

CIS 305 Group Project

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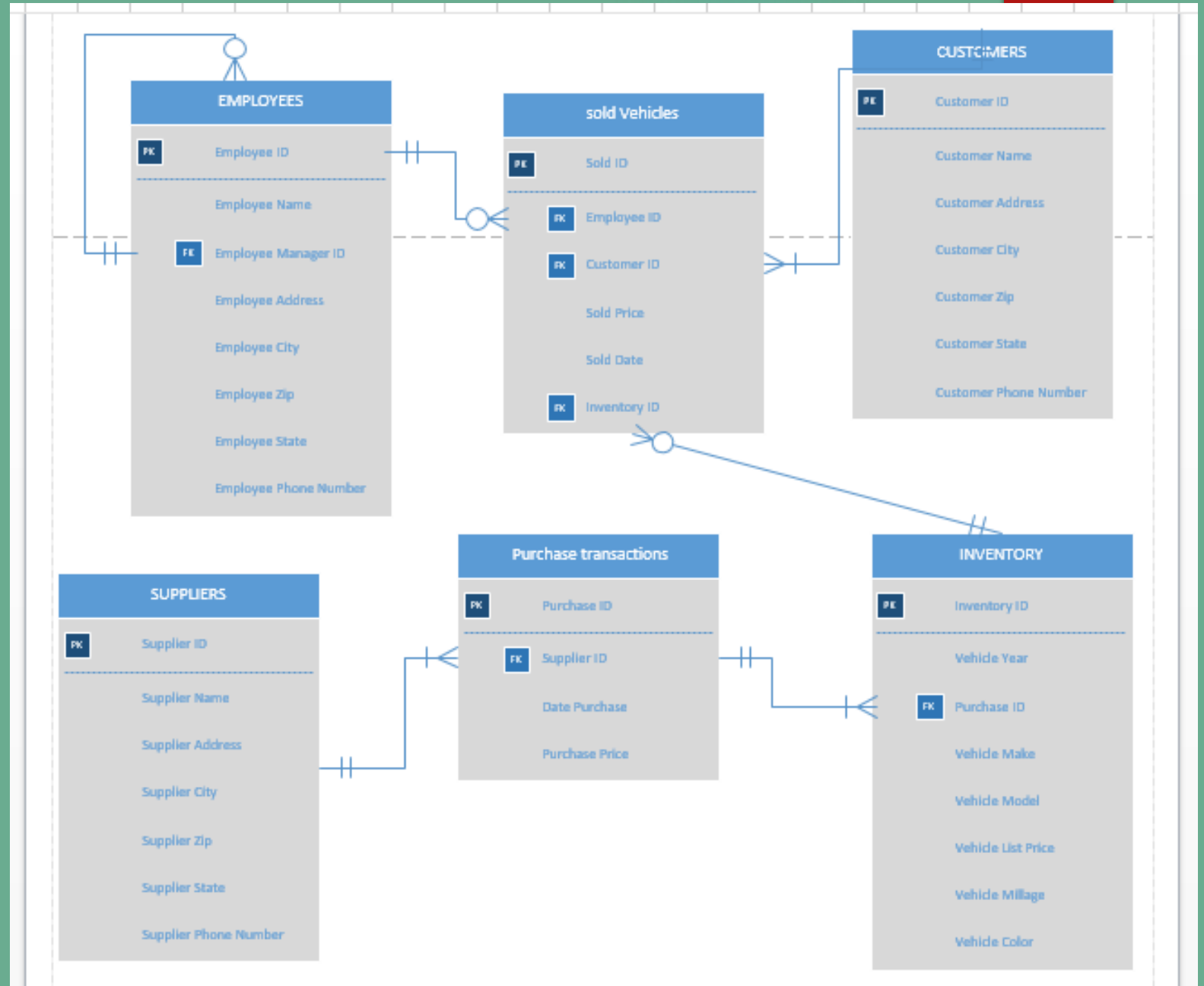
Description

- Database is for a used car dealership
- Dealership buys used cars from auction houses to resell for profit

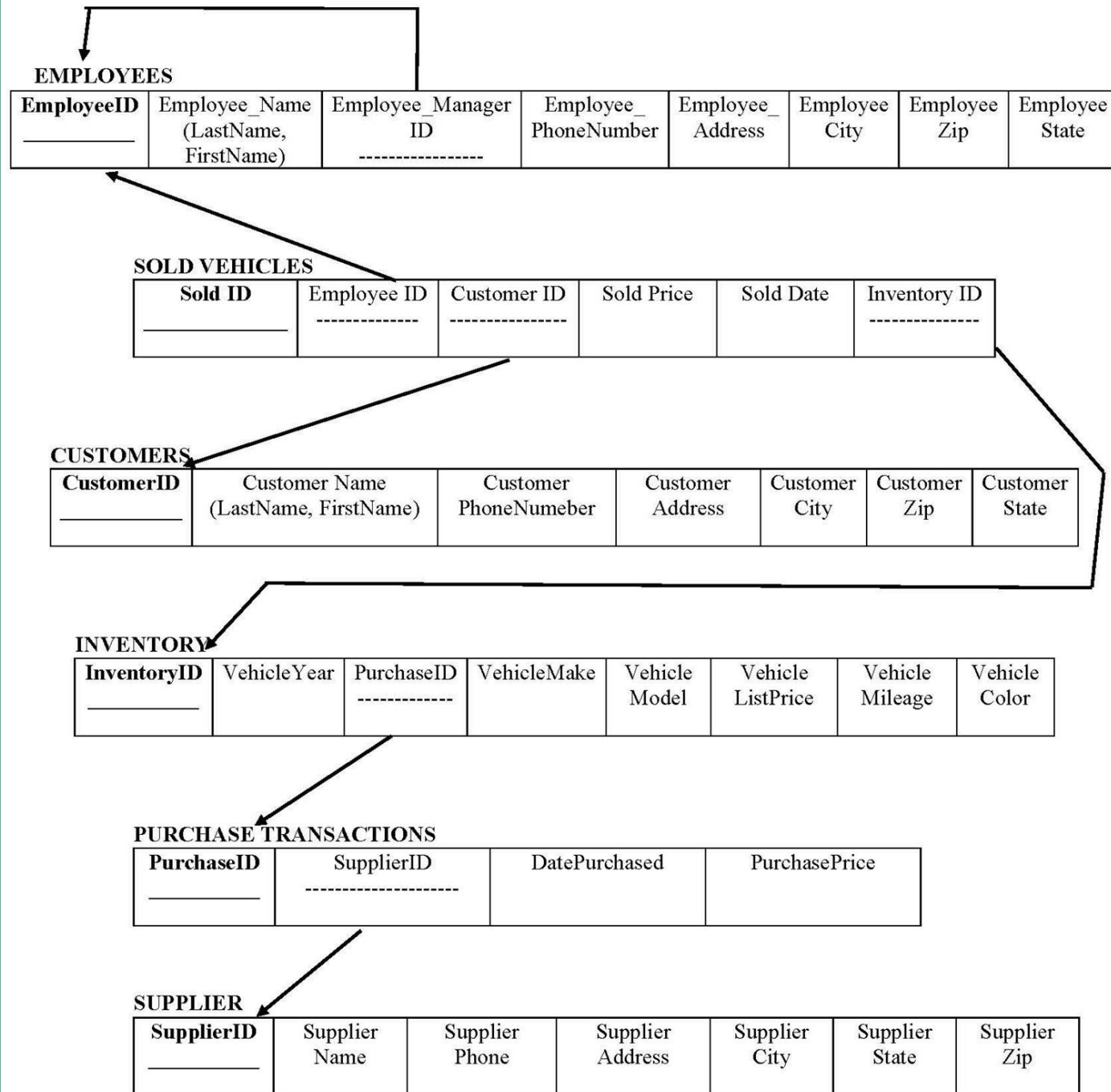
Problems

- The manager wants to know the following information about the business:
 - The profit by the make of each vehicle to know what cars to buy at auction.
 - The average amount of days that cars stay on the lot.
 - The numbers of cars each employee sold so the manager knows who to give bonuses to.
 - Which suppliers the manager has purchased three or more cars from so he knows which auction houses to focus on.
 - The name and phone number of each customer as well as the make, model, and year of the vehicle each person bought. So the manager can call and thank each customer.
 - The cars that are currently available for sale.

E-R Diagram



Relational Schema



SQL Queries

Query 1: Available Cars for Sale

```
Select * from Inventory  
Where Not Exists (Select Null from SoldVehicles Where SoldVehicles.InventoryID = Inventory.InventoryID)
```

	InventoryID	VehicleMake	Vehiclemodel	vehicleyear	VehicleMillage	VehicleColor	Vehiclelistprice	PurchaseID
1	14	Lexus	IS 250	2006	47532	white	17500.00	10014
2	17	Hyundai	Genesis	2006	41436	silver	26250.00	10017
3	18	Jeep	Cherokee	2002	67548	white	11250.00	10018
4	19	Dodge	Charger	2013	22432	black	19500.00	10019
5	20	Dodge	Chalenger	2009	37547	white	17250.00	10020

SQL Queries

Query 2: Profit by Make of Vehicle

	VehicleMake	Number of Cars	Profit
1	Toyota	2	3468
2	Honda	2	2516
3	Hyundai	2	2349
4	Ford	2	1924
5	Lincoln	1	1770
6	Nissan	1	1249
7	Infiniti	1	570
8	BMW	1	460
9	Kia	1	10
10	VolksWagen	2	-1695

```
Select I.VehicleMake , Count(I.VehicleMake) as 'Number of Cars', Sum(SV.SoldPrice - PT.Purchaseprice) as Profit
from dbo.PurchaseTransactions as PT, dbo.SoldVehicles as SV, dbo.Inventory as I
Where I.PurchaseID = PT.PurchaseID and
I.InventoryID= SV.InventoryID
Group By I.VehicleMake
Order by Profit Desc
```

SQL Queries

Query 3: Purchases From Suppliers 3+

	SupplierName	Purchases
1	Chino Auction House	5
2	Fontana Auction House	4
3	Irvine Auction House	3
4	Pomona Auction House	3

```
[-] Select S.SupplierName, Count(PT.SupplierID) as 'Purchases'
    from Suppliers as S, PurchaseTransactions as PT
    Where S.SupplierID= PT.SupplierID
    Group by S.SupplierName
    Having Count(PT.SupplierID) > 2
```


SQL Queries

Query 4 - Customer Information

```
Select Customername, CustomerPhoneNumber, Vehiclemake, Vehiclemodel, Vehicleyear, '$' + CAST(soldprice AS VARCHAR(15)) Soldprice
from Customers c, inventory i, soldvehicles s
where c.customerid = s.customerid and s.inventoryid= i.inventoryid
```

	Customername	CustomerPhoneNumber	Vehiclemake	Vehiclemodel	Vehicleyear	Soldprice
1	Lance Morton	415-542-0400	Honda	Civic	2012	\$12900
2	James Cooper	828-282-7700	Honda	Accord	2011	\$14500
3	Edgar Bowen	856-286-8474	Hyundai	Sonata	2010	\$13500
4	Edgar Bowen	856-286-8474	Toyota	Camry	2014	\$22150
5	Carroll Cote	937-344-3965	Ford	Focus	2009	\$7499
6	Eric Wright	610-796-4774	Toyota	Corola	2008	\$13000
7	Sharon Thibeault	773-407-1310	Kia	Optima	2012	\$12999
8	Edward Pugh	303-806-1008	Nissan	Maxima	2010	\$14999
9	Savanna Glines	218-586-5525	Ford	Escape	2012	\$15249
10	Teresa Cline	744-655-6986	Lincoln	Navigator	2004	\$27000
11	Greg Everson	212-325-3679	Infiniti	Q50	2009	\$16000
12	Poly Sanders	832-767-0075	Hyundai	Elantra	2012	\$13420
13	James Cooper	828-282-7700	VolksWagen	Jetta	2013	\$10000
14	Edgar Bowen	856-286-8474	VolksWagen	Passat	2011	\$10100
15	Edward Pugh	303-806-1008	BMW	i3	2006	\$22000

SQL Queries

Query 5: Number of Vehicles Sold by Each Employee

```
Select E.EmployeeName, Count(SV.EmployeeID) as 'Vehicles Sold'  
From Employees as E, SoldVehicles as SV  
Where E.EmployeeID = SV.EmployeeID  
Group by E.EmployeeName  
Order by 'Vehicles Sold' DESC
```

	EmployeeName	Vehicles Sold
1	Joseph South	3
2	Lawerence Lee	2
3	David Matthews	2
4	Parish Connell	2
5	Vince Hernandez	1
6	Jade Lalonde	1
7	Beth Thomas	1
8	Cylde Lopez	1
9	Linda Holt	1
10	Melvin Downing	1

SQL Queries

Query 6- Average Days On Lot

```
Select AVG(DATEDIFF(day,PT.DatePurchased, SV.SoldDate)) as 'Average Days on Lot'  
from dbo.PurchaseTransactions as PT, dbo.SoldVehicles as SV, dbo.Inventory as I  
Where I.PurchaseID = PT.PurchaseID and  
I.InventoryID= SV.InventoryID
```

	Average Days on Lot
1	38