DBMS LAB 07

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```
CREATE TABLE Products
(
   Product_no VARCHAR(6) PRIMARY KEY,
   Description VARCHAR(20),
   Profit_percent INT(6),
   Unit_measure
   VARCHAR(10),Qty_on_hand
   INT(6), Reorder_lvl  INT(6),
   Sell_price DECIMAL(7, 2),
   Cost_price DECIMAL(7,
   2),Last_ordered_date
   DATE
);
```

```
INSERT INTO Products (Product_no, Description, Profit_percent, Unit_measure,
Qty_on_hand,Reorder_lvl, Sell_price, Cost_price, Last_ordered_date)
VALUES
('P00123', 'Wireless Mouse', 25, 'pcs', 150, 50, 25.99, 18.00, '2024-10-01'),
('P00456', 'Bluetooth Speaker', 30, 'pcs', 80, 20, 49.99, 35.00, '2024-09-15'),
('P00789', 'Laptop Stand', 20, 'pcs', 200, 100, 29.99, 22.50, '2024-08-25'),
('P01012', 'USB-C Cable', 15, 'pcs', 500, 150, 9.99, 5.00, '2024-10-05'),
('P01134', 'Smartphone Case', 40, 'pcs', 300, 80, 19.99, 12.00, '2024-11-07');
```

Write SQL query on date column for table on date column (e.g., Last_ordered_date).

1. CURRENT_DATE: Fetch all products that were last ordered today

SELECT *

FROM Products

WHERE Last_ordered_date = CURRENT_DATE;

Output:

Product_no	Description	Profit_percent	Unit_measure	Qty_on_hand	Reorder_lvl	Sell_price	Cost_price	Last_ordered_date
P01134	Smartphone Case	40	pcs	300	80	19.99	12.00	2024-11-07

2. DATEADD: Fetch products where the last order date was more than 30 days ago

SELECT *
FROM Products
WHERE Last_ordered_date < DATE_SUB(CURRENT_DATE, INTERVAL 30 DAY);

Output:

Product_no	Description	Profit_percent	Unit_measure	Qty_on_hand	Reorder_lvl	Sell_price	Cost_price	Last_ordered_date
P00123	Wireless Mouse	25	pcs	150	50	25.99	18.00	2024-10-01
P00456	Bluetooth Speaker	30	pcs	80	20	49.99	35.00	2024-09-15
P00789	Laptop Stand	20	pcs	200	100	29.99	22.50	2024-08-25
P01012	USB-C Cable	15	pcs	500	150	9.99	5.00	2024-10-05

3. DATEDIFF: Fetch products where it has been more than 60 days since the last order

SELECT *
FROM Products
WHERE DATEDIFF(CURRENT_DATE, Last_ordered_date) > 60;

Output:

Product_no	Description	Profit_percent	Unit_measure	Qty_on_hand	Reorder_lvl	Sell_price	Cost_price	Last_ordered_date
P00789	Laptop Stand	20	pcs	200	100	29.99	22.50	2024-08-25

4. YEAR, MONTH, DAY: Fetch products that were last ordered in a specific month and year

SELECT *
FROM Products
WHERE YEAR(Last_ordered_date) = 2024AND
MONTH(Last_ordered_date) = 9;

Output:

Product_no	Description	Profit_percent	Unit_measure	Qty_on_hand	Reorder_lvl	Sell_price	Cost_price	Last_ordered_date
P00456	Bluetooth Speaker	30	pcs	80	20	49.99	35.00	2024-09-15

5. GETDATE: Fetch products that were last ordered within the last week

SELECT *
FROM Products
WHERE Last_ordered_date >= DATE_SUB(CURRENT_DATE, INTERVAL 1 WEEK);

Output:

Product_no	Description	Profit_percent	Unit_measure	Qty_on_hand	Reorder_lvl	Sell_price	Cost_price	Last_ordered_date
P01134	Smartphone Case	40	pcs	300	80	19.99	12.00	2024-11-07

6. DATEPART: Fetch products that were last ordered on a weekend (Saturday or Sunday)

SELECT * FROM Products
WHERE DAYOFWEEK(Last_ordered_date) IN (7, 1); -- 7 = Saturday, 1 = Sunday inMySQL

Output:

Product_no	Description	Profit_percent	Unit_measure	Qty_on_hand	Reorder_lvl	Sell_price	Cost_price	Last_ordered_date
P00456	Bluetooth Speaker	30	pcs	80	20	49.99	35.00	2024-09-15
P00789	Laptop Stand	20	pcs	200	100	29.99	22.50	2024-08-25
P01012	USB-C Cable	15	pcs	500	150	9.99	5.00	2024-10-05

7. FORMAT: Format the Last_ordered_date in MM-DD-YYYY format

SELECT Product_no, Description, DATE_FORMAT(Last_ordered_date, '%m-%d-%Y')AS Last_ordered_date
FROM Products;

Output:

Product_no	Description	Last_ordered_date
P00123	Wireless Mouse	10-01-2024
P00456	Bluetooth Speaker	09-15-2024
P00789	Laptop Stand	08-25-2024
P01012	USB-C Cable	10-05-2024
P01134	Smartphone Case	11-07-2024

8. EXTRACT: Fetch products where the order month is January (for databases that support EXTRACT)

SELECT *
FROM Products
WHERE MONTH(Last_ordered_date) = 1;

Output:

Program did not output anything!

9. DATE_TRUNC: Group products by month and count orders per month (for databases that support DATE_TRUNC)

SELECT DATE_FORMAT(Last_ordered_date, '%Y-%m-01') AS Order_Month, COUNT(*)AS Orders_Per_Month
FROM Products
GROUP BY Order_Month

Output:

Order_Month	Orders_Per_Month
2024-08-01	1
2024-09-01	1
2024-10-01	2
2024-11-01	1

ORDER BY Order_Month;

10. DATE_FORMAT: Format the date as YYYY-MM-DD (MySQL-specific)

SELECT Product_no, Description, DATE_FORMAT(Last_ordered_date, '%Y-%m-%d')AS Last_ordered_date
FROM Products;

Output:

Product_no	Description	Last_ordered_date
P00123	Wireless Mouse	2024-10-01
P00456	Bluetooth Speaker	2024-09-15
P00789	Laptop Stand	2024-08-25
P01012	USB-C Cable	2024-10-05
P01134	Smartphone Case	2024-11-07

11. Adding and Subtracting Dates: Fetch products where the last order date is within the next 10 days (for planning purposes)

SELECT * FROM Products WHERE Last_ordered_date BETWEEN CURRENT_DATEAND DATE_ADD(CURRENT_DATE, INTERVAL 10 DAY);

Output:

Product_no	Description	Profit_percent	Unit_measure	Qty_on_hand	Reorder_lvl	Sell_price	Cost_price	Last_ordered_date
P01134	Smartphone Case	40	pcs	300	80	19.99	12.00	2024-11-07

12. DAYOFWEEK or WEEKDAY: Fetch products ordered on a Monday (MySQL example)

```
SELECT *
FROM Products
WHERE DAYOFWEEK(Last_ordered_date) = 2;  -- 2 = Monday in MySQL
```

```
Output:

Program did not output anything!
```

13. Calculating Age of Last Order: Find the number of days since each product's last order

```
SELECT Product_no, Description, DATEDIFF(CURRENT_DATE, Last_ordered_date)AS
Days_Since_Last_Order
FROM Products;
```

Output:

Product_no	Description	Days_Since_Last_Order
P00123	Wireless Mouse	37
P00456	Bluetooth Speaker	53
P00789	Laptop Stand	74
P01012	USB-C Cable	33
P01134	Smartphone Case	0

14. ISDATE: Check if a date field is valid (for databases that support ISDATE)

```
SELECT *
FROM Products
WHERE STR_TO_DATE(Last_ordered_date, '%Y-%m-%d') IS NOT NULL;
```

Output:

Product_no	Description	Profit_percent	Unit_measure	Qty_on_hand	Reorder_lvl	Sell_price	Cost_price	Last_ordered_date
P00123	Wireless Mouse	25	pcs	150	50	25.99	18.00	2024-10-01
P00456	Bluetooth Speaker	30	pcs	80	20	49.99	35.00	2024-09-15
P00789	Laptop Stand	20	pcs	200	100	29.99	22.50	2024-08-25
P01012	USB-C Cable	15	pcs	500	150	9.99	5.00	2024-10-05
P01134	Smartphone Case	40	pcs	300	80	19.99	12.00	2024-11-07

15. Extract Quarter: Fetch products last ordered in the first quarter of the year

```
SELECT * FROM Products WHERE QUARTER(Last_ordered_date) = 1;
```

```
Output:

Program did not output anything!
```