# Assignment:11

- **Create a Java Program to perform basic CRUD operations on a database.**
- **Develop a Java application to manage student records using JDBC**

**CODE:**

```java
package org.wipro.Assignment11;
import java.sql.*;
import java.time.LocalDate;
public class Student {  new*
    public static void main(String[] args) throws SQLException {  new*

        String url = "jdbc:mysql://localhost:3306/studentdetails";
        String username = "root";
        String password = "SAI0306@s1";
        try {
            Class.forName( className: "com.mysql.cj.jdbc.Driver");
            Connection con = DriverManager.getConnection(url, username, password);
            System.out.println("Connection Successful");
            /*String query = "create table Student(stdid INT primary key, " +
                    "name varchar(255), age INT, grade varchar(10),dataOfJoin DATE)";
            Statement st = con.createStatement();
            st.executeUpdate(query);
            System.out.println("Table Created");
            con.close();*/
            //Insert//
            /* String query = "insert into Student(stdid,name,age,grade,dataOfJoin) VALUES(?,?,?,?,?)";
            PreparedStatement stm=con.prepareStatement(query);
            Random rand=new Random();
            insertdummydata(stm,rand,1,"sai", 21, "A");
            insertdummydata(stm, rand, 2, "roopa", 22, "B");
            insertdummydata(stm, rand, 3, "riya", 23, "C");
            insertdummydata(stm, rand, 4, "pooja", 20, "D");
            insertdummydata(stm, rand, 5, "rekha", 21, "B");
            System.out.println("Data Inserted");*/
```

```java
            //upate//
            /* String query = "update Student set age=22 where stdid=3" ;
            Statement st = con.createStatement();
            int rowsaffected = st.executeUpdate(query);
            System.out.println("Data Updated");
            System.out.println(rowsaffected + " rows are updated successfully with increment of age");
            con.close();*/

            //delete//
                String deletedQuery="delete from Student where dataOfJoin <?";
            PreparedStatement stm=con.prepareStatement(deletedQuery);
            stm.setDate( parameterIndex: 1, Date.valueOf(LocalDate.of( year: 2022, month: 3, dayOfMonth: 22)));
            int rowsaffected=stm.executeUpdate();
            System.out.println(rowsaffected + " rows are deleted successfully");
            con.close();

        } catch (ClassNotFoundException e) {
            System.out.println("mysql jdbc driver is not found in the database");

        } catch (SQLException e) {
            System.out.println("Connection Failed");
        }
    }
}
```
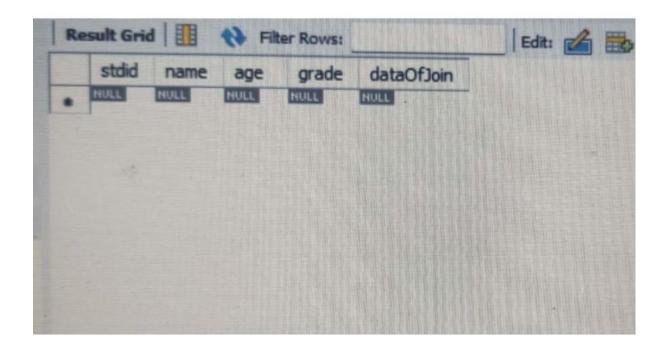
```
/*private static void insertdummydata(PreparedStatement stm, Random rand, int stdid, String name, int age,String grade) throws SQLException {
    stm.setInt(1, stdid);
    stm.setString(2, name);
    stm.setInt(3, age);
    stm.setString(4, grade);
    stm.setDate(5, Date.valueOf(LocalDate.now().minusDays(rand.nextInt(365*5))));
    stm.executeUpdate();*/
}
```

## Output1:

```
"C:\Program Files\Java\jdk-21\bin\java.exe"
Connection Successful
Table Created

Process finished with exit code 0
```
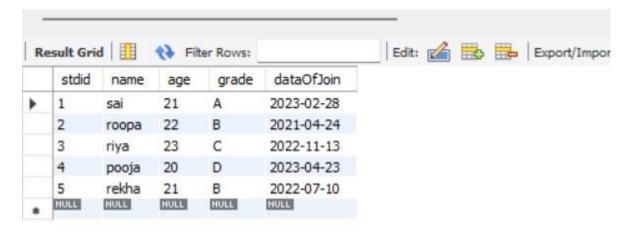


| | stdid | name | age | grade | dataOfJoin |
|---|---|---|---|---|---|
| * | NULL | NULL | NULL | NULL | NULL |

## Output2:

```
"C:\Program Files\Java\jdk-21\bin\java.exe" "-javaagent:C:\Program Files\JetB
Connection Successful
Data Inserted


Process finished with exit code 0
```

| Result Grid | | Filter Rows: | | Edit: | Export/Impor |

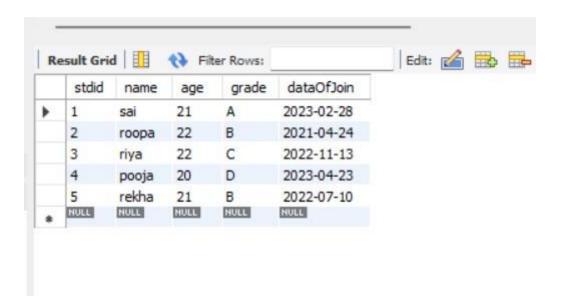| stdid | name | age | grade | dataOfJoin |
|-------|------|-----|-------|------------|
| 1 | sai | 21 | A | 2023-02-28 |
| 2 | roopa | 22 | B | 2021-04-24 |
| 3 | riya | 23 | C | 2022-11-13 |
| 4 | pooja | 20 | D | 2023-04-23 |
| 5 | rekha | 21 | B | 2022-07-10 |
| NULL | NULL | NULL | NULL | NULL |

## Output3:

```
"C:\Program Files\Java\jdk-21\bin\java.exe" "-javaagent:C:\Program
Connection Successful
Data Updated
1 rows are updated successfully with increment of age


Process finished with exit code 0
```

| stdid | name | age | grade | dataOfJoin |
|-------|------|-----|-------|------------|
| 1 | sai | 21 | A | 2023-02-28 |
| 2 | roopa | 22 | B | 2021-04-24 |
| 3 | riya | 22 | C | 2022-11-13 |
| 4 | pooja | 20 | D | 2023-04-23 |
| 5 | rekha | 21 | B | 2022-07-10 |
| NULL | NULL | NULL | NULL | NULL |

**Output4:**

```
"C:\Program Files\Java\jdk-21\bin\java.exe" "-javaagent:C:\
Connection Successful
1 rows are deleted successfully

Process finished with exit code 0
```

| stdid | name | age | grade | dataOfJoin |
|-------|------|-----|-------|------------|
| 1 | sai | 21 | A | 2023-02-28 |
| 3 | riya | 22 | C | 2022-11-13 |
| 4 | pooja | 20 | D | 2023-04-23 |
| 5 | rekha | 21 | B | 2022-07-10 |
| NULL | NULL | NULL | NULL | NULL |