

# Assignment 2

## No Duplicate Rows are allowed in the following questions

For each question you need to write the corresponding query, run it in the SQL-developer environment, get the result and place the snapshot of the result. For example, if the questions is:

**Question:**

Print all of the information in offices table

**Query:**

```
select *  
from offices
```

**Result:**

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

- 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 that their dollar value is greater than 30000. Return the list in descending order by their dollar value.

```
SELECT PRODUCT_ID, MFR_ID, DESCRIPTION, (PRICE * QTY_ON_HAND) AS dollar_value
```

```
FROM Products
```

```
WHERE (PRICE * QTY_ON_HAND) > 30000
```

ORDER BY dollar\_value DESC;

PRODU MFR DESCRIPTION	DOLLAR_VALUE
-----	-----
4100Z ACI WIDGET INSTALLER	70000
4100Y ACI WIDGET REMOVER	68750
2A44R REI RIGHT HINGE	54000
2A44L REI LEFT HINGE	54000

- 3) List the Order Number, Order Date, Customer Number and Sales Rep Number for orders for part '41002' or '41003'. (Use a compound search condition - OR.)

SELECT ORDER\_NUM, ORDER\_DATE, CUST, REP

FROM Orders

WHERE PRODUCT = '41002' OR PRODUCT ='41003';

ORDER_NUM	ORDER_DAT	CUST	REP
-----	-----	-----	-----
113012	11-JAN-21	2111	105
113013	14-JAN-20	2118	108
112997	08-JAN-23	2124	107
113027	22-JAN-19	2103	105
112992	04-NOV-24	2118	108

- 4) List the Name and Age for all Sales Reps in the following offices: 11; 22. (Use the set membership test - IN.)

SELECT name, age

FROM Salesreps

WHERE rep\_office IN('11', '22');

NAME	AGE
-----	-----
Mary Jones	31
Sam Clark	52
Nacy Angelli	49

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

SELECT name

FROM Salesreps

WHERE name LIKE '\_o%';

NAME
Bob Smith
Tom Synder

- 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 reps_office IS NULL;
```

EMPL_NUM	NAME
110	Tom Synder

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

```
SELECT name
FROM Salesreps
WHERE name LIKE '%Smith' OR name LIKE '%Clark';
```

NAME
Sue Smith
Sam Clark
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 description of the products which are at least 6 characters and at most 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 attribute called "name".

```
SELECT DISTINCT DESCRIPTION
```

```
FROM Products
```

```
WHERE length(DESCRIPTION) >= 6 AND length(DESCRIPTION) <= 10
```

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

7 rows selected.
```

- 10) For all orders Amount less than \$650, list the order num with the name of the rep who placed the order and 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 < 650;
```

ORDER_NUM	REP_NAME	COMPANY	CUST_REP
113034	Tom Synder	Ace International	Tom Synder
113055	Dan Roberts	Holm and Landis	Mary Jones
113057	Paul Cruz	JCP Inc.	Paul Cruz

- 11) List the Mfr Id, the Product Id, Company and PRICE of all products bought by customers where customer number is one of (2111,2112,2105,2119) and where the amount of the order < \$3000. Order the results by ascending Company. Duplicate rows are not allowed.

```
SELECT DISTINCT MFR_ID, PRODUCT_ID, COMPANY, PRICE
```

```
FROM Customers, Products, Orders
```

```
WHERE product = PRODUCT_ID AND mfr = MFR_ID AND cust = CUST_NUM AND CUST_NUM  
IN(2111,2112,2105,2119) AND amount < 3000
```

```
ORDER BY Company ASC;
```

MFR	PRODU	COMPANY	PRICE
REI	2A44G	JCP Inc.	350
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 Chicago;

SELECT ORDER\_NUM, salesreps.name, Offices.city

FROM Orders, Salesreps, Offices

WHERE Salesreps.empl\_num = orders.rep AND salesreps.rep\_office = offices.office AND offices.city = 'Chicago'

ORDER_NUM	NAME	CITY
112968	Dan Roberts	Chicago
113055	Dan Roberts	Chicago
113042	Dan Roberts	Chicago
112975	Paul Cruz	Chicago
113057	Paul Cruz	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 DISTINCT CUST\_NUM, Company, CREDIT\_LIMIT, ORDER\_NUM, Amount

FROM Customers, Offices, Orders

WHERE Credit\_Limit > 0 AND Amount > 0 AND Amount < Credit\_Limit AND (Credit\_Limit - Amount) <= 10000 AND CUST\_NUM = CUST;

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

- 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 DISTINCT e.name AS "EMPL_NAME", m.name AS "MANAGERS_NAME"
FROM Salesreps e, Salesreps m
WHERE m.empl_NUM = e.manager AND e.age >= m.age;
```

EMPL_NAME	MANAGERS_NAME
Bill Adams	Bob Smith
Dan Roberts	Bob Smith
Larry Fitch	Sam Clark

- 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.sales < salesreps.quota OR offices.sales < offices.target) AND salesreps.rep_office = offices.office;
```

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:
- a) The salesrep sales should be greater than the quota and
  - b) The rep should be either "Sam Clark", or "Mary Jones"

```
SELECT name, empl_num, hire_date
```

FROM Salesreps

WHERE sales > quota AND Name IN('Sam Clark', ' Mary Jones' );

NAME	EMPL_NUM	HIRE_DATE
Sam Clark	106	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 the rep is the same person as the rep who took the order.

SELECT orders.order\_num, customers.company, c.name AS "CUSTOMER\_REP", offices.office, offices.city, r.name AS "REP\_ORDER"

FROM orders, customers, salesreps c, offices, salesreps r

WHERE orders.amount > 7000 AND customers.cust\_num = orders.cust AND c.empl\_num = customers.cust\_rep AND c.rep\_office = offices.office AND orders.rep = r.empl\_num AND r.manager != rep;

ORDER_NUM	COMPANY	CUSTOMER_REP	OFFICE	CITY	REP_ORDER
113042	Ian and Schmidt	Bob Smith	12	Chicago	Dan Roberts
113069	Chen Associates	Paul Cruz	12	Chicago	Nacy Angelli
112987	Acme Mfg.	Bill Adams	13	Atlanta	Bill Adams
112979	Orion Corp.	Sue Smith	21	Los Angeles	Sue Smith
113024	Orion Corp.	Sue Smith	21	Los Angeles	Larry Fitch
113045	Zetacorp	Larry Fitch	21	Los Angeles	Larry Fitch

6 rows selected.

- 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", m.name as "MANAGER\_NAME"

FROM Customers, Salesreps employee, Offices, Salesreps m

WHERE employee.manager = m.empl\_num AND m.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 < \$650. Sort the rows by the OrderDate. Duplicate rows is not allowed.

```
SELECT DISTINCT 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 < 650
ORDER BY ORDER_DATE;
```

PRODU	MFR	DESCRIPTION	CUST_NUM	COMPANY	ORDER_NUM	ORDER_DAT
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", manager.name AS "MANAGER_NAME"
FROM Salesreps employee, Salesreps manager, Orders
WHERE employee.manager = manager.empl_num AND Orders.rep = manager.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

6 rows selected.