Lab-4

Write all create table statements and all insert values statements here.

```
create table Product (
   ProductNumber int NOT NULL,
   ProductName varchar2(50) NOT NULL,
   UnitPrice int NOT NULL,
   PRIMARY KEY (ProductNumber)
);
create table Office (
   OfficeNumber int NOT NULL,
   Telephone int NOT NULL,
   O_Size int NOT NULL,
   PRIMARY KEY (OfficeNumber)
);
create table Sales_Person (
   SalesPersonNumber int NOT NULL,
   SalesPersonName varchar2(50) NOT NULL,
   CommPercentage int NOT NULL,
   YearHire int NOT NULL,
   OfficeNumber int NOT NULL,
   PRIMARY KEY (SalesPersonNumber),
   FOREIGN KEY (OfficeNumber) REFERENCES Office(OfficeNumber)
);
create table Customer (
   CustomerNumber int NOT NULL,
   CustomerName varchar2(50) NOT NULL,
   SalesPersonNumber int NOT NULL,
   HeadQuarterCity varchar2(50) NOT NULL,
   PRIMARY KEY (CustomerNumber),
   FOREIGN KEY (SalesPersonNumber) REFERENCES Sales_Person(SalesPersonNumber)
```

```
);
create table Customer_Employee (
    CustomerNumber int NOT NULL,
    EmployeeNumber int NOT NULL,
    EmployeeName varchar2(50) NOT NULL,
    Title varchar2(50) NOT NULL,
    PRIMARY KEY (CustomerNumber,EmployeeNumber),
    FOREIGN KEY (CustomerNumber) REFERENCES Customer(CustomerNumber)
);
create table Sales (
    SalesPersonNumber int NOT NULL,
    ProductNumber int NOT NULL,
    Quantity int NOT NULL,
    PRIMARY KEY (SalesPersonNumber,ProductNumber),
    FOREIGN KEY (SalesPersonNumber) REFERENCES
Sales_Person(SalesPersonNumber),
    FOREIGN KEY (ProductNumber) REFERENCES Product(ProductNumber)
);
insert into Product values (21765,'Fuels',10000);
insert into Product values (21520,'Grains',1000);
insert into Product values (15175,'Oils',5000);
insert into Office values (375,1234567890,150);
insert into Office values (185,0123456789,170);
insert into Office values (225,0987654321,165);
insert into Sales_Person values (186,'Adams',10,2018,375);
insert into Sales_Person values (137,'Sam',11,2017,185);
insert into Sales_Person values (213,'John',8,2019,225);
insert into Customer values (1525,'Arthur',186,'NewYork');
insert into Customer values (1825,'Dutch',137,'London');
insert into Customer values (1325,'Hosea',213,'Atlanta');
insert into Customer_Employee values (1525,435,'Jim','President');
```

```
insert into Customer_Employee values (1825,135,'Ross','Vice President');
insert into Customer_Employee values (1325,735,'Milton','Manager');
insert into Sales values (186,21765,5175);
insert into Sales values (137,21520,7175);
insert into Sales values (213,15175,3175);
select * from Product;
select * from Office;
select * from Sales_Person;
select * from Customer;
select * from Customer_Employee;
select * from Sales;
```

Output:

PRODUCTNUMBER	PRODUCTNAME	UNITPRICE
21765	Fuels	10000
21520	Grains	1000
15175	Oils	5000

Download CSV
3 rows selected.

OFFICENUMBER	TELEPHONE	O_SIZE
375	1234567890	150
185	123456789	170
225	987654321	165

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3 rows selected.

SALESPERSONNUMBER	SALESPERSONNAME	COMMPERCENTAGE	YEARHIRE	OFFICENUMBER
186	Adams	10	2018	375
137	Sam	11	2017	185
213	John	8	2019	225

Download CSV
3 rows selected.

CUSTOMERNUMBER	CUSTOMERNAME	SALESPERSONNUMBER	HEADQUARTERCITY
1525	Arthur	186	NewYork
1825	Dutch	137	London
1325	Hosea	213	Atlanta

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3 rows selected.

CUSTOMERNUMBER	EMPLOYEENUMBER	EMPLOYEENAME	TITLE
1525	435	Jim	President
1825	135	Ross	Vice President
1325	735	Milton	Manager

Download CSV
3 rows selected.

SALESPERSONNUMBER	PRODUCTNUMBER	QUANTITY
186	21765	5175
137	21520	7175
213	15175	3175

Download CSV
3 rows selected.

1. Find the commission percentage and year of hire of salesperson number 186.

```
select CommPercentage, YearHire

from Sales_Person

where SalesPersonNumber=186
```

Output:

COMMPERCENTAGE	YEARHIRE
10	2018

Download CSV

2. List the salesperson numbers and salesperson names of those salespersons who have a commission percentage of 10.

```
select SalesPersonNumber, SalesPersonName

from Sales_Person

where CommPercentage=10
```

Output:

SALESPERSONNUMBER	SALESPERSONNAME
186	Adams

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3. List the salesperson number and salesperson name of all the salespersons.

```
select SalesPersonNumber, SalesPersonName

from Sales_Person
```

Output:

SALESPERSONNUMBER	SALESPERSONNAME
186	Adams
137	Sam
213	John

Download CSV

3 rows selected.

4. List the salesperson numbers, salesperson names, and commission percentages of the salespersons whose commission percentage is less than 12.

```
select SalesPersonNumber, SalesPersonName,  CommPercentage

from Sales_Person

where  CommPercentage<12
```

Output:

SALESPERSONNUMBER	SALESPERSONNAME	COMMPERCENTAGE
186	Adams	10
137	Sam	11
213	John	8

Download CSV

3 rows selected.

5. List the customer numbers and headquarters cities of the customers that have a customer number of at least 1700.

```
select CustomerNumber, HeadQuarterCity
from Customer
where  CustomerNumber>=1700
```

Output:

CUSTOMERNUMBER	HEADQUARTERCITY
1825	London

Download CSV

6. List the customer numbers, customer names, and headquarters cities of the customers that are headquartered in New York and that have a customer number higher than 1500.

```
select CustomerNumber, HeadQuarterCity, CustomerName
from Customer
where  HeadQuarterCity='NewYork' AND CustomerNumber>1500
```

Output:

CUSTOMERNUMBER	HEADQUARTERCITY	CUSTOMERNAME
1525	NewYork	Arthur

Download CSV

7. List the customer numbers, customer names, and headquarters cities of the customers that are headquartered in New York or that have a customer number higher than 1500.

```
select CustomerNumber, HeadQuarterCity, CustomerName
from Customer
where  HeadQuarterCity='NewYork' OR CustomerNumber>1500
```

Output:

CUSTOMERNUMBER	HEADQUARTERCITY	CUSTOMERNAME
1525	NewYork	Arthur
1825	London	Dutch

Download CSV

2 rows selected.

8. List the customer numbers, customer names, and headquarters cities of the customers that are headquartered in New York or that satisfy the two conditions of having a customer number higher than 1500 and being headquartered in Atlanta.

select CustomerNumber, HeadQuarterCity, CustomerName

from Customer

where HeadQuarterCity='NewYork' OR (CustomerNumber>1500 AND HeadQuarterCity='Atlanta')

Output:

CUSTOMERNUMBER	HEADQUARTERCITY	CUSTOMERNAME
1525	NewYork	Arthur

Download CSV

9. Which cities serve as headquarters cities for General Hardware customers?

select distinct HeadQuarterCity

from Customer;

Output:

HEADQUARTERCITY
NewYork
London
Atlanta

Download CSV

3 rows selected.

10. Find the customer numbers, customer names, and headquarters cities of those customers with customer numbers greater than 1000. List the results in alphabetic order by headquarters cities.

```
select CustomerNumber, HeadQuarterCity, CustomerName
from Customer
where  CustomerNumber>1000
ORDER BY HeadQuarterCity;
```

Output:

CUSTOMERNUMBER	HEADQUARTERCITY	CUSTOMERNAME
1325	Atlanta	Hosea
1825	London	Dutch
1525	NewYork	Arthur

Download CSV

3 rows selected.

11. Find the average number of units of the different products that Salesperson 137 sold (i.e., the average of the quantity values in the first three records of the SALES table).

select avg(Quantity)

from Sales

where SalesPersonNumber=137;

Output:

AVG(QUANTITY)
7175

Download CSV

12. What is the largest number of units of Product Number 21765 that any individual salesperson has sold?

```
select max(Quantity)

from Sales

where ProductNumber=21765;
```

Output:

MAX(QUANTITY)
5175

Download CSV

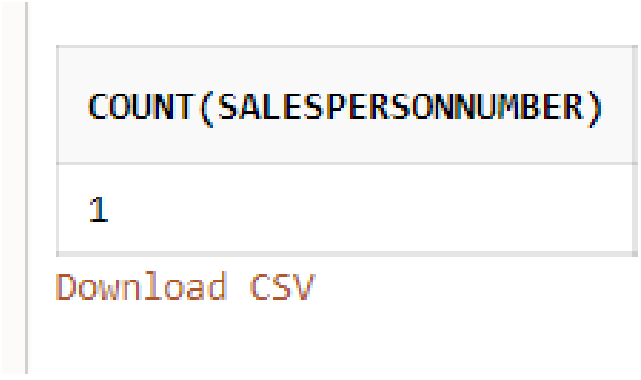
13. How many salespersons have sold Product Number 21765?

```
select count(SalesPersonNumber)

from Sales

where ProductNumber=21765;
```

Output:



COUNT(SALESPERSONNUMBER)
1

Download CSV

14. Find the total number of units of all products sold by each salesperson.

```
select SalesPersonNumber,sum(Quantity)

from Sales

GROUP BY SalesPersonNumber;
```

Output:

SALESPERSONNUMBER	SUM(QUANTITY)
186	5175
137	7175
213	3175

Download CSV

3 rows selected.

15. Find the total number of units of all products sold by each salesperson whose salesperson number is at least 150.

```
select SalesPersonNumber, sum(Quantity)

from Sales

where SalesPersonNumber>=150

GROUP BY SalesPersonNumber
```

Output:

SALESPERSONNUMBER	SUM(QUANTITY)
186	5175
213	3175

Download CSV

2 rows selected.

16. Find the total number of units of all products sold by each salesperson whose salesperson number is at least 150. (Repeated 15 question as 16 in the Lab-4 file so reuploading)

```
select SalesPersonNumber, sum(Quantity)
from Sales
where SalesPersonNumber>=150
GROUP BY SalesPersonNumber
```

Output:

SALESPERSONNUMBER	SUM(QUANTITY)
186	5175
213	3175

Download CSV

2 rows selected.

17. Find the total number of units of all products sold by each salesperson whose salesperson number is at least 150. Include only salespersons whose total number of units sold is at least 5000.

```
select SalesPersonNumber, sum(Quantity)
from Sales
where SalesPersonNumber>=150
GROUP BY SalesPersonNumber
having sum(Quantity)>=5000;
```

Output:

SALESPERSONNUMBER	SUM(QUANTITY)
186	5175

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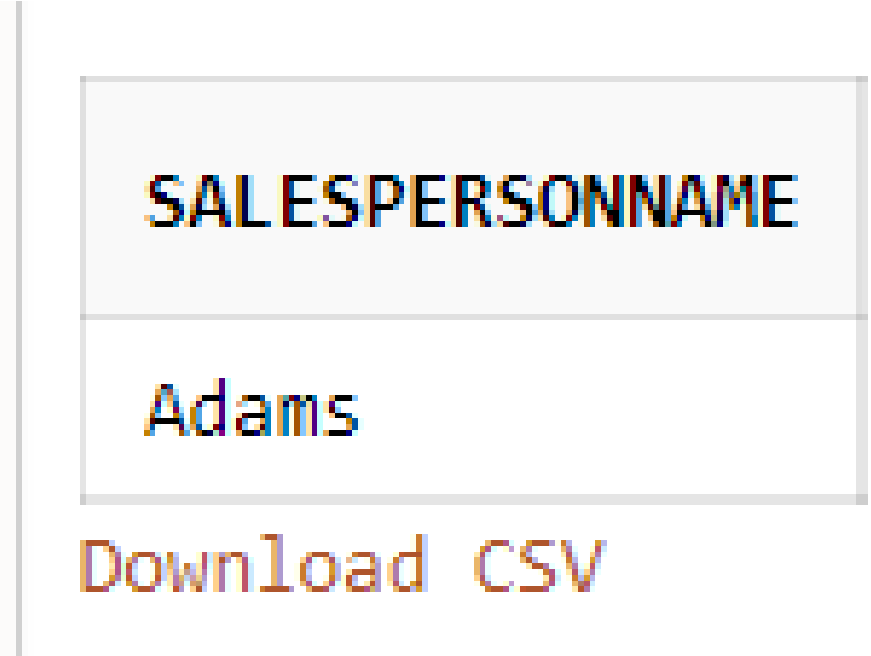
18. Find the name of the salesperson responsible for Customer Number 1525.

select SalesPersonName

from Sales_Person, Customer

where Sales_Person.SalesPersonNumber=Customer.SalesPersonNumber AND CustomerNumber=1525;

Output:



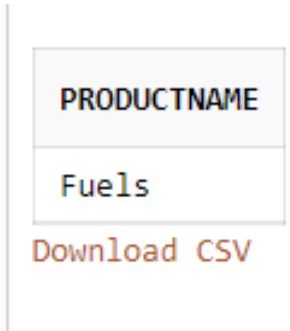
19. List the names of the products of which salesperson Adams has sold more than 2000 units.

select ProductName

from Sales_Person, Product, Sales

where Sales_Person.SalesPersonNumber=Sales.SalesPersonNumber AND Sales.ProductNumber=Product.ProductNumber AND SalesPersonName='Adams' AND Quantity>2000;

Output:



20. Which salespersons with salesperson numbers greater than 200 have the lowest commission percentage?'' (We'll identify salespersons by their salesperson number.)

```
select SalesPersonNumber

from Sales_Person

where SalesPersonNumber>200 AND CommPercentage=(select min(CommPercentage)from Sales_Person)
```

Output:

SALESPERSONNUMBER
213

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