

Requirements Definition

Introduction and Context

The world is full of people that want to live their dreams in real life. Because of this, Dan's Auto Shop opened to give people that chance: he offers highly powerful, unique vehicles for rent. The selection includes the Batmobile, the motorcycle from Top Gun, Superman's cape, Mr. Incredible's car, and many other impressive vehicles.

Customers can see when vehicles are available for rent, load money into their account balances, and take vehicles out to rent. When they log into their account, they will see vehicles available and be able to rent them for a specific timeframe. If that is not available, the system will let them know. The customer also needs enough funds in their account to successfully rent a vehicle. A key feature of the shop is the offering of insurance on every vehicle, so that if the Batmobile breaks down, the shop employees can bill the customer.

This shop is run by a manager that receives money for vehicles rented, pays his employees, and is able to acquire new vehicles with funds as he receives them. The employee types are either the lot attendant or the auto retrieval specialist. They both have access to see vehicles and allow customers to check them out. The lot attendant offers insurance, and if no one pays, he load jacks their vehicle to break down.

By giving people the chance to rent these vehicles, Dan's Auto Shop will make millions of dollars each year as well as help people to live their fantasies.

Users and Their Goals

See the folder of use-case diagrams in the GitHub repository

Functional Requirements:

1. Vehicle Features (5+ options)
 - 1.1. Reservation system (reserve cars by the day)
 - 1.1.1. User selects the days they want to rent a car, then the list of available cars shows up
 - 1.1.2. Once a car is selected it is no longer available
 - 1.1.3. Only rent a car if it is available
 - 1.1.4. Money moves out of user accounts and into manager account
 - 1.2. Car always breaks down for everyone that does not pay insurance

- 1.2.1. Load jack button available for lot attendant, turn it on if they don't pay insurance
- 2. Manager Features (1+)
 - 2.1. Able to assign attributes to different people
 - 2.2. By default everyone is a customer
 - 2.3. Manager can upgrade people's access to other jobs
 - 2.4. Pay all employees
 - 2.4.1. Opt out for each employee
 - 2.5. Manager can purchase new vehicle (use a library of images to pick from)
 - 2.6. Manager pays the employees from the business wallet
- 3. Employee Features
 - 3.1. Employees register the amount of hours they work
 - 3.2. Employees get 15\$ per hour
 - 3.3. Auto retrieval specialist (1+)
 - 3.3.1. Know when to go get the car
 - 3.3.2. Where the car is (person types in their address)
 - 3.4. Lot attendant (1+)
 - 3.4.1. Check car out, check car back in
 - 3.4.2. Check gas tank
 - 3.4.3. Ask customers if they want the insurance (able to add)
 - 3.4.4. Load jack button is pushed for every car that does not have insurance
- 4. Customer Features
 - 4.1. Customer can buy insurance (50\$)
 - 4.2. Late fee is double
 - 4.2.1. Charged daily; double the daily fee.
 - 4.3. If car breaks down, you don't have to pay anything
 - 4.4. Cost 300\$ for car retrieval specialist
 - 4.5. Option to submit an ethics violation (says to better business bureau, but actually goes to company)
 - 4.6. Only rent a car if you are a member (own account)
 - 4.7. Account has money, email, phone, etc.
 - 4.8. Option to add money in with a text input

Non-functional Requirements:

- 1. Super Hero Cars (with pictures)
- 2. System will use a database
 - 2.1. Database stores passwords, usernames, account balance, name, email, phone number

- 2.2. Database stores available vehicles
- 2.3. Vehicle name, year, price, calendar, vehicle IDs
- 3. Git version control
- 4. Always have a deployable product(main)

Future Features:

This section contains a list of features that are beyond the scope of the project, but could be implemented in future versions.

- 1. You could implement both an ios app and an android app for customers convenience.
- 2. You could add a google maps type feature for the service worker to find the broken down lojacked car.
- 3. The system could email users a confirmation for their reservation.
- 4. Have a discount code system in place or promo codes applied to their rental fees.
- 5. Extremely entertaining YouTube ads to get more people to purchase
- 6. Implement a subscription as another layer to actually be able to rent vehicles

Glossary:

This section contains a list of important terms and their definitions.

Customer - a user that uses the system to rent cars that are available at the rental lot.

Lot Attendant - a user, either a Lot Owner or authorized by a Lot Owner, that checks Customers' validations when Customers arrive at rental service.

Manager - the user that purchases vehicles, pays employees and can upgrade users access to the system.

System - refers to the application that the project aims to build.

Auto retrieval specialist - employee who picks up a broken down rental car.

User - refers to any of the five types of users of the system (Customers, Auto Retrieval Specialist, Lot Attendants, Manager).