

Experiment no 4

- 1) Implementation of program to modify data from database using JAVA with backend Oracle/SQL.
- 2) Implementation of program to create, insert and delete in database using JAVA with backend Oracle/SQL.

Program –

```
import java.sql.*;
public class Javadatabase1 {
    public static void main(String args[]) {
        try
        {
            Class.forName("oracle.jdbc.driver.OracleDriver");
            // Establishing Connection
            Connection con = DriverManager.getConnection(
            "jdbc:oracle:thin:@localhost:1521:XE", "system", "dbms");
            Statement stmt=con.createStatement();
            //ResultSet rs=stmt.executeQuery("select * from sy");
            //while(rs.next())
            //System.out.println(rs.getString(1)+" "+rs.getInt(2));
            //try {
            //String sql = "CREATE TABLE PERSON (id INTEGER , first VARCHAR(255),last VARCHAR(255), age INTEGER )";
            //stmt.executeUpdate(sql);
            //stmt.executeUpdate("insert into PERSON values(5,'PATIL','PATIL', 23046)");
            stmt.executeUpdate("update PERSON set first='OMKAR', last='YELAVE' where id=5");
            //stmt.executeUpdate("DELETE from PERSON WHERE id=3");
            ResultSet rs=stmt.executeQuery("select * from PERSON");
            while(rs.next())
            System.out.println(rs.getInt(1)+" "+rs.getString(2)+" "+rs.getString(3)+" "+rs.getInt(4) );
            /*catch(SQLException se){}
            }*/
        con.close();
        }
        catch(Exception e)
        {
            //System.out.println("Tuple cannot be inserted."+se);
        }
    }
    //Getting the connection
}
```

Before Inserting new row :

```
1 package com.example.sqloperations;
2 import java.sql.*;
3 import java.util.*;
4 import java.util.logging.*;
5
6 public class SQLoperations {
7
8     // Database connection details
9     private static final String URL = "jdbc:oracle:thin:@localhost:1521:xe";
10    private static final String USER = "scott";
11    private static final String PASS = "tiger";
12
13    // Database connection
14    private static Connection conn;
15
16    // Establish connection
17    private static void connect() throws SQLException {
18        conn = DriverManager.getConnection(URL, USER, PASS);
19    }
20
21    // Insert new row
22    public void insertNewRow() {
23        // SQL query to insert a new row
24        String sql = "INSERT INTO PRACTITIONER (NAME, SEX, AGE, EXAM, WHITE_PETAL) VALUES ('John', 'M', 30, 1, 4)";
25
26        // Execute the query
27        try {
28            Statement stmt = conn.createStatement();
29            stmt.executeUpdate(sql);
30
31            // Fetch and print the data
32            ResultSet rs = stmt.executeQuery("SELECT * FROM PRACTITIONER");
33            while (rs.next()) {
34                System.out.println(rs.getString(1) + " " + rs.getString(2) + " " + rs.getString(3) + " " + rs.getString(4));
35            }
36
37            conn.close();
38        } catch (SQLException e) {
39            System.out.println("Error: " + e.getMessage());
40        }
41    }
42
43    // Main method
44    public static void main(String[] args) {
45        SQLoperations obj = new SQLoperations();
46        obj.insertNewRow();
47    }
48
49 }
```

Output - SQLoperations (run) X

```
1 practitioner name John
2 patient gender M
3 exam petal 30
4 white petal 4
SQL SUCCESSFUL (total time: 0 seconds)
```

#After inserting new row :

```
1 package com.example.sqloperations;
2 import java.sql.*;
3 import java.util.*;
4 import java.util.logging.*;
5
6 public class SQLoperations {
7
8     // Database connection details
9     private static final String URL = "jdbc:oracle:thin:@localhost:1521:xe";
10    private static final String USER = "scott";
11    private static final String PASS = "tiger";
12
13    // Database connection
14    private static Connection conn;
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16    // Establish connection
17    private static void connect() throws SQLException {
18        conn = DriverManager.getConnection(URL, USER, PASS);
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25
26        // Execute the query
27        try {
28            Statement stmt = conn.createStatement();
29            stmt.executeUpdate(sql);
30
31            // Fetch and print the data
32            ResultSet rs = stmt.executeQuery("SELECT * FROM PRACTITIONER");
33            while (rs.next()) {
34                System.out.println(rs.getString(1) + " " + rs.getString(2) + " " + rs.getString(3) + " " + rs.getString(4));
35            }
36
37            conn.close();
38        } catch (SQLException e) {
39            System.out.println("Error: " + e.getMessage());
40        }
41    }
42
43    // Main method
44    public static void main(String[] args) {
45        SQLoperations obj = new SQLoperations();
46        obj.insertNewRow();
47    }
48
49 }
```

Output - SQLoperations (run) X

```
1 practitioner name John
2 patient gender M
3 exam petal 30
4 white petal 4
SQL SUCCESSFUL (total time: 0 seconds)
```

#After updating the row :

```
1 package com.example.sqloperations;
2 import java.sql.*;
3 import java.util.*;
4 import java.util.logging.*;
5
6 public class SQLoperations {
7
8     // Database connection details
9     private static final String URL = "jdbc:oracle:thin:@localhost:1521:xe";
10    private static final String USER = "scott";
11    private static final String PASS = "tiger";
12
13    // Database connection
14    private static Connection conn;
15
16    // Establish connection
17    private static void connect() throws SQLException {
18        conn = DriverManager.getConnection(URL, USER, PASS);
19    }
20
21    // Update row
22    public void updateRow() {
23        // SQL query to update a row
24        String sql = "UPDATE PRACTITIONER SET EXAM = 2, WHITE_PETAL = 4 WHERE NAME = 'John'";
25
26        // Execute the query
27        try {
28            Statement stmt = conn.createStatement();
29            stmt.executeUpdate(sql);
30
31            // Fetch and print the data
32            ResultSet rs = stmt.executeQuery("SELECT * FROM PRACTITIONER");
33            while (rs.next()) {
34                System.out.println(rs.getString(1) + " " + rs.getString(2) + " " + rs.getString(3) + " " + rs.getString(4));
35            }
36
37            conn.close();
38        } catch (SQLException e) {
39            System.out.println("Error: " + e.getMessage());
40        }
41    }
42
43    // Main method
44    public static void main(String[] args) {
45        SQLoperations obj = new SQLoperations();
46        obj.updateRow();
47    }
48
49 }
```

Output - SQLoperations (run) X

```
1 practitioner name John
2 patient gender M
3 exam petal 30
4 white petal 4
SQL SUCCESSFUL (total time: 0 seconds)
```