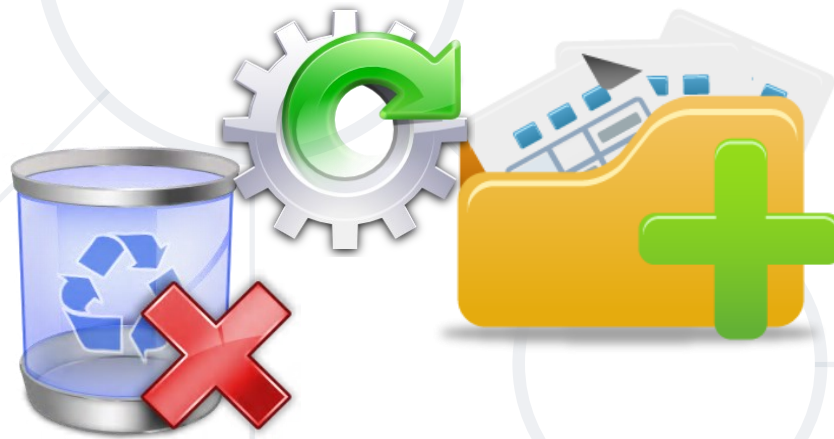# Basic CRUD in SQL Server

Update and Delete Using SQL Queries

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https://softuni.bg

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1. Writing Data
   - INSERT

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Inserting Data

- The SQL **INSERT** command

```
INSERT INTO Towns VALUES (33, 'Paris')
```

```
INSERT INTO Projects (Name, StartDate)
    VALUES ('Reflective Jacket', GETDATE())
```

- **Bulk data** can be recorded in a single query, separated by comma

```
INSERT INTO EmployeesProjects
    VALUES (229, 1),
           (229, 2),
           (229, 3), …
```

Inserting Data (2)

- Inserting rows into existing table:

  List of columns

  ```
  INSERT INTO Projects (Name, StartDate)
      SELECT Name + ' Restructuring', GETDATE()
          FROM Departments
  ```

- Using existing records to create a **new table**:

  ```
  SELECT CustomerID, FirstName, Email, Phone
      INTO CustomerContacts
      FROM Customers
  ```

  New table name

  Existing source

Using SQL UPDATE and DELETE

Deleting Data

- Deleting specific rows from a table

```
DELETE FROM Employees WHERE EmployeeID = 1
```

- Note: Don't forget the **WHERE** clause!

Condition

- Delete all rows from a table (works faster than **DELETE**):

```
TRUNCATE TABLE Users
```

Updating Data

- The SQL UPDATE command

New values

```sql
UPDATE  Employees
    SET LastName = 'Brown'
  WHERE EmployeeID = 1
```

```sql
UPDATE  Employees
    SET Salary = Salary * 1.10,
        JobTitle = 'Senior' + JobTitle
  WHERE DepartmentID = 3
```

- Note: Don't forget the **WHERE** clause!

Problem: Update Projects

- Mark **all unfinished** Projects as being **completed today**
  - Hint: Unfinished projects have their EndDate set to **NULL**

Name	EndDate
Classic Vest	NULL
HL Touring Frame	NULL
LL Touring Frame	NULL
...	...

Name	EndDate
Classic Vest	2017-01-23
HL Touring Frame	2017-01-23
LL Touring Frame	2017-01-23
...	...

- Note: Query **SoftUni** database

Solution: Update Projects


```sql
UPDATE Projects
   SET EndDate = GETDATE()
 WHERE EndDate IS NULL
```

Filter only records
with no value

Summary

- Queries provide a **flexible** and **powerful method** to **manipulate records**

- Write data in tables using **INSERT**

- Modify existing data using **UPDATE** and **DELETE**

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