Classes

**Active:** Term used to classify a type of Customer that is not a Prospective Customer.

**Appointment:** An Abstract idea that represents the agreement between a customer and a Technician to set a date and time for when the Customer will bring its vehicle to the shop.

**Customer**: Type of Corporation or Private Individual that owns and brings one or multiple cas for preventive maintenance services performed, by mechanics, in exchange for currency.

**Corporation**: Group of Persons that represent a group of customers but are treated as a single Customer with the exception that this type is allowed to have multiple addresses registered. This Group becomes a Customer when it first registers with the Auto Shop.

**Employee**: Individual that is employed by the company and is given a salary in exchange for his or her time and services performed on the company’s behalf.

**Free Month:** One month out of the twelve designated as a reward for a premier customer.

**Free Oil Change:** Type of oil change that is offered to a steady customer at no monetary charge.

**Steady Customer**: Status that represents a Customer whose vehicle, or vehicles, receive iteratively preventive maintenance. This type of customer exchanges emails with technicians in order to arrange a date for the preventive services to be performed in the vehicle. This type of customer receives rewards depending on the amount of money spent.

**Steady Customer Order Details:** Collection of details that refer to a specific Steady Customer and shows how many loyalty points were redeemed towards an Order, by said Steady Customer.

**Notification:** Action that describes an attempt of the company to communicate with a given Steady Customer.

**Premier Customer**: Status that represents a Customer who registers a vehicle with a special set of conditions. This Customer brings in the registered vehicles, at given intervals, in order to have preventive maintenance performed on them. Rewards to this Customer are offered depending on the driving habits and if vehicles are constantly brought in when required.

**Prospective Customer**: Status that represents a Customer that is referred by one and only one Premier or Steady type of Customer. A limited amount of offers, in the form of phone or email, are done to the subject. The status of this customer may change depending on its reaction to the offers.

**Referred Customer Instance**: Abstract proof that validates the referral of a Prospective Customer by one and only one Premier Customer.

**Special:** A package of services that are offered at a discounted price only to Prospective Customers.

**Special Details:** Description that explains what a given Special entails.

**Private Individual**: Type of Person that represents and is treated as a single Customer. This type of Person becomes a Customer when it first registers with the Auto Shop.

**Vehicle**: Physical object that is owned by a Customer. One or many mechanics will perform maintenance on this object at intervals determined by the maintenance plan on which its under.

**Mentoring**: The physical act of an experienced Mechanic advising and overseeing a more inexperienced Mechanic with the purpose of improving the quality of work of the inexperienced mechanic.

**Order**: Intangible object representing the exchange of money and car services made between the Customer and Technician.

**Maintenance Details**: Abstract object which lists the specifics of the components that make up and order Usually describes what will be done to the vehicle, in terms of preventive services.

**Maintenance Item**: Single item that appears on a Maintenance Order. Describes the features and attributes of an item being used in a maintenance service.

**Skills**: Set of specialized services that can be performed by a mechanic. These abilities are developed over time by performing the same service multiple times while also being under the mentorship of another mechanic who has already developed this trait.

**Skills\_Details:** Collection of ideas that describes a particular Skill.

**Technician**: Type of Employee that performs services in the reception desk which include but not limited to: registering a vehicle, assigning service dates to customers, and being aware of when an already registered vehicle will need maintenance.

**Mechanic**: Type of Employee that performs maintenance services on vehicles. This individual can often be specialized in one or many skills, and further develop their skills by being mentored my mechanics with a more advanced skill level than them.

**Maintenance Pack**: Abstract label assigned to a vehicle, which represents that type of maintenance a vehicle will receive.

**MaintenancePackDetails:** Group of descriptions the focus on the contents in a given Maintenance Pack.

**Maintenance Skill:** Type of skill that is used to perform service on a certain Maintenance Item.

**Manufacturer**: Company that produces vehicles. This company is responsible for assigning the given intervals based on the milage and type of vehicle.

**Interval:** Refers to the period of time at when a certain mileage is or will be reached.

**Oil Change:** A service performed on vehicles by mechanics with the purpose of preventing malfunction of the vehicle.

**Maintenance Details Oil Change:** Collection of descriptions depicting how and oil change was performed and what items were used in it.

**Mechanic With Specific Skill Doing Specific Maintenance Detail Item:**  Indicated a certain mechanic that possesses the necessary skills for performing a specific maintenance item on a service to a vehicle.

**Skill\_Details Maintenance Details:** Abstract collection of descriptions that shows proof that a certain skill can be used to perform a certain given maintenance item.

**Maintenance Skill Maintenance Details:** a type of skill that can be used to perform different maintenance items.

**Transactions:** Abstract idea representing the exchange of monetary service for preventive maintenance services on vehicles.

Associations

**Skills -> Mechanic**: A skill may be possessed by one or many Mechanics

**Mechanic -> Skills**: A mechanic may possess one to many skills.

**Mechanic -> Mentoring**: A mechanic can be mentored by one and only one, more experienced, mechanic.,

**Mentoring -> Mechanic**: A mechanic can mentor one and only one other mechanic at a given time.

**Mentoring -> Skill\_Details:** Mentoring can teach one to many skills.

**Skill\_Details -> Mentoring:** A skill is taught during one and only one mentoring period.

**Technician -> Order**: A Technician writes one or many orders.

**Orders -> Technician**: An order is written by one and only Technician.

**Mechanic -> Maintenance Details**: A mechanic is assigned to one to two orders, at a given time.

**Maintenance Details -> Mechanic**: An Order assigns one to many mechanics.

**Order -> Maintenance Details**: An order contains one to many Maintenance Details.

**Maintenance Details -> Orders**: A set of Maintenance Details is contained in one and only one Order.

**Maintenance Details -> Maintenance Item**: A Maintenance Detail describes one and only one Maintenance Item.

**Maintenance Item -> Maintenance Details**: A Maintenance Item is described by zero or many Maintenance Details.

**Maintenance Details -> Oil Change:** A maintenance detail may consist of one and only one oil change.

**Oil Change -> Maintenance Details:** An oil change forms one to many Maintenance Details.

**Maintenance Item -> Maintenance Pack:** A maintenance item is contained in one to many Maintenance Packs

**Skills -> Maintenance Item:** A skill is required in one to many Maintenance Items.

**Maintenance Item -> Skills:** Maintenance items require one to many skills.

**Maintenance Pack -> Maintenance Item:** A Maintenance Pack contains one to many Maintenance Items.

**Maintenance Skill -> Maintenance Details:** A maintenance skill may be require in zero to many maintenance Details.

**Maintenance Details -> Maintenance Skill:** A Maintenance Detail may require zero to many Maintenance Skills.

**Order -> Vehicle:** An Order contains one and only one Vehicle.

**Vehicle -> Order:** A vehicle is contained in one to many Orders.

**Customer -> Vehicle:** A Customer can own zero to many vehicles.

**Vehicle -> Customer:** A vehicle is owned by one and only one Customer.

**Vehicle -> Manufacturer:** A vehicle is made by one and only one manufacturer.

**Manufacturer -> Vehicle:** A manufacturer makes one to many vehicles.

**Customer -> Appointment:** A customer makes one to many appointments.

**Appointment -> Customer:** An Appointment is made one and only customer.

**Customer -> Corporation:** A customer may be classified as a Corporation.

**Customer -> Private Individual:** A customer may be classified as a Private individual

**Private Individual -> Customer:** A Private Individual is one and only one Customer.

**Corporation -> Customer:** A Corporation is one and only Customer.

**Special -> Special Details:** A Special contains one to many Special Details.

**Special Details -> Special:** may be contained in zero to three Specials

**Special Details -> Prospective Customer:** May be received by one and only one Prospective Customer.

**Notification -> Steady Customer:** A Notification is sent to one and only one Steady Customer.

**Steady Customer -> Notification:** A Steady Customer receives one to many Notifications.

**Steady Customer -> Free Oil Change:** A steady customer may generate one or many Free Oil Changes.

**Free Oil Change -> Steady Customer:** A Free Oil Change is generated by one and only one Steady Customer.

**Steady Customer -> Steady Customer Order Details:** A Steady Customer may have zero to many steady customer order details.

**Steady Customer Order Details -> Steady Customer:** A steady customer order details may be generated by one and only one steady customer.

**Prospective Customer - > Active:** A prospective customer is referred by one and only one Active.

**Active -> Prospective Customer:** An active can refer none to many Prospective Customers.

**Premier Customer -> Referred Customer Instance:** A premier customer generates zero to many referred customer instances.

**Referred Customer Instance -> Premier Customer:** A Referred Customer Instance is generated by one and only one Premier Customer

**Referred Customer Instance -> Transactions:** A referred customer instance deducts $50 from one and only one order.

**Transactions -> Referred Customer Instance:** An order gets $50 deducted from one and only one Referred Customer Instance.