

SQL Subquery Notes

What is a Subquery:

A subquery is a SELECT query enclosed inside another query.

The inner SELECT query is usually used to determine the results of the outer SELECT query.

Syntax:

```
SELECT dept FROM employees
```

```
WHERE salary = (SELECT MAX(salary) FROM employees);
```

Outer query, Inner query = Subquery

SQL Query to Display Department with Maximum Salary from Employee Table:

```
SELECT Department FROM employees
```

```
WHERE salary = (SELECT MAX(salary) FROM employees);
```

Insert Statement Using Subquery:

The INSERT statement uses the data returned from the subquery to insert into another table.

Update Subquery:

```
CREATE TABLE product (
```

```
    product_id INT,
```

```
    item VARCHAR(30),
```

```
    sell_price FLOAT,
```

```
    product_type VARCHAR(30)
```

```
);
```

```
INSERT INTO products VALUES (101, 'jewellery', 1800, 'luxury');
```

-- Add 5 more values accordingly

```
SELECT * FROM products;
```

```
CREATE TABLE orders (
```

```
    order_id INT,
```

```
    product_sold VARCHAR(30),
```

```
    selling_price FLOAT
```

```
);
```

```
INSERT INTO orders
```

```
SELECT product_id, item, sell_price
```

```
FROM products
```

```
WHERE product_id IN
```

```
(SELECT product_id FROM products WHERE sell_price > 1000);
```

```
SELECT * FROM orders;
```

Subqueries with the UPDATE Statement:

A subquery can be used in conjunction with the UPDATE statement.

Either single or multiple columns in a table can be updated using a subquery.

Statement:

```
UPDATE table_name
```

```
SET column_name = new_value
```

```
WHERE operator value (SELECT column_name FROM table_name WHERE condition);
```

Example:

```
UPDATE employees
```

```
SET salary = salary * 0.35
```

```
WHERE age IN (SELECT age FROM employees_b WHERE age >= 27);
```

Subquery with the DELETE Statement:

A subquery can be used in conjunction with the DELETE statement.

Syntax:

```
DELETE FROM table_name WHERE operator value
```

```
(SELECT column_name FROM table_name WHERE condition);
```

Example:

```
DELETE FROM employees WHERE age IN (SELECT age FROM employees_b WHERE age >= 27);
```