**Phase 1 Report**

CS 6400-Fall 2021

**Team 008**

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**Data types:**

|  |  |  |
| --- | --- | --- |
| **Attribute** | **Data type** | **Nullable** |
| Email | String | null |
| Phone | string | Not null |
| Street Address | String | Not null |
| City | String | Not null |
| State | String | Not null |
| Postal code | String | Not null |

**CUSTOMER**

**INDIVIDUAL CUSTOMER**

|  |  |  |
| --- | --- | --- |
| **Attribute** | **Data type** | **Nullable** |
| First name | String | Not null |
| Last name | String | Not null |
| Driver’s license number | Integer | Not null |

**BUSINESS**

|  |  |  |
| --- | --- | --- |
| **Attribute** | **Data type** | **Nullable** |
| TIN | Integer | Not null |
| Business name | String | Not null |
| Primary\_name | String | Not null |
| Primary\_title | String | Not null |

**SALES**

|  |  |  |
| --- | --- | --- |
| **Attribute** | **Data type** | **Nullable** |
| Sold\_Price | Float | Not null |
| Sold\_Date | Datetime | Not null |

**VEHICLE:**

|  |  |  |
| --- | --- | --- |
| **Attribute** | **Data Type** | **Nullable** |
| Year | Integer | Not Null |
| Model\_name | String | Not Null |
| Invoice\_price | Float | Not Null |
| VIN | String | Not Null |
| Color | List<Strings> | Not Null |
| Description | String | Null |

**MANUFACTURER:**

|  |  |  |
| --- | --- | --- |
| **Attribute** | **Data Type** | **Nullable** |
| Manufacturer\_name | String | Not Null |

**CAR:**

|  |  |  |
| --- | --- | --- |
| **Attribute** | **Data Type** | **Nullable** |
| Door\_count | Int | Not Null |

**CONVERTIBLE:**

|  |  |  |
| --- | --- | --- |
| **Attribute** | **Data Type** | **Nullable** |
| Roof\_type | String | Not Null |
| Back\_seat\_count | Int | Not Null |

**TRUCK:**

|  |  |  |
| --- | --- | --- |
| **Attribute** | **Data Type** | **Nullable** |
| Cargo\_capacity | Int | Not Null |
| Cargo\_cover\_type | String | Null |
| Axle\_count | Int | Not Null |

**Van/Mini Van:**

|  |  |  |
| --- | --- | --- |
| **Attribute** | **Data Type** | **Nullable** |
| Has\_driver\_back\_door | Boolean | Not Null |

**SUV:**

|  |  |  |
| --- | --- | --- |
| **Attribute** | **Data Type** | **Nullable** |
| Drivetrain\_type | String | Not Null |
| Cupholder\_count | Int | Not Null |

**Business Logic Constraints:**

**Ronald Around (Owner):**

Only Ronald Around (Owner) can enter sold prices that are less than or equal to 95% of the invoice price.

Only Ronald Around (Owner) can update the labor charges on a repair to a value less than their previous value.

**SALESPERSON AND SALES:**

If a sold price is less than or equal to 95% of the invoice price, the system will reject the sale.

Vehicles are bought by customers via a salesperson.

If buyer purchase several vehicles at the same time, they would still be handled as

separate sales transactions.

The purchase date should be tracked to determine when a vehicle

leaves inventory.

**Vehicles**:

The model name and model year are entered by the user in free form.

Model years cannot exceed the current year plus one.

Year entered must include century digits.

A description field can be free form of multiple pieces of additional information

Invoice price must include dollars and cents. On the client side, two separate boxes (dollars and cents) may enforce both values to be entered.

**Service Writers and Repairs:**

Only one repair can be open (null completion date) at a time.

Any updates on labor charges cannot be less than their previous values unless updated by owner.

Once created, only labor charges and parts can be changed, or the repair marked complete.