

# Dave's Automotive

CECS 323 TERM PROJECT

ZHIPENG MEI, VIET LE, BRIAN LEE, YIXUAN LENG

## Class Descriptions

- **Customer:** a person or organization that buys goods or services from a store or business.
- **Corporation:** a company or group of people authorized to act as a single entity
- **Individual:** a single person that is distinct from a group, class, or family.
- **Steady:** a steady customer is a person who has signed up for generated E-mail **notifications** with Dave's Automotive.
- **Premier:** a premier customer is a person who pays an annual fee in monthly installments to receive planned preventative maintenance at Dave's Automotive.
- **Prospective:** a prospective customer is a person who may become a potential steady or premier customer in the future.
- **Referral:** a recommendation of new potential customers that includes their contact information.
- **Special:** a discount offer for first time customers to entice prospective customers.
- **SpecialInstance:** the occurrence of sending prospective customers special deals through E-mail or Phone.
- **Appointment:** an arrangement to meet someone at a particular time and place.
- **Notification:** an E-mail sent to steady customers to remind them when their automobiles are due for maintenance.
- **Vehicle:** a means of transportation on land, typically with four wheels and powered by an internal combustion engine.
- **Order:** a request made for (a) good(s) and/or (a) service(s)
- **OrderLine:** the lines of an order
- **RepairItems:** a list of parts that need to be fixed
- **RepairInstance:** the occurrence of repairing an item
- **MaintenancePack:** a maintenance item that consists of other maintenance items
- **Technician:** an employee that writes the maintenance order which assigns a mechanic to each of the maintenance items on the list
- **Mechanics:** an employee who is skilled in one particular job and can mentor another person who is involved with that same skillset
- **Employee:** a person who works at Dave's Automotive for wages or salary
- **Mentorship:** a program where a mechanic with a particular skill teaches a mechanic with the same skill
- **Skill:** something that can be learned by a mechanic and can be developed into a great understanding and mastery of what was learned
- **SkillRepair:** when a mechanic fixes a part that needs to be fixed
- **SkillMechanic:** something that a mechanic has learned and mastered

### **Class Associations:**

- A customer may be either steady, premier, or prospective.
- A steady, premier, or prospective is a customer.
- A customer is either an individual or a corporation.
- An individual or corporation is a customer.
- A prospective customer receives zero to many special.
- A special can be received by one to many prospective customers.
- A corporation has one to many addresses.
- An address represents one and only one corporation.
- A customer receives one to many special instance.
- A specialinstance is received by one and only one customer.
- A customer owns one to many vehicles.
- A vehicle is owned by one and only one customer.
- A special contains one to many special instance.
- A specialinstance is contained in one and only on special.
- A vehicle gets zero to many notifications.
- A notification is sent to one and only one vehicle.
- A prospective customer receives zero to many referrals.
- A referral is received by one and only one prospective customer.
- A vehicle is contained in one to many orders.
- An order contains one and only one vehicle.
- A premier customer gives zero to many referrals.
- A referral is given by one and only one premier customer.
- An order contains one and only one orderline.
- An orderline is contained by one and only one order.
- A steady customer gives zero to many referrals.
- A referral is given by one and only one steady customer.

- A repair items is contained in one to many orderline.
- An orderline contains one and only one repair item.
- A steady customer makes zero to many appointments.
- An appointment is made by one and only one steady customer.
- A maintenance package contains one to many repair items.
- A repair item is contained in one to many maintenance packages.
- A steady customer is sent one to many notifications.
- A notification is sent to one and only one steady customer.
- A maintenance package contains one to many repairInstances.
- A repairInstance is contained in one and only one maintenance package.
- A repair item contains one to many repairInstances.
- A repairInstance is contained in one and only one repair item.
- A mechanic earns one to many certifications.
- A certification is earned by one and only one mechanic.
- A repair item requires one to many skills.
- A skill is required to fix one to many repair items.
- A mechanic is assigned to one and many orderlines.
- An orderline assigns to one and only one mechanic.
- A repair item requires one to many skillrepair.
- A skillrepair is required to fix one and only one repair item.
- A mechanic mentors one to many mentorships.
- A mentorship is mentored by one and only mechanic.
- A skill requires one to many skillrepair.
- A skillrepair is required by one and only one skill.
- A mechanic acquires one to many skills.
- A skill can be acquired by one to many mechanics.
- An employee is either a technician, mechanic, or neither.
- A technician or mechanic is an employee.

- A mechanic acquires one to many skillmechanic.
- A skillmechanic can be acquired by one and only one mechanic.
- A technician writes one to many order.
- An order is written by one and only one technician.
- A skill acquires one to many skillmechanic.
- A skillmechanic can be acquired by one and only one skill.

