03 - Inserting, Updating, and Deleting Data

Insert New Record

```
INSERT INTO table_name  ( col1 , col2 , col3 ) VALUES (  ,  , , )
```

```
INSERT INTO customers (
    first_name ,
    last_name ,
    birth_date,
    address ,
    city ,
    state
)
VALUES (
    'Mohamed',
    'Saeed',
    '2002-03-25',
    'address',
    'Qalama',
    'QA'
);
```

optional (handwritten annotation next to the column list)

- Note You don't have to make it as baby step you can make multiple insert

  ```
  INSERT INTO shippers (name) VALUES ('mohamed'),('ahmed'),('sayed')
  ```

- You can insert Hierarchical rows using simple trick in sql

  Assume that you have table like orders that carry info about the order and the order items stored in another table

  (handwritten diagram: orders → order_items)
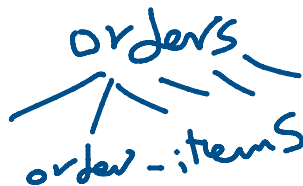
  If you want to insert in just single shoot , you must know the **ID** of the new inserted order as it can be config
  As auto increment how to do things like that ?

  ```
  LAST_INSERT_ID()
  ```

  This built-in method help to get that last id inserted so you can use it

  ```
  INSERT INTO orders (customer_id , order_date , status)
  VALUES( 1 , "2024-02-02",2);

  INSERT INTO order_items VALUES( LAST_INSERT_ID() , 1 , 2,2.2 );
  ```

Copy the table

You can copy table to another table or copy the content of the table to another table

- Copy Table to another table **CREATE STATMENT**

     CREATE TABLE archieved_orders **AS**
     SELECT * FROM orders;

     Note how the SELECT are so powerful , but note the table constrains are dropped no PK or auto increment and so on

- Copy the content of table to another table **INSERT STATMENT**

     INSERT INTO archieved_orders
     SELECT *
     FROM orders ;

     CREATE TABLE invoice_archieve **AS**
     SELECT *
     FROM invoices i
     JOIN clients c **USING** (client_id)
     WHERE payment_date IS NOT NULL

Update STATMENT

     You can update any column value using **UPDATE** Statement

     UPDATE customers
     SET first_name = 'Mohamed'
     WHERE customer_id = 1;

     Notes

     - You Can Update muliple records
     - You can Update based on filter

- Update using the sub Queries

     UPDATE invoices
     SET payment_total = 15.5
     WHERE client_id =
                    (SELECT client_id
                    FROM clients
                    WHERE name = 'Vinte')

[handwritten notes:] Sub-Query — it's just another select Query that Run together get Some info (it's Run First)

DELETE Record

DELETE FROM table_name

OR

DELETE FROM table_name
WHERE condition;

DELETE FROM orders
WHERE order_id =

DELETE FROM orders
WHERE order_id = 11