

SQL Assignment : Product Table

Objective

This Assignment will help you practice creating a Products table, Inserting data, Updating data and performing various queries.

Instructions

1. Creating the Table: Write a SQL statement to create the Products table with the following structure:

- ProductID (integer, primary key, not null)
- ProductName (nvarchar(50), not null)
- Category (nvarchar(50), not null)
- Price (decimal(10,2), not null)
- StockQuantity (integer, not null)

2. Insert Records: Insert the following records into the Products table:

- (1, 'Laptop', 'Electronics', 1000.00, 50)
- (2, 'Headphones', 'Electronics', 150.00, 200)
- (3, 'Coffee Maker', 'Home Appliances', 80.00, 100)
- (4, 'Blender', 'Home Appliances', 120.00, 80)
- (5, 'Office Chair', 'Furniture', 250.00, 30)

3. Insert One More Record: Insert the additional record:

- (6, 'Desk Lamp', 'Furniture', 250.00, 150)

4. Select All Records : Write a SQL statement to select all records from the Products table.

5. Select Specific Columns : Write a SQL statement to select the ProductName and Price columns from the Products table.

6. Where Clause : Write a SQL statement to select all products in the 'Electronics' category.

7. Order By : Write a SQL statement to select all products and order them by Price in ascending order.

8. Aggregate Function (COUNT) : Write a SQL statement to count the number of products in the Products table.

Solutions :

1. Creating the Table : we can use below SQL statement to create table -

```
CREATE table products (  
    ProductId INT PRIMARY KEY NOT NULL,  
    ProductName NVARCHAR(50) NOT NULL,  
    Category NVARCHAR(50) NOT NULL,  
    Price decimal(10,2) NOT NULL,  
    StockQuantity INT NOT NULL );
```

SQL query successfully executed. However, the result set is empty.

ProductId	ProductName	Category	Price	StockQuantity
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2. Insert Records :

to insert data in products table we can use below SQL statement -

```
INSERT INTO products (ProductId,ProductName,Category,Price,StockQuantity)  
VALUES  
(1, 'Laptop', 'Electronics', 1000.00, 50),  
(2, 'Headphones', 'Electronics', 150.00, 200),  
(3,'Coffee Maker','Home Appliances', 80.00, 100),  
(4,'Blender','Home Appliances', 120.00, 80),  
(5,'Office Chair','Furniture', 250.00, 30) ;
```

SQL query successfully executed. However, the result set is empty.

ProductId	ProductName	Category	Price	StockQuantity
1	Laptop	Electronics	1000	50
2	Headphones	Electronics	150	200
3	Coffee Maker	Home Appliances	80	100
4	Blender	Home Appliances	120	80
5	Office Chair	Furniture	250	30

3. Insert One More Record :

INSERT INTO products (ProductId,ProductName,Category,Price,StockQuantity)
VALUES (6, 'Desk Lamp', 'Furniture', 250.00, 150);

Input

```
Insert into products (ProductId,ProductName,Category,Price,StockQuantity)
VALUES
(6, 'Desk Lamp', 'Furniture', 250.00, 150);
```

Output

SQL query successfully executed. However, the result set is empty.

Available Tables

Productid	ProductName	Category	Price
3	Monitor	Electronics	12000
4	Keyboard	Electronics	400
5	Mousepad	Electronics	250

Products

Productid	ProductName	Category	Price
1	Laptop	Electronics	1000
2	Headphones	Electronics	150
3	Coffee Maker	Home Appliances	80
4	Blender	Home Appliances	120
5	Office Chair	Furniture	250
6	Desk Lamp	Furniture	250

4. Select All Records : SELECT * FROM products;

Input

```
SELECT * FROM products;
```

Output

Productid	ProductName	Category	Price	StockQuantity
1	Laptop	Electronics	1000	50
2	Headphones	Electronics	150	200
3	Coffee Maker	Home Appliances	80	100
4	Blender	Home Appliances	120	80
5	Office Chair	Furniture	250	30

Available Tables

Productid	ProductName	Category	Price
3	Monitor	Electronics	12000
4	Keyboard	Electronics	400
5	Mousepad	Electronics	250

Products

Productid	ProductName	Category	Price
1	Laptop	Electronics	1000
2	Headphones	Electronics	150
3	Coffee Maker	Home Appliances	80
4	Blender	Home Appliances	120
5	Office Chair	Furniture	250
6	Desk Lamp	Furniture	250

Shippings

Input

```
SELECT ProductName, Price FROM products;
```

Output

ProductName	Price
Laptop	1000
Headphones	150
Coffee Maker	80
Blender	120
Office Chair	250

Available Tables

Productid	ProductName	Category	Price
3	Monitor	Electronics	12000
4	Keyboard	Electronics	400
5	Mousepad	Electronics	250

Products

Productid	ProductName	Category	Price
1	Laptop	Electronics	1000
2	Headphones	Electronics	150
3	Coffee Maker	Home Appliances	80
4	Blender	Home Appliances	120
5	Office Chair	Furniture	250
6	Desk Lamp	Furniture	250

Shippings

5. Select Specific Columns : SELECT ProductName, Price FROM products;

6. Where Clause : SELECT * FROM products where Category = 'Electronics' ;

The screenshot shows a database management tool interface. On the left, there's a sidebar with a tree view of tables: country, Orders, Products, and Shippings. The main area is divided into 'Input', 'Output', and 'Available Tables' sections. The 'Input' section contains the SQL query: `SELECT * FROM products where Category = 'Electronics' ;`. The 'Output' section displays a table with 5 columns: ProductId, ProductName, Category, Price, and StockQuantity. It shows two rows of data for Electronics products. The 'Available Tables' section on the right shows a table with 4 columns: ProductId, ProductName, Category, and Price, listing 6 products.

ProductId	ProductName	Category	Price	StockQuantity
1	Laptop	Electronics	1000	50
2	Headphones	Electronics	150	200

ProductId	ProductName	Category	Price
3	Monitor	12000	3
4	Keyboard	400	1
5	Mousepad	250	2

7. Order By : SELECT * FROM products order by Price asc;

The screenshot shows the same database management tool interface. The 'Input' section contains the SQL query: `SELECT * FROM products order by Price asc;`. The 'Output' section displays a table with 5 columns: ProductId, ProductName, Category, Price, and StockQuantity. It shows 6 rows of data sorted by Price in ascending order. The 'Available Tables' section on the right shows a table with 4 columns: ProductId, ProductName, Category, and Price, listing 6 products.

ProductId	ProductName	Category	Price	StockQuantity
3	Coffee Maker	Home Appliances	80	100
4	Blender	Home Appliances	120	80
2	Headphones	Electronics	150	200
5	Office Chair	Furniture	250	30
6	Desk Lamp	Furniture	250	150

ProductId	ProductName	Category	Price
1	Laptop	Electronics	1000
2	Headphones	Electronics	150
3	Coffee Maker	Home Appliances	80
4	Blender	Home Appliances	120
5	Office Chair	Furniture	250
6	Desk Lamp	Furniture	250

8. Aggreade Function (COUNT) : SELECT count(*) AS Number_of_Products from products;

The screenshot shows the same database management tool interface. The 'Input' section contains the SQL query: `SELECT count(*) AS Number_of_Products from products;`. The 'Output' section displays a table with 1 column: Number_of_Products. It shows a single row with the value 6. The 'Available Tables' section on the right shows a table with 4 columns: ProductId, ProductName, Category, and Price, listing 6 products.

Number_of_Products
6

ProductId	ProductName	Category	Price
1	Laptop	Electronics	1000
2	Headphones	Electronics	150
3	Coffee Maker	Home Appliances	80
4	Blender	Home Appliances	120
5	Office Chair	Furniture	250
6	Desk Lamp	Furniture	250