NAME: Khushal Mishra, **UID:** 22BCS11931, **GROUP/SECTION:** 619 - B

EXPERIMENT – 5 (Project Based Learning with Java)

CODE JAVA

```
package name;

import java.sql.*;

public class Mydb {
   private static final String URL = "jdbc:mysql://localhost:3306/exp4.db";
   private static final String USER = "root";
   private static final String PASSWORD = "Scnzcoming@1";
   private Connection connection;


   public Mydb() {
      try {
         Class.forName("com.mysql.cj.jdbc.Driver");
         connection = DriverManager.getConnection(URL, USER, PASSWORD);
         System.out.println(" Database Connected Successfully!");
      } catch (ClassNotFoundException e) {
         System.err.println(" JDBC Driver not found! Add MySQL Connector JAR.");
      } catch (SQLException e) {
         System.err.println(" Connection failed! Check credentials. Error: " + e.getMessage());
      }
   }

   public void getAllEmployees() {
      String query = "SELECT * FROM employee";
      try (Statement stmt = connection.createStatement();
          ResultSet rs = stmt.executeQuery(query)) {
         System.out.println("\n Employee List:");
         while (rs.next()) {
            System.out.println("ID: " + rs.getInt("id") +
                        ", Name: " + rs.getString("name") +
                        ", Salary: " + rs.getDouble("salary"));
         }
      } catch (SQLException e) {
         System.err.println("Error fetching employees: " + e.getMessage());
      }
   }


   public void addEmployee(int id,String name, double salary) {
      String query = "INSERT INTO employee (id,name, salary) VALUES (?,?, ?)";
      try (PreparedStatement stmt = connection.prepareStatement(query)) {
          stmt.setInt(1, id);
         stmt.setString(2, name);
         stmt.setDouble(3, salary);
         stmt.executeUpdate();
         System.out.println("Employee added successfully: " + name);
      } catch (SQLException e) {
         System.err.println(" Error adding employee: " + e.getMessage());
      }
   }
```

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```
  public void removeDuplicateEmployees() {
    String query = "DELETE e1 FROM employee e1 " +
                   "INNER JOIN employee e2 " +
                   "ON e1.name = e2.name AND e1.salary = e2.salary " +
                   "WHERE e1.id > e2.id";
    try (Statement stmt = connection.createStatement()) {
      int rowsDeleted = stmt.executeUpdate(query);
      System.out.println(" 🗑️ " + rowsDeleted + " duplicate records removed.");
    } catch (SQLException e) {
      System.err.println(" Error removing duplicates: " + e.getMessage());
    }
  }


  public void closeConnection() {
    if (connection != null) {
      try {
        connection.close();
        System.out.println("Database Connection Closed.");
      } catch (SQLException e) {
        System.err.println(" Error closing connection: " + e.getMessage());
      }
    }
  }


  public static void main(String[] args) {
    Mydb db = new Mydb();


    db.addEmployee(109,"James", 5000);
    db.addEmployee(110,"Harry Potter", 6000);
    db.addEmployee(111,"John cena", 5500);
    db.addEmployee(112,"Rahul", 8000);
    db.addEmployee(113,"Ram", 5200);
    db.addEmployee(140,"Devi", 6000);


    db.getAllEmployees();


    db.removeDuplicateEmployees();


    db.getAllEmployees();


    db.closeConnection();
  }
}
```

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OUTPUT

```
ID: 108, Name: Krishna1, Salary: 6000.0
ID: 109, Name: Harsh1, Salary: 5500.0
ID: 110, Name: Sartha1k, Salary: 8000.0
ID: 111, Name: John cena, Salary: 5500.0
ID: 112, Name: Rahul, Salary: 8000.0
ID: 113, Name: Ram, Salary: 5200.0
ID: 140, Name: Devi, Salary: 6000.0
ID: 160, Name: Aman1, Salary: 5200.0
🗑 0 duplicate records removed.

📌 Employee List:
ID: 101, Name: John Doe, Salary: 50000.0
ID: 102, Name: Krishna, Salary: 60000.0
ID: 103, Name: Harsh, Salary: 55000.0
ID: 104, Name: Sarthak, Salary: 58000.0
ID: 105, Name: Aman, Salary: 52000.0
ID: 107, Name: John1 Doe, Salary: 5000.0
ID: 108, Name: Krishna1, Salary: 6000.0
ID: 109, Name: Harsh1, Salary: 5500.0
ID: 110, Name: Sartha1k, Salary: 8000.0
ID: 111, Name: John cena, Salary: 5500.0
ID: 112, Name: Rahul, Salary: 8000.0
ID: 113, Name: Ram, Salary: 5200.0
ID: 140, Name: Devi, Salary: 6000.0
ID: 160, Name: Aman1, Salary: 5200.0
```

DATABASE