

Assignment 5

No Duplicate Rows are allowed in the following questions

For each of the following questions, you need to show three things: the question itself, the query, and the snapshot of the answer.

tiger

For example, if the question is:

Question: print the rows in the salesreps table

Query: select * from salesreps

Output: the snapshot of the result is:

| EMPL_NUM | NAME | AGE | REP_OFFICE | TITLE | HIRE_DATE | MANAGER | QUOTA | SALES |
|----------|--------------|-----|------------|-----------|-----------|---------|--------|--------|
| 105 | Bill Adams | 37 | 13 | Sales Rep | 12-FEB-24 | 104 | 350000 | 367911 |
| 109 | Mary Jones | 31 | 11 | Sales Rep | 12-OCT-21 | 106 | 300000 | 392725 |
| 102 | Sue Smith | 48 | 21 | Sales Rep | 10-DEC-22 | 108 | 350000 | 474050 |
| 106 | Sam Clark | 52 | 11 | VP Sales | 14-JUN-23 | | 275000 | 299912 |
| 104 | Bob Smith | 33 | 12 | Sales Mgr | 19-MAY-24 | 106 | 200000 | 142594 |
| 101 | Dan Roberts | 45 | 12 | Sales Rep | 20-OCT-24 | 104 | 300000 | 305673 |
| 110 | Tom Synder | 41 | | Sales Rep | 10-JAN-25 | 101 | | 75985 |
| 108 | Larry Fitch | 62 | 21 | Sales Mgr | 12-OCT-22 | 106 | 350000 | 361865 |
| 103 | Paul Cruz | 29 | 12 | Sales Rep | 01-MAR-24 | 104 | 275000 | 286775 |
| 107 | Nacy Angelli | 49 | 22 | Sales Rep | 14-NOV-23 | 108 | 300000 | 186042 |

10 rows selected.

- 1) Write a select statement to list all the columns from the Offices table. 'Select *' is not allowed. Return the list in DESC Office order.

```
SELECT office, city, region, mgr, target, sales
FROM offices
ORDER BY office DESC;
```

| OFFICE | CITY | REGION | MGR | TARGET | SALES |
|--------|-------------|---------|-----|--------|--------|
| 22 | Denver | Western | 108 | 300000 | 186042 |
| 21 | Los Angeles | Western | 108 | 725000 | 835915 |
| 13 | Atlanta | Eastern | 105 | 350000 | 367911 |
| 12 | Chicago | Eastern | 104 | 800000 | 735042 |
| 11 | New York | Eastern | 106 | 575000 | 692637 |

- 2) List the product ID, mfr ID, Name (its description), and dollar value of quantity on hand (price * quantity) of the products whose dollar value is greater than 20000. Return the list in descending order by their dollar value.

```
SELECT MFR_ID, PRODUCT_ID, DESCRIPTION, (PRICE * QTY_ON_HAND) AS dollar_value
FROM PRODUCTS
WHERE (PRICE * QTY_ON_HAND) > 20000.00
ORDER BY dollar_value DESC;
```

| MFR | PRODU | DESCRIPTION | DOLLAR_VALUE |
|-----|-------|------------------|--------------|
| ACI | 4100Z | WIDGET INSTALLER | 70000 |
| ACI | 4100Y | WIDGET REMOVER | 68750 |
| REI | 2A44L | LEFT HINGE | 54000 |
| REI | 2A44R | RIGHT HINGE | 54000 |
| IMM | 773C | 300-LB BRACE | 27300 |
| QSA | XK48 | REDUCER | 27202 |
| ACI | 41003 | SIZE 3 WIDGET | 22149 |

- 3) List the Order Number, Order Date, Customer Number, and Sales Rep Number for orders for part '779C' or '773C'. (Use a compound search condition - OR.)

```
SELECT ORDER_NUM, ORDER_DATE, CUST, REP
FROM ORDERS
WHERE PRODUCT = '779C' OR PRODUCT = '773C';
```

| ORDER_NUM | ORDER_DAT | CUST | REP |
|-----------|-----------|------|-----|
| 113007 | 08-JAN-20 | 2112 | 108 |
| 113048 | 10-FEB-23 | 2120 | 102 |
| 113003 | 25-JAN-19 | 2108 | 109 |

- 4) List the Name and Age of all Sales Reps in the following offices: 11; 13. (Use the set membership test - IN.)

```
SELECT name, age
FROM salesreps
WHERE rep_office IN ('11', '13');
```

| NAME | AGE |
|------------|-----|
| Bill Adams | 37 |
| Mary Jones | 31 |
| Sam Clark | 52 |

- 5) List the names of all Sales Reps who have the letter 'a' (this is lower case a) as the second character of their name.

```
SELECT name
FROM salesreps
WHERE name LIKE '_a%';
```

```

NAME
-----
Mary Jones
Sam Clark
Dan Roberts
Larry Fitch
Paul Cruz
Nacy Angelli

```

- 6) Return the Sales Rep ID and Name of any Sales Rep not assigned to an office yet.

```

SELECT empl_num, name
FROM salesreps
WHERE rep_office is NULL;

```

```

  EMPL_NUM NAME
-----
      110 Tom Synder

```

- 7) Show all the sales rep names with last name "Smith" or "Jones".

```

SELECT name
FROM salesreps
WHERE name LIKE '%Smith' OR name LIKE '%Jones';

```

```

NAME
-----
Mary Jones
Sue Smith
Bob Smith

```

- 8) List different titles in the sales reps table. Only list each title once and unknown titles should be ignored. Duplicate rows are not allowed.

```

SELECT DISTINCT title
FROM salesreps
WHERE title IS NOT NULL;

```

```

TITLE
-----
Sales Rep
Sales Mgr
VP Sales

```

- 9) List the products' descriptions that are more than 6 characters and less than 10 characters long. No duplicate row is allowed. You can use the built-in function length() to do this. For example, length(name) returns the number of characters for an attribute called "name."

```

SELECT DISTINCT description

```

FROM products
 WHERE length(description) > 6 AND length(description) < 10;

```

DESCRIPTION
-----
REDUCER
HINGE PIN
BRACE PIN
HOUSING
RETAINER
  
```

- 10) For all orders Amount less than \$700, list the order number with the name of the rep who placed the order, the name of the customer who made the order, and the name of the rep for that customer

SELECT ORDER_NUM, s.name AS "REP_NAME", company, cust.name AS "CUST_REP"
 FROM ORDERS, salesreps s, customers, salesreps cust
 WHERE rep = s.empl_num AND cust_num = cust AND cust_rep = cust.empl_num AND amount < 700.00;

| ORDER_NUM | REP_NAME | COMPANY | CUST_REP |
|-----------|--------------|-------------------|--------------|
| 113055 | Dan Roberts | Holm and Landis | Mary Jones |
| 113034 | Tom Synder | Ace International | Tom Synder |
| 113013 | Larry Fitch | Midwest Systems | Larry Fitch |
| 113057 | Paul Cruz | JCP Inc. | Paul Cruz |
| 112997 | Nacy Angelli | Peter Brothers | Nacy Angelli |

- 11) List the Mfr ID, the Product ID, the Company, and the PRICE of all products bought by customers where the customer number is one of (2111,2112,2105,2119) and the order amount < \$10,000. Order the results by ascending Company. Duplicate rows are not allowed.

SELECT DISTINCT MFR_ID, PRODUCT_ID, COMPANY, PRICE
 FROM PRODUCTS, customers, ORDERS
 WHERE product = PRODUCT_ID AND mfr = MFR_ID AND cust = CUST_NUM AND CUST_NUM IN
 (2111,2112,2105,2119) AND amount < 10000.00
 ORDER BY COMPANY ASC;

| MFR | PRODU | COMPANY | PRICE |
|-----|-------|----------|-------|
| REI | 2A44G | JCP Inc. | 350 |
| ACI | 41003 | JCP Inc. | 107 |
| ACI | 4100X | JCP Inc. | 25 |
| IMM | 773C | Zetacorp | 975 |

- 12) List all orders number, the name of the rep who took the order , the city where the rep has his/her office. Print the employee whose office is in either Chicago or Denver;

SELECT ORDER_NUM, salesreps.name, offices.city

```
FROM offices, salesreps, ORDERS
WHERE salesreps.empl_num = ORDERS.REP AND salesreps.rep_office = offices.office AND offices.city IN
('Chicago', 'Denver');
```

| ORDER_NUM | NAME | CITY |
|-----------|--------------|---------|
| 112968 | Dan Roberts | Chicago |
| 112997 | Nacy Angelli | Denver |
| 113062 | Nacy Angelli | Denver |
| 113069 | Nacy Angelli | Denver |
| 112975 | Paul Cruz | Chicago |
| 113055 | Dan Roberts | Chicago |
| 113057 | Paul Cruz | Chicago |
| 113042 | Dan Roberts | Chicago |

13) List all customers (Customer number, Company, and Credit Limit) and orders (Order Number, Amount) where the Amount is within \$10,000 of the Credit Limit. Therefore:

- Credit_limit should be greater than zero and
- Amount should be greater than zero and
- Amount should be less than credit_limit and
- Credit_limit – Amount <=\$10000

```
SELECT CUST_NUM, COMPANY, CREDIT_LIMIT, ORDER_NUM, AMOUNT
FROM customers, ORDERS
WHERE CREDIT_LIMIT > 0.00 AND AMOUNT > 0.00 AND AMOUNT < CREDIT_LIMIT AND (CREDIT_LIMIT - AMOUNT)
<= 10000.00 AND CUST_NUM = CUST;
```

| CUST_NUM | COMPANY | CREDIT_LIMIT | ORDER_NUM | AMOUNT |
|----------|---------------|--------------|-----------|--------|
| 2117 | J.P. Sinclair | 35000 | 112961 | 31500 |
| 2112 | Zetacorp | 50000 | 113045 | 45000 |
| 2114 | Orion Corp. | 20000 | 112979 | 15000 |

14) List all salesreps names and their managers' names where the salesrep is at least as old as the manager. Duplicate rows are not allowed.

```
SELECT e.name AS "EMPL_NAME", m.name AS "MANAG_NAME"
FROM salesreps e, salesreps m
WHERE m.empl_num = e.manager AND e.age >= m.age;
```

| EMPL_NAME | MANAG_NAME |
|-------------|------------|
| Larry Fitch | Sam Clark |
| Bill Adams | Bob Smith |
| Dan Roberts | Bob Smith |

- 15) List all salesreps (Name) and the City they work in where either the sales of the salesrep < Quota or the sales for the office is < Target.

```
SELECT name, city
FROM salesreps, offices
WHERE salesreps.rep_office = offices.office AND (salesreps.sales < salesreps.quota OR offices.sales < offices.target);
```

| NAME | CITY |
|--------------|---------|
| Bob Smith | Chicago |
| Dan Roberts | Chicago |
| Paul Cruz | Chicago |
| Nacy Angelli | Denver |

- 16) List the name, ID, and hire date of the salesreps where the following two conditions hold:

- The salesreps sales should be greater than the quota and
- The rep should be either "Sam Clark", or "Mary Jones."

```
SELECT empl_num, name, hire_date
FROM salesreps
WHERE (sales > quota) AND name LIKE '%Mary Jones' OR name LIKE '%Sam Clark';
```

| EMPL_NUM | NAME | HIRE_DATE |
|----------|------------|-----------|
| 109 | Mary Jones | 12-OCT-21 |
| 106 | Sam Clark | 14-JUN-23 |

- 17) List all orders (Order Number) over \$7,000 showing the company placing the order, the Customer Rep assign to the company, the Office id and the city, and the rep who took the order where such that the Customer Rep's is not the rep who took the order.

```
SELECT
  o.order_num,
  c.company,
  cr.name AS customer_rep,
  cr.rep_office AS office_id,
  ofc.city AS city,
  orr.name AS order_rep
FROM
  orders o
JOIN
  customers c ON o.cust = c.cust_num
JOIN
  salesreps cr ON c.cust_rep = cr.empl_num
LEFT JOIN
  offices ofc ON cr.rep_office = ofc.office
```

```

JOIN
  salesreps orr ON o.rep = orr.empl_num
WHERE
  o.amount > 7000
  AND c.cust_rep <> o.rep;

```

| ORDER_NUM | COMPANY | CUSTOMER_REP | OFFICE_ID | CITY | ORDER_REP |
|-----------|-----------------|--------------|-----------|-------------|--------------|
| 113042 | Ian and Schmidt | Bob Smith | 12 | Chicago | Dan Roberts |
| 113024 | Orion Corp. | Sue Smith | 21 | Los Angeles | Larry Fitch |
| 113069 | Chen Associates | Paul Cruz | 12 | Chicago | Nacy Angelli |

- 18) List all customer reps (their name and their ID) and their managers name in which the manager is based in New York. Use appropriate column header.

```

SELECT DISTINCT employee.empl_num, employee.name AS "EMPLOYEE_NAME", managerr.name AS
"MANAGER_NAME"
FROM customers, offices, salesreps employee, salesreps managerr
WHERE employee.manager = managerr.empl_num AND managerr.empl_num = offices.mgr AND offices.city IN
('New York');

```

| EMPL_NUM | EMPLOYEE_NAME | MANAGER_NAME |
|----------|---------------|--------------|
| 108 | Larry Fitch | Sam Clark |
| 109 | Mary Jones | Sam Clark |
| 104 | Bob Smith | Sam Clark |

- 19) List all products (ProductId, MFR_Id, and Description), customers (CustNum, Company) who have bought that product, and orders (Order Number, and Order Date) where the order < \$700. Sort the rows by the OrderDate. Duplicate rows is not allowed.

```

SELECT PRODUCT_ID, MFR_ID, DESCRIPTION, CUST_NUM, COMPANY, ORDER_NUM, ORDER_DATE
FROM PRODUCTS, customers, ORDERS
WHERE cust = CUST_NUM AND product = PRODUCT_ID AND mfr = MFR_ID AND amount < 1000.00
ORDER BY ORDER_DATE;

```

| PRODU | MFR | DESCRIPTION | CUST_NUM | COMPANY | ORDER_NUM | ORDER_DAT |
|-------|-----|-----------------|----------|-------------------|-----------|-----------|
| 41003 | BIC | HANDLE | 2118 | Midwest Systems | 113013 | 14-JAN-20 |
| 41003 | BIC | HANDLE | 2124 | Peter Brothers | 112997 | 08-JAN-23 |
| 4100X | ACI | WIDGET ADJUSTER | 2111 | JCP Inc. | 113057 | 18-FEB-23 |
| 2A45C | REI | RATCHET LINK | 2107 | Ace International | 113034 | 14-NOV-23 |
| 4100X | ACI | WIDGET ADJUSTER | 2108 | Holm and Landis | 113055 | 15-FEB-24 |

- 20) List the name of the salesreps and the name of their managers only if the manager has taken care of some orders.

```
SELECT DISTINCT employee.name AS "EMPLOYEE_NAME", managerr.name AS "MANAGER_NAME"
FROM salesreps employee, salesreps managerr, orders
WHERE employee.manager = managerr.empl_num AND rep = managerr.empl_num;
```

| EMPLOYEE_NAME | MANAGER_NAME |
|---------------|--------------|
| Mary Jones | Sam Clark |
| Nacy Angelli | Larry Fitch |
| Larry Fitch | Sam Clark |
| Sue Smith | Larry Fitch |
| Tom Synder | Dan Roberts |
| Bob Smith | Sam Clark |