Experiment-4

Subject Name: Advanced Internet Programming
Subject Code: CAP716/20CAP726

UID: 20MCA1232 **Section/Group:2-A**

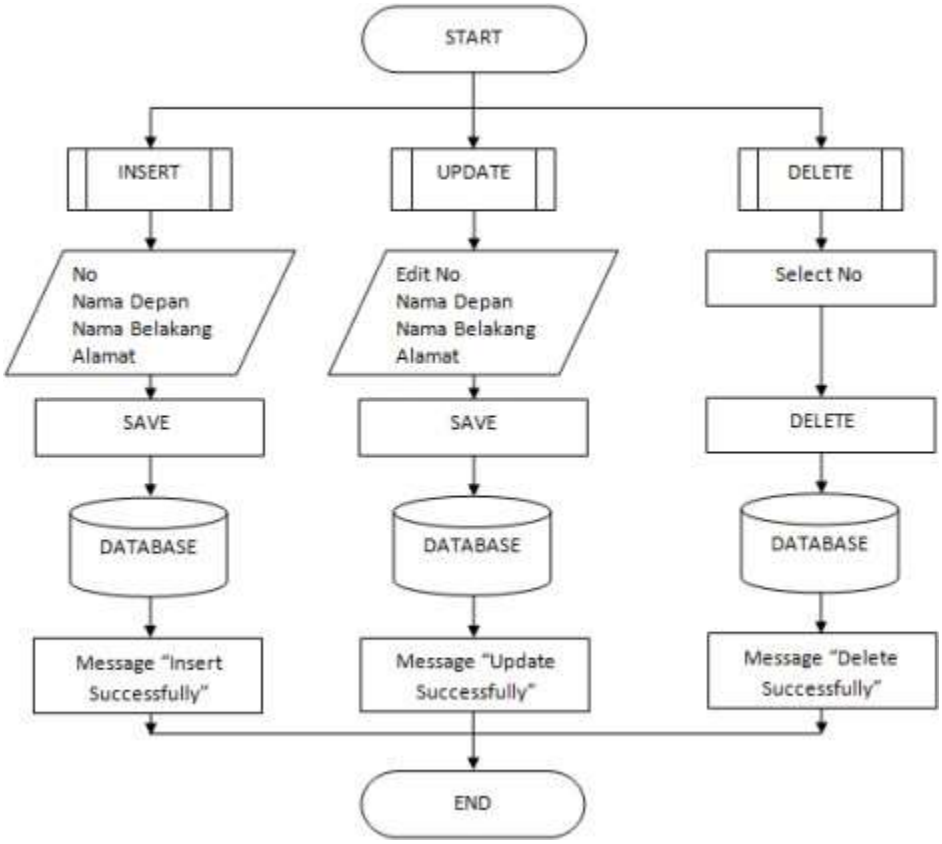
Semester: 1 **Date of Performance: 05.10.20**

Aim/Overview of the practical: Implementation of CRUD operations on JDBC Applications with Oracle-MySQL-PostgreSQL.

Task to be done:
CRUD operations

- Insertion into the database
- Updation from the database
- Searching from the database
- Deletion of records(Row) from the database

Algorithm/Flowchart:



Dataset:

Insertion:

Name	Age
James	23
Julie	24

Update:

SET James Age=34

Search:

List all the records where Age>20

Delete:

Delete the record of Julie.

Code for experiment:

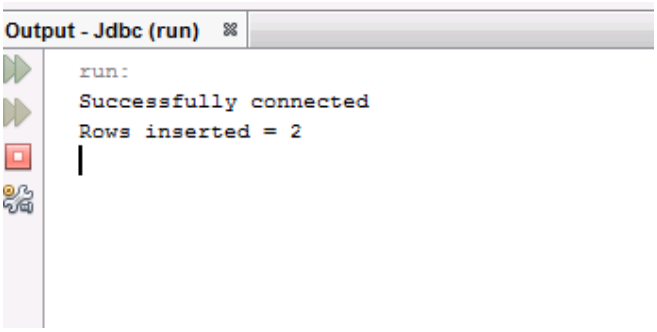
```
public class MyJdbc {

    static Connection connect=null;
    public static Connection connection(String database,String user,String password)
    {

        String url="jdbc:mariadb://localhost:3306/"+database;

        try {
            //register the driver
            DriverManager.registerDriver(new org.mariadb.jdbc.Driver());

            //connecting to database
            connect=DriverManager.getConnection(url,user,password);



        } catch (SQLException ex) {
            Logger.getLogger(MyJdbc.class.getName()).log(Level.SEVERE, null, ex);
        }


        return connect;
    }
```

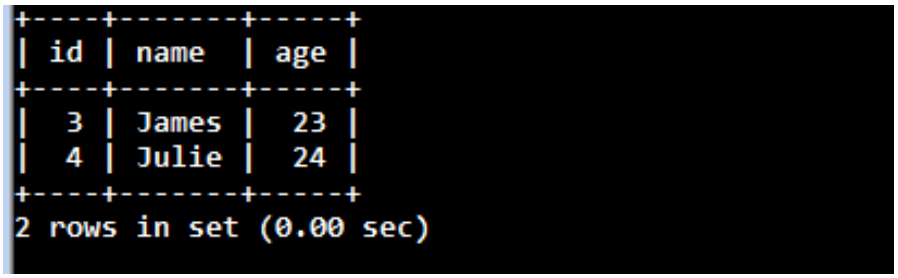
```
    public int insertData(Statement stmt,String table,String data) throws SQLException
    {
        int flag=0;
        String []st=data.split(" ");
       String sql="INSERT INTO "+table+" VALUES ("+st[0]+","+st[1]+")";

        flag=stmt.executeUpdate(sql);
        return flag;
    }

    public int updateData(Statement stmt,String table, String column, String newData,int
id) throws SQLException
    {
         int flag=0;
         String sql="UPDATE "+table+" SET "+column+"="+newData+" WHERE id="+id;
         flag=stmt.executeUpdate(sql);

         return flag;
    }

    public int deleteRow(Statement stmt,String table,int id) throws SQLException
    {
        int flag=0;
        String sql="DELETE FROM "+table+" WHERE id="+id;
        flag=stmt.executeUpdate(sql);
        return flag;
    }

    public void showData(Statement stmt,String table) throws SQLException
    {
        String sql="SELECT * FROM "+table;
         ResultSet rs=stmt.executeQuery(sql);
         while(rs.next())
        System.out.println(rs.getInt(0)+"  "+rs.getString(1)+"  "+rs.getString(2));
    }

}

//main

public class Jdbc {

    /**
     * @param args the command line arguments
     */
    public static void main(String[] args) throws SQLException {
        Scanner scan=new Scanner(System.in);
        // TODO code application logic here
       String url ="jdbc:mariadb://localhost:3306/test"; //update connection string

        String user = "root";//add your db user id here
        String password = "";//add your db password here

        Connection conn = DriverManager.getConnection(url, user, password);
        System.out.println("Successfully connected");

        //insert employee record into database
        Statement stmt = conn.createStatement();
```

```
        int rows = stmt.executeUpdate("insert into employee (age,name)
values(23,'James'),(24,'Julie')");
        System.out.println("Rows inserted = "+ rows);

        scan.next();
        //update employee record
        rows= stmt.executeUpdate("Update employee set age=31 where name='James'");
        System.out.println("Rows updated = "+ rows);
        scan.next();
        //read employee records
        ResultSet rs = stmt.executeQuery("Select * from employee where age>20");
        while(rs.next()){
            System.out.println("Emp Id : " + rs.getInt("id") + ", Name : " +
rs.getString("name") + ", Age : " + rs.getInt("age"));
        }
        scan.next();
        //delete employee record
        rows = stmt.executeUpdate("delete from employee where name = 'Julie'");
        System.out.println("Rows deleted = "+ rows);
    }

}
```

Result:

Insert





Update

```
Output - Jdbc (run)
run:
Successfully connected
Rows inserted = 2

.
Rows updated = 1
```

```
+----+-------+-----+
| id | name  | age |
+----+-------+-----+
|  3 | James |  31 |
|  4 | Julie |  24 |
+----+-------+-----+
2 rows in set (0.00 sec)
```

Search:

```
Emp Id : 3, Name : James, Age : 31
Emp Id : 4, Name : Julie, Age : 24
```

Delete:

```
.
Rows deleted = 1
BUILD SUCCESSFUL (total time: 5 minutes 3 seconds)
```

```
+----+-------+-----+
| id | name  | age |
+----+-------+-----+
|  3 | James |  31 |
+----+-------+-----+
1 row in set (0.00 sec)
```

Learning outcomes:

1. **Creating jdbc connection.**
2. **CRUD operation in jdbc.**