants to be able to turn packages on/off without calling developers
- Should be built with future changes in mind even if we can't implement everything now

Security

- Different permission levels for different user types
- Strong password requirements plus password reset functionality
- All data transfer needs to be encrypted (especially payment info)
- Lock accounts after too many failed login attempts to prevent hacking
- Need to log who does what in the system for accountability

- Credit card processing has to be secure and compliant

Functional Requirements

- The system shall let users log in with username/password
- The system shall allow customers to sign up for lesson packages online or over the phone
- The system shall let customers schedule, change, and cancel driving appointments
- The system shall track practice test progress and show scores/completion status
- The system shall store instructor notes for each lesson
- The system shall process credit card payments securely
- The system shall generate reports showing user activity and system usage
- The system shall receive and process updates from DMV systems
- The system shall let admins manage user accounts and permissions
- The system shall support the three different lesson packages with different content
- The system shall match customers with available instructors, cars, and time slots
- The system shall store customer contact info and pickup/dropoff locations
- The system shall send notifications for DMV updates and important system changes

User Interface

- Web-based interface that works on desktop and mobile
- Four types of users need different interfaces: Owner (Liam), IT Officer (Ian), Secretary, Customers
- Customer side needs: registration, appointment booking, test taking, progress tracking
- Admin side needs: user management, reports, system settings
- Liam showed us a sketch of what he wants - logo at top, then sections for test progress, user info, driver notes, and photos
- Secretary needs to be able to make appointments for customers who call in
- Everything should be mobile-friendly since people will use phones

Assumptions

- Students have internet access and basic computer skills to use the system
- DMV will cooperate with providing API access or at least regular updates
- We can use existing payment processing services rather than building our own
- Staff will get training on how to use the admin features
- Internet will be reliable enough for real-time scheduling
- Current security standards (like PCI compliance) will be sufficient
- Users will actually want to use an online system vs just calling

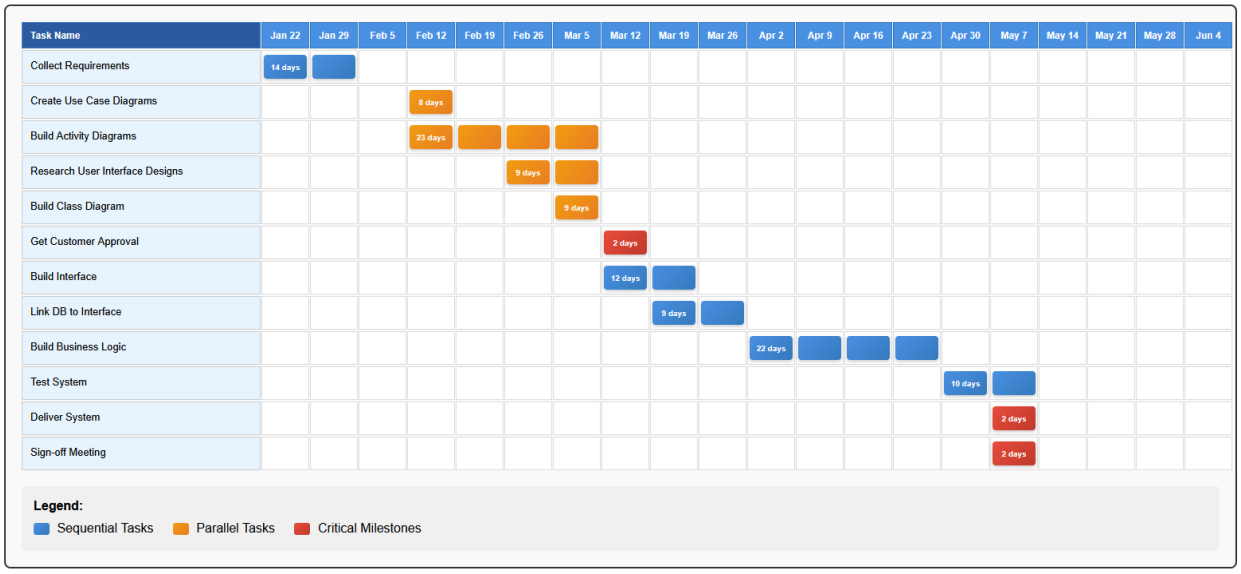
Limitations

- Can't modify data offline because it would create sync issues

- Adding new package types will still need developer work beyond just enabling/disabling
- DMV integration depends on their systems and willingness to share data
- Performance depends on internet speed and cloud provider reliability
- Budget probably won't allow for super advanced features in version 1
- Timeline is tight so we might have to phase some features
- No mobile app initially - just mobile web browser
- Limited customization options for now to keep scope manageable

Gantt Chart

DriverPass System Development Project Timeline



Project Duration: January 22 - May 10 | Total: 108 calendar days