Question 1: Write statements for creating the four tables & insert data into each table as shown in the above.

```
create schema if not exists comprehensive;

CREATE TABLE Customer (
                    CustomerID int not NULL,
                    CustomerFirstName varchar(255),
                    CustomerLastName varchar(255),
                    CustomerPhone varchar(20),
                    AnnualIncome float,
                    CreditRating int,
                    CONSTRAINT customer PRIMARY KEY (CustomerID));

CREATE TABLE SalesPerson (
                    SalesID int not NULL,
                    SalesFirstName varchar(255),
                    SalesLastName varchar(255),
                    SalesHireDate date,
                    SalesSalary float,
                    CONSTRAINT SalesPerson PRIMARY KEY (SalesID));

CREATE TABLE Encounter (
                    EncID char(3)  not NULL,
                    SalesPersonID int,
                    CustomerID int ,
                    EncDate date,
                    Purchase char(3),
                    CONSTRAINT Encounter PRIMARY KEY (EncID),
                    CONSTRAINT customer FOREIGN KEY (CustomerID)
                    REFERENCES Customer(CustomerID),
                    CONSTRAINT SalesPerson FOREIGN KEY (SalesPersonID)
                    REFERENCES SalesPerson(SalesID));

CREATE TABLE CreditRating (
                    CreditID int not NULL,
                    CreditDescription varchar(255),
                    MinFICO varchar(255),
                    MaxFICO varchar(255),
                    Comments varchar(255),
                    CONSTRAINT CreditRating PRIMARY KEY (CreditID));


Insert Customer (customerID, CustomerFirstName,  CustomerLastName, CustomerPhone, AnnualIncome, creditRating) values
(1, "Clark", "Adams", 8017686043, 64250.00, 1);
INSERT INTO `customer` (`CustomerID`, `CustomerFirstName`, `CustomerLastName`, `CustomerPhone`, `AnnualIncome`,
`CreditRating`) VALUES ('10', 'Hans', 'Joner', '8017638922', '38125.00', '6');
INSERT INTO `customer` (`CustomerID`, `CustomerFirstName`, `CustomerLastName`, `CustomerPhone`, `AnnualIncome`,
`CreditRating`) VALUES ('11', 'Carl', 'Hughes', '8013733284', '115626.00', '5');
INSERT INTO `customer` (`CustomerID`, `CustomerFirstName`, `CustomerLastName`, `CustomerPhone`, `AnnualIncome`,
`CreditRating`) VALUES ('12', 'Simon', 'Prescott', '8011371976', '63625.00', '6');
INSERT INTO `customer` (`CustomerID`, `CustomerFirstName`, `CustomerLastName`, `CustomerPhone`, `AnnualIncome`,
`CreditRating`) VALUES ('2', 'Pablo', 'Martinez', '8013731976', '61875.00', '2');
INSERT INTO `customer` (`CustomerID`, `CustomerFirstName`, `CustomerLastName`, `CustomerPhone`, `AnnualIncome`,
`CreditRating`) VALUES ('3', 'Susana', 'Miner', '8017631882', '120250.00', '4');
INSERT INTO `customer` (`CustomerID`, `CustomerFirstName`, `CustomerLastName`, `CustomerPhone`, `AnnualIncome`,
`CreditRating`) VALUES ('4', 'Femi', 'Silva', '8013731465', '24250.00', '5');
```

INSERT INTO `customer` (`CustomerID`, `CustomerFirstName`, `CustomerLastName`, `CustomerPhone`, `AnnualIncome`, `CreditRating`) VALUES ('5', 'Lola', 'McCloud', '8013746692', '91375.00', '6');
INSERT INTO `customer` (`CustomerID`, `CustomerFirstName`, `CustomerLastName`, `CustomerPhone`, `AnnualIncome`, `CreditRating`) VALUES ('6', 'Maggy', 'Redmond', '8017667251', '46375.00', '6');
INSERT INTO `customer` (`CustomerID`, `CustomerFirstName`, `CustomerLastName`, `CustomerPhone`, `AnnualIncome`, `CreditRating`) VALUES ('7', 'Lilie', 'Kimball', '8017855151', '52250.00', '3');
INSERT INTO `customer` (`CustomerID`, `CustomerFirstName`, `CustomerLastName`, `CustomerPhone`, `AnnualIncome`, `CreditRating`) VALUES ('8', 'Okon', 'Okur', '8013561024', '29250.00', '4');
INSERT INTO `customer` (`CustomerID`, `CustomerFirstName`, `CustomerLastName`, `CustomerPhone`, `AnnualIncome`, `CreditRating`) VALUES ('9', 'Eric', 'Knudsen', '8013561024', '40875.00', '7');

Insert Salesperson (SalesID, SalesFirstName, SalesLastName, SalesHireDate, SalesSalary) values (1, "Lewis", "Peoples", "1989-02-13", "140000.00");
INSERT INTO `salesperson` (`SalesID`, `SalesFirstName`, `SalesLastName`, `SalesHireDate`, `SalesSalary`) VALUES ('2', 'Richard', 'Martin', '1989-05-02', '82000');
INSERT INTO `salesperson` (`SalesID`, `SalesFirstName`, `SalesLastName`, `SalesHireDate`, `SalesSalary`) VALUES ('3', 'Juan', 'Rodriguez', '1989-05-02', '93000');
INSERT INTO `salesperson` (`SalesID`, `SalesFirstName`, `SalesLastName`, `SalesHireDate`, `SalesSalary`) VALUES ('4', 'Rachel', 'Scholls', '1989-04-27', '56000');
INSERT INTO `salesperson` (`SalesID`, `SalesFirstName`, `SalesLastName`, `SalesHireDate`, `SalesSalary`) VALUES ('5', 'Jesse', 'Lukes', '1996-05-15', '67000');
INSERT INTO `salesperson` (`SalesID`, `SalesFirstName`, `SalesLastName`, `SalesHireDate`, `SalesSalary`) VALUES ('6', 'Maggy', 'Adelman', '2001-06-01', '75000');

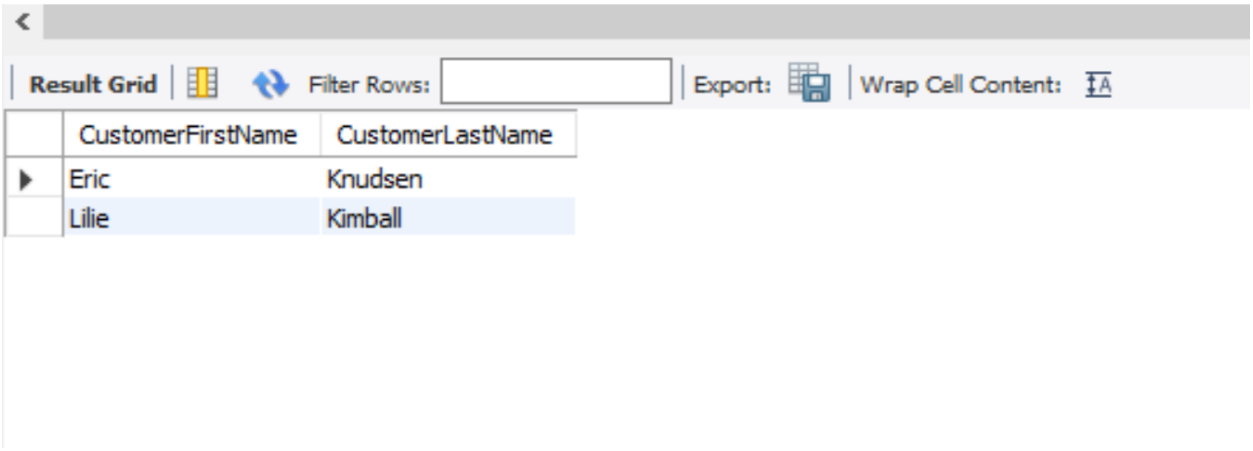
INSERT INTO `encounter` (`EncID`, `SalesPersonID`, `CustomerID`, `EncDate`, `Purchase`) VALUES ('001', '1', '2', '2019-07-01', 'Yes');
INSERT INTO `encounter` (`EncID`, `SalesPersonID`, `CustomerID`, `EncDate`, `Purchase`) VALUES ('002', '1', '4', '2019-07-16', 'Yes');
INSERT INTO `encounter` (`EncID`, `SalesPersonID`, `CustomerID`, `EncDate`, `Purchase`) VALUES ('003', '2', '5', '2019-08-01', 'Yes');
INSERT INTO `encounter` (`EncID`, `SalesPersonID`, `CustomerID`, `EncDate`, `Purchase`) VALUES ('004', '2', '9', '2019-08-12', 'Yes');
INSERT INTO `encounter` (`EncID`, `SalesPersonID`, `CustomerID`, `EncDate`, `Purchase`) VALUES ('005', '3', '1', '2019-08-13', 'No');
INSERT INTO `encounter` (`EncID`, `SalesPersonID`, `CustomerID`, `EncDate`, `Purchase`) VALUES ('006', '3', '12', '2019-08-19', 'Yes');
INSERT INTO `encounter` (`EncID`, `SalesPersonID`, `CustomerID`, `EncDate`, `Purchase`) VALUES ('007', '3', '11', '2019-09-02', 'Yes');
INSERT INTO `encounter` (`EncID`, `SalesPersonID`, `CustomerID`, `EncDate`, `Purchase`) VALUES ('008', '4', '10', '2019-09-03', 'No');
INSERT INTO `encounter` (`EncID`, `SalesPersonID`, `CustomerID`, `EncDate`, `Purchase`) VALUES ('009', '5', '6', '2019-10-06', 'Yes');
INSERT INTO `encounter` (`EncID`, `SalesPersonID`, `CustomerID`, `EncDate`, `Purchase`) VALUES ('010', '6', '8', '2019-10-18', 'Yes');
INSERT INTO `encounter` (`EncID`, `SalesPersonID`, `CustomerID`, `EncDate`, `Purchase`) VALUES ('011', '6', '3', '2019-07-02', 'Yes');
INSERT INTO `encounter` (`EncID`, `SalesPersonID`, `CustomerID`, `EncDate`, `Purchase`) VALUES ('012', '6', '7', '2019-07-02', 'Yes');

Insert CreditRating (CreditID, CreditDescription, MinFICO, MaxFICO, Comments) values ("1", "Extremely Poor", "300", "499", "Cannot extend credit");
INSERT INTO `creditrating` (`CreditID`, `CreditDescription`, `MinFICO`, `MaxFICO`, `Comments`) VALUES ('2', 'Very Poor', '500', '580', 'Owner approval required to extend credit');
INSERT INTO `creditrating` (`CreditID`, `CreditDescription`, `MinFICO`, `MaxFICO`, `Comments`) VALUES ('3', 'Poor', '580', '619', 'Credit extended at extremely high interest rates');
INSERT INTO `creditrating` (`CreditID`, `CreditDescription`, `MinFICO`, `MaxFICO`, `Comments`) VALUES ('4', 'Fair', '620', '679', 'Credit extended at high interest rates');

```
INSERT INTO `creditrating` (`CreditID`, `CreditDescription`, `MinFICO`, `MaxFICO`, `Comments`) VALUES ('5', 'Good', '680', '699', 'Credit extended at normal interest rates');
INSERT INTO `creditrating` (`CreditID`, `CreditDescription`, `MinFICO`, `MaxFICO`, `Comments`) VALUES ('6', 'Very Good', '700', '850', 'Credit extended at low interest rates');
INSERT INTO `creditrating` (`CreditID`, `CreditDescription`, `MinFICO`, `MaxFICO`,`Comments`) VALUES ('7', 'Unknown', 'NULL ', 'NULL ', 'Paid cash without looking into financing options');
```

Question 2: Write a query to show a list of customers whose last name begins with the letter "K". Show the first and last names of these customers. Sort the list of customers descending by last name.

```
SELECT CustomerFirstName, CustomerLastName
FROM comprehensive.customer
where CustomerLastName like 'K%'
order by CustomerLastName Desc;
```

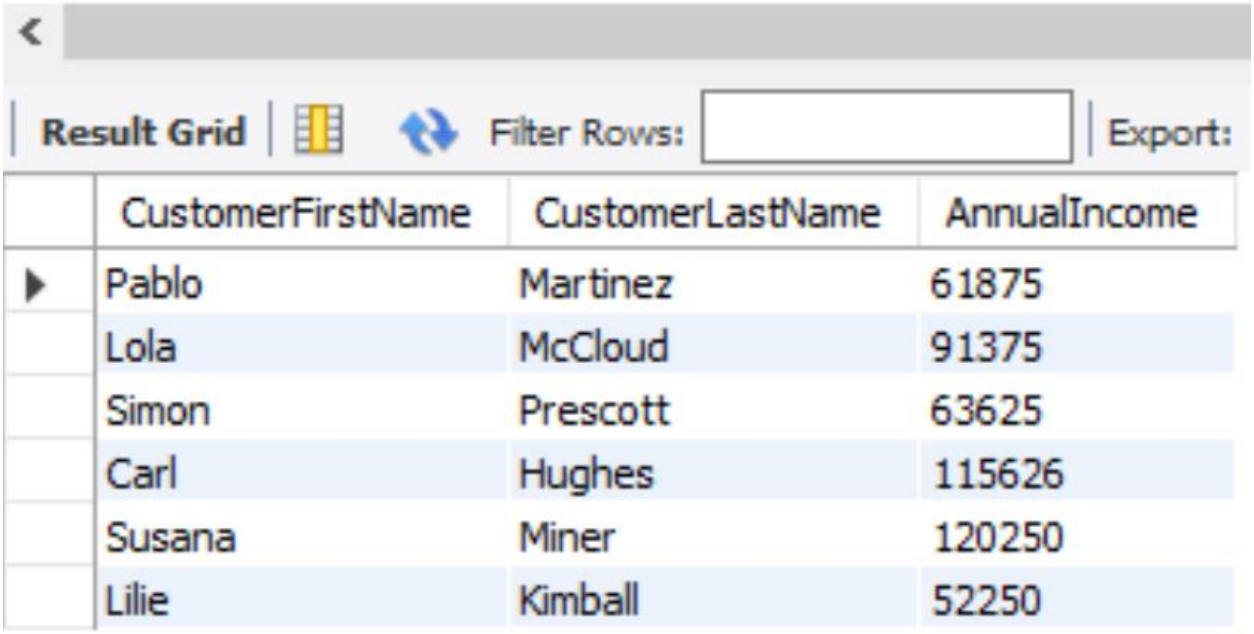


CustomerFirstName	CustomerLastName
Eric	Knudsen
Lilie	Kimball

Question 3: Write a query to generate a list of customers with annual incomes greater than $50,000 that purchased a car.

Show the first name, last name, and annual income for each of these customers. (HINT: Purchase will have a value of "Yes")

```
select CompExam.CustomerFirstName, CompExam.CustomerLastName, CompExam.AnnualIncome from customer CompExam
Join Encounter FinalExam on CompExam.customerid = FinalExam.customerid and AnnualIncome > 50000 and FinalExam.purchase ='Yes';
```

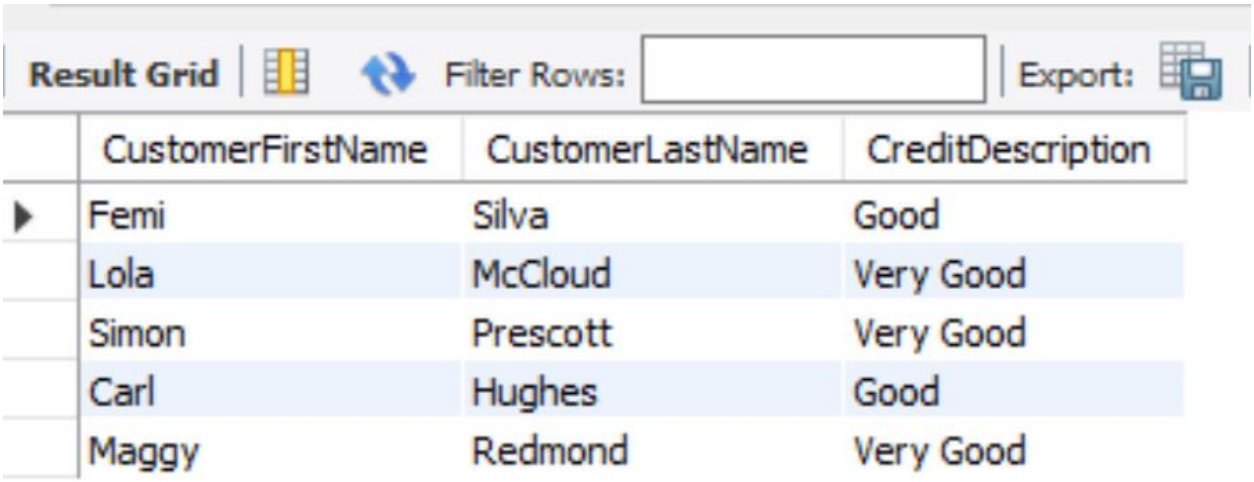


Result Grid | Filter Rows: | Export:

	CustomerFirstName	CustomerLastName	AnnualIncome
▶	Pablo	Martinez	61875
	Lola	McCloud	91375
	Simon	Prescott	63625
	Carl	Hughes	115626
	Susana	Miner	120250
	Lilie	Kimball	52250

Question 4: Write a query to find which customers purchased vehicles despite having a “Good” or “Very Good” credit description? Show the "first name, last name, and credit description for these customers.

```
select CustomerFirstName, CustomerLastName, cis.CreditDescription from customer CompExam
Join Encounter FinalExam on CompExam.customerid = FinalExam.customerid
join CreditRating cis on CompExam.creditrating = cis.creditID
and cis.CreditDescription
in ('Good', 'Very Good')
and FinalExam.purchase ='Yes';
```

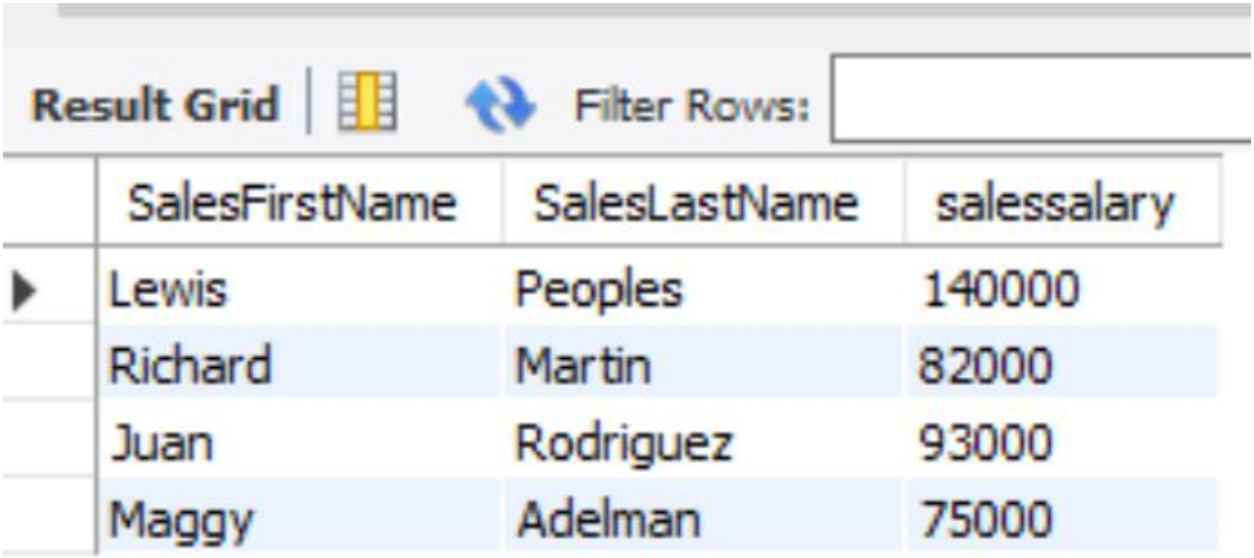


Result Grid | Filter Rows: | Export:

	CustomerFirstName	CustomerLastName	CreditDescription
▶	Femi	Silva	Good
	Lola	McCloud	Very Good
	Simon	Prescott	Very Good
	Carl	Hughes	Good
	Maggy	Redmond	Very Good

Question 5: Write a query that list salespeople's first name, last name, and salary for salespeople who have 2 or more customers.

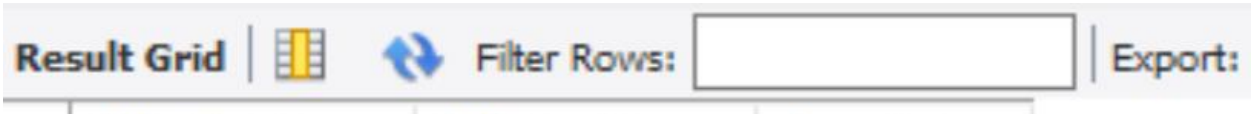
```
select CompExam.SalesFirstName, CompExam.SalesLastName, CompExam.salessalary
from salesperson CompExam
Join Encounter FinalExam
on CompExam.salesid = FinalExam.salespersonid
group by (FinalExam.salespersonid)
having count(FinalExam.customerid) >=2;
```



	SalesFirstName	SalesLastName	salessalary
▶	Lewis	Peoples	140000
	Richard	Martin	82000
	Juan	Rodriguez	93000
	Maggy	Adelman	75000

Question 6: Write a query to computer a commission (5% of salary) and show this calculated field as Commission for salespeople who sold 3 or more cars. Also display salespeople's first name and last name. Sort the list ascending by salespeople' last name.

```
select CompExam.SalesFirstName, CompExam.SalesLastName, CompExam.salessalary * .05
as Commission from salesperson CompExam
Join Encounter FinalExam on CompExam.salesid = FinalExam.salespersonid
and FinalExam.purchase ='Yes'
group by FinalExam.salespersonid
having count(FinalExam.customerid) >=3
order by CompExam.SalesLastName;
```

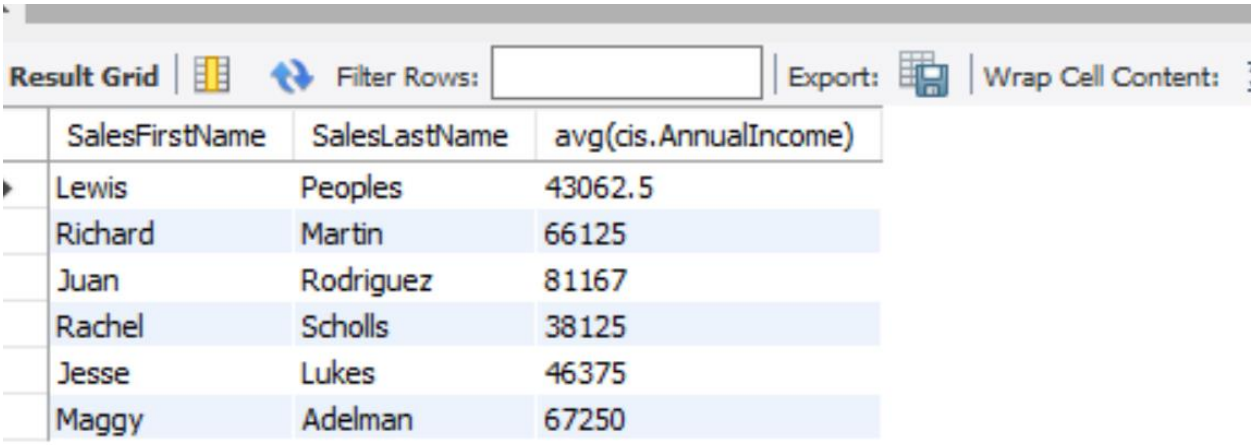


	SalesFirstName	SalesLastName	Commission
▶	Maggy	Adelman	3750

Question 7: Construct a query to show the salespeople's first name and the average annual income of their customers as

"Average Income" in your result. (HINT: You do not need to include a criterion for Purchase in this query).

```
select ComExam.SalesFirstName, ComExam.SalesLastName,
avg(cis.AnnualIncome) from salesperson ComExam
Join Encounter FinalExam on ComExam.salesid = FinalExam.salespersonid
join customer cis  on FinalExam.customerid = cis.customerid
group by (FinalExam.salespersonid);
```



SalesFirstName	SalesLastName	avg(cis.AnnualIncome)
Lewis	Peoples	43062.5
Richard	Martin	66125
Juan	Rodriguez	81167
Rachel	Scholls	38125
Jesse	Lukes	46375
Maggy	Adelman	67250