

# Tugas 4 Praktikum Basis Data

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03-11-2017

## Single Entity

1. List products sold by order date.

```
SELECT o.orderDate, p.productName
FROM products p
JOIN orderdetails d USING(productCode)
JOIN orders o USING(orderNumber)
ORDER BY o.orderDate DESC;
```

RESULT:

```
+-----+-----+
| orderDate | productName |
+-----+-----+
| 2005-05-31 | 1962 LanciaA Delta 16V |
| 2005-05-31 | 1957 Chevy Pickup |
| 2005-05-31 | 1998 Chrysler Plymouth Prowler |
| 2005-05-31 | 1964 Mercedes Tour Bus |
| 2005-05-31 | 1926 Ford Fire Engine |
|          | . |
|          | . |
|          | . |
| 2003-01-06 | 1911 Ford Town Car |
| 2003-01-06 | 1932 Alfa Romeo 8C2300 Spider Sport |
| 2003-01-06 | 1936 Mercedes Benz 500k Roadster |
+-----+-----+
2996 rows in set (0.36 sec)
```

2. List the order dates in descending order for orders for the 1940 Ford Pickup Truck.

```
SELECT o.orderDate
FROM orders o
JOIN orderdetails d USING(orderNumber)
JOIN products p USING(productCode)
WHERE p.productName = "1940 Ford Pickup Truck"
ORDER BY o.orderDate DESC;
```

RESULT:

```
+-----+
| orderDate |
+-----+
| 2005-05-31 |
| 2005-05-01 |
| 2005-03-09 |
| 2005-02-17 |
```

```

| 2005-01-20 |
.
.
.
| 2003-05-28 |
| 2003-03-26 |
| 2003-01-29 |
+-----+
28 rows in set (0.00 sec)

```

3. List the names of customers and their corresponding order number where a particular order from that customer has a value greater than \$25,000?

```

SELECT c.customerName, o.orderNumber, SUM(d.quantityOrdered*d.priceEach) AS total_value
FROM customers c
JOIN orders o USING(customerNumber)
JOIN orderdetails d USING(orderNumber)
GROUP BY c.customerName
HAVING SUM(d.quantityOrdered*d.priceEach) > 25000
ORDER BY SUM(d.quantityOrdered*d.priceEach) DESC;

```

RESULT:

```

+-----+-----+-----+
| customerName          | orderNumber | total_value |
+-----+-----+-----+
| Euro+ Shopping Channel |      10104 | 820689.54 |
| Mini Gifts Distributors Ltd. |      10113 | 591827.34 |
| Australian Collectors, Co. |      10120 | 180585.07 |
| Muscle Machine Inc      |      10127 | 177913.95 |
| La Rochelle Gifts      |      10275 | 158573.12 |
.
.
.
| Microscale Inc.        |      10242 | 29230.43 |
| Royale Belge           |      10116 | 29217.18 |
| Frau da Collezione     |      10157 | 25358.32 |
+-----+-----+-----+
95 rows in set (0.31 sec)

```

4. Are there any products that appear on all orders?

```

SELECT p.productName, d.orderNumber
FROM orders o
LEFT JOIN orderdetails d USING(orderNumber)
LEFT JOIN products p USING(productCode)
HAVING COUNT(d.orderNumber) = (SELECT DISTINCT COUNT(o.orderNumber) FROM orders o);

```

RESULT:

Empty set (0.01 sec)

5. List the names of products sold at less than 80% of the MSRP.

```

SELECT p.productName, d.priceEach, p.MSRP
FROM products p
JOIN orderdetails d USING(productCode)

```

WHERE (d.priceEach/p.MSRP)<0.8;

RESULT:

productName	priceEach	MSRP
1996 Moto Guzzi 1100i	95.15	118.94
1993 Mazda RX-7	113.23	141.54
1937 Lincoln Berline	82.19	102.74
1965 Aston Martin DB5	99.55	124.44
1965 Aston Martin DB5	99.55	124.44
.	.	.
American Airlines: B767-300	73.07	91.34
The USS Constitution Ship	57.82	72.28
American Airlines: MD-11S	59.22	74.03

44 rows in set (0.01 sec)

6. Reports those products that have been sold with a markup of 100% or more (i.e., the priceEach is at least twice the buyPrice)

```
SELECT p.productName, d.priceEach, p.buyPrice
FROM products p
JOIN orderdetails d USING(productCode)
WHERE (d.priceEach/p.buyPrice)>=2;
```

RESULT:

productName	priceEach	buyPrice
1952 Alpine Renault 1300	214.30	98.58
1952 Alpine Renault 1300	197.16	98.58
1952 Alpine Renault 1300	205.73	98.58
1952 Alpine Renault 1300	212.16	98.58
1952 Alpine Renault 1300	207.87	98.58
.	.	.
1982 Camaro Z28	101.15	46.53
American Airlines: MD-11S	74.03	36.27
American Airlines: MD-11S	73.29	36.27

7. List the products ordered on a Monday.

```
SELECT p.productName, DAYNAME(o.orderDate) AS DAY
FROM products p
JOIN orderdetails d USING(productCode)
JOIN orders o USING(orderNumber)
WHERE DAYNAME(o.orderDate) = 'Monday';
```

RESULT:

-----+

productName	DAY
1969 Harley Davidson Ultimate Chopper	Monday
1969 Harley Davidson Ultimate Chopper	Monday
1969 Harley Davidson Ultimate Chopper	Monday
1969 Harley Davidson Ultimate Chopper	Monday
1969 Harley Davidson Ultimate Chopper	Monday
.	.
Boeing X-32A JSF	Monday
Pont Yacht	Monday
Pont Yacht	Monday

407 rows in set (0.00 sec)

8. What is the quantity on hand for products listed on 'On Hold' orders?

```
SELECT SUM(d.quantityOrdered) AS Quantity
FROM orders o
JOIN orderdetails d
WHERE o.status='On Hold';
```

RESULT:

Quantity
527580

1 row in set (0.00 sec)

## Procedures

Create a procedure for purchasing an item. The procedure will be called PURCHASE and this procedure will have two parameters:

- Product Code
- Quantity

This procedure will do the following task:

1. Check if the following product exist
2. Check if the product have enough stock (based on the requested quantity)
3. Write the order and the details
4. Write the payments
5. Reduce the stock in product

```
DROP PROCEDURE IF EXISTS Purchase;
```

```
DELIMITER //
```

```
CREATE PROCEDURE Purchase (IN PCODE VARCHAR(10), IN QTY INT, IN CNUMBER INT)
BEGIN
```

```
IF EXISTS (SELECT p.productCode FROM products p WHERE productCode = PCODE) THEN
```

```
IF (SELECT p.quantityInStock FROM products p WHERE productCode = PCODE) >= QTY THEN
```

```
INSERT INTO orders (orderDate, requiredDate, shippedDate, status, comments, CNUMBER)
```

```
VALUES (CURDATE(), CURDATE(), CURDATE(), 'On Hold', 'Order Baru Gan', 103);
```

```
INSERT INTO orderdetails (orderNumber, productCode, quantityOrdered, priceEach, orderLineNumber)
```

```
VALUES (LAST_INSERT_ID(), PCODE, QTY, (SELECT buyPrice FROM products WHERE productCode = PCODE),
```

```
(SELECT productLine FROM products WHERE productCode = PCODE));  
UPDATE products SET quantityInStock = quantityInStock - QTY WHERE productCode = PCODE;  
ELSE  
SELECT "STOCK TIDAK CUKUP" AS MESSAGE;  
END IF;  
ELSE  
SELECT "PRODUCT NOT EXIST" AS MESSAGE;  
END IF;  
END//  
DELIMITER ;  
  
CALL Purchase("S10_1949", 10, 103);
```