

## Business Rules

- 1) The automotive shop contains 3 types of customers: Steady, Premier, and Prospective.
- 2) The Steady customers are those who have signed up for generated E-Mail notifications to alert them when their automobile(s) are likely to be due for maintenance.
- 3) When a customer registers a vehicle, we ask the customer for an estimate of how many miles a year they expect to put on the vehicle.
- 4) Every time the vehicle is brought in for service, the mileage is noted and the yearly mileage is updated.
- 5) Each model and make of a specific vehicle has a set of pre-defined maintenance intervals.
- 6) Each of those maintenance intervals has a set of services that are called for at that time.
- 7) When a customer is due for maintenance, an E-Mail is sent to that customer.
- 8) The E-Mail includes the following items :
  - a. The date that the maintenance is due
  - b. The mileage in which the maintenance is due at
  - c. The expected amount of time the maintenance is to take
  - d. An estimate of what that maintenance will cost
- 9) The steady customers then reply to the E-Mail stating which days that would be willing to arrive.
- 10) Another E-Mail is sent for their confirmation.
- 11) Premier Customers pay an annual fee in monthly installments.
- 12) The amount of the fee is a function that includes the following:
  - a. The estimate of the number of miles that the customer will put on the vehicle each year
  - b. The model of the vehicle
  - c. The make of the vehicle
  - d. Assume that the vehicle will be serviced for 5 years or more
  - e. Calculate the maintenance intervals that will appear during those 5 years
- 13) The Premier customer will be charged extra if:
  - a. The customer does not bring their vehicle in to service within 2000 miles of the maintenance interval
  - b. The customer gets into an accident
- 14) The automotive shop does not provide premier coverage for any vehicle with over 100,000 miles on it.
- 15) Every vehicle a customer owns is on the same plan.
- 16) Each vehicle has one and only one owner.
- 17) A free oil change is provided to a steady customer if they refer us to someone who is currently not a customer.
- 18) \$50 is taken off a premier customer's monthly payment if they refer us to someone who is currently not a customer.
- 19) Keep track of every customer who made a referral.
- 20) Only one referral will be accepted from a prospective customer.
- 21) Specials are given out to first time customers on a periodic basis through

- a. An E-Mail
  - b. An automated phone call
- 22) If a prospective customer does not upgrade to Steady or Premier after the third contact, that customer is flagged as a dead prospect.
  - 23) A customer may be either a Private individual or a corporation.
  - 24) For a private individual, we only track one address.
  - 25) For a corporation, we may track several addresses with unique labels.
  - 26) Each corporate customer may have only one address of each label.
  - 27) Corporate customers are provided with free towing if necessary.
  - 28) Each time a customer comes for a service, a service technician creates a maintenance visit order.
  - 29) The order captures the maintenance items for the visit.
  - 30) A mechanic is assigned for each maintenance item in the visit.
  - 31) Individual skills are tracked for each mechanic for a better matching for each maintenance item.
  - 32) Each maintenance item requires one or more skills.
  - 33) It is possible for a mechanic to get assigned to a maintenance item in which they lack one or more necessary skills to perform that service.
  - 34) Each mechanic has the ability to mentor another mechanic in a skill.
  - 35) A formal record is created for the start of a mentorship.
  - 36) The end date is also recorded for a mentorship.
  - 37) A given mentor/mentee relationship could start and stop multiple times.
  - 38) Each service has a set of maintenance items in it.
  - 39) A maintenance package is composed of multiple maintenance items.
  - 40) A maintenance package does not include any other maintenance packages.
  - 41) A maintenance package is identified by the mileage, make, and model.
  - 42) Abstract maintenance packages exist such as a "Fall Package".
  - 43) A service may be a combination of maintenance packages and maintenance items.
  - 44) If a customer brings in multiple vehicles at the same time, a separate maintenance visit is created for each of the vehicles
  - 45) Steady customers receive loyalty points for every \$10 that is spent at the shop.
  - 46) The Steady customer may use those points to pay off for maintenance items.
  - 47) A customer does not earn loyalty points from spending loyalty points.
  - 48) At most 3 services may overlap for a mechanic at a given time.
  - 49) The parking lot has a limit to how many cars can be serviced at the same time.
  - 50) Packages/Items take a specific amount of time and therefore customers are limited to what services they can receive from what time they arrive to the shop
  - 51) Mechanic must know at least 3 Unique skills.
  - 52) Email Priority, if a customer has email than we contact them through that, if not, through phone number.
  - 53) Mechanics are on shifts.