



## Database Administration

### Activity 1: SQL DDL and DML

**Instructions:** Carefully read and analyze the statements. Write down the corresponding commands for each number to accomplish the tasks, and submit your answer in pdf format.

1. Create a new table using DDL:

Create a new table called "Sales" with the following columns: "OrderID" (int) (unique) (primary key), "Product" (varchar), "Quantity" (int), "Price" (decimal), and "Date" (datetime).

```
CREATE TABLE Sales (  
  
    OrderID INT UNIQUE PRIMARY KEY,  
  
    Product VARCHAR(255),  
  
    Quantity INT,  
  
    Price DECIMAL(10, 2),  
  
    Date DATETIME );
```

2. Insert data using DML:

Insert five new rows into the "Sales" table you just created. Each row should represent a sale (Feel free to choose products) and should include values for all five columns.

```
INSERT INTO Sales (OrderID, Product, Quantity, Price, Date) VALUES  
  
    (1, 'Honda CBR650r', 2, 530000.00, '2023-02-20 11:30:01'),  
  
    (2, 'Dominar 400', 1, 195000.00, '2023-02-20 13:60:10'),  
  
    (3, 'Honda CB500x', 5, 384500.00, '2023-03-03 6:45:00'),  
  
    (4, 'CFMOTO 450sr', 10, 299900.00, '2023-02-26 13:14:05'),  
  
    (5, 'Ninja 1000sx', 3, 718000.00, '2023-06-10 13:00:08');
```

3. Update data using DML:

Update the price of the first sale in the "Sales" table to be 3,500.00.

```
UPDATE Sales SET Price = 350000.00  
WHERE OrderID = 1;
```

4. Delete data using DML:

Delete the row in the "Sales" table where the OrderID is 3.

```
DELETE FROM Sales WHERE OrderID = 3
```

5. Alter the table using DDL:

Add a new column to the "Sales" table called "Discount" (decimal) and set the default value to 0.00.

```
ALTER TABLE Sales  
ADD Discount decimal(10, 2) DEFAULT 0.00;
```

6. Modify the table using DDL:

Change the data type of the "Quantity" column in the "Sales" table to be smallint.

```
ALTER TABLE Sales  
ALTER COLUMN Quantity SMALLINT;
```

7. Use the SELECT command with WHERE clause:

Retrieve all the orders from the "Sales" table that were made on or after January 3, 2022, and have a quantity greater than or equal to 10.

```
SELECT * FROM Sales  
WHERE Date >= '2022-01-03' AND Quantity >= 10
```

8. Use the SELECT command with ORDER BY and LIMIT:

Retrieve the top 3 sales in the "Sales" table, ordered by price in descending order.

```
SELECT * FROM Sales ORDER BY Price DESC LIMIT 3;
```

9. Use the SUM function to calculate the total sales:

Calculate the total sales amount in the "Sales" table.

```
SELECT SUM(Quantity * Price) AS  
TotalSales FROM Sales;
```

10. Use the AVG function to calculate the average price:

Calculate the average price of all products in the "Sales" table.

```
SELECT AVG(Price) AS Avrg_Prc FROM Sales;
```