**CRUD OPERATION 26/05/2025**

**INSERT**

**1)**import java.sql.\*;  
  
public class CRUD {  
 public static void main(String[] args) {  
 String url = "jdbc:mysql://localhost:3306/ORG123";  
 String user = "root";  
 String password = "Harsh@1372";  
  
 try {  
  
 Class.*forName*("com.mysql.cj.jdbc.Driver");  
  
 Connection conn = DriverManager.*getConnection*(url, user, password);  
  
  
 String sql = "INSERT INTO Worker (FIRST\_NAME, LAST\_NAME, SALARY, JOINING\_DATE, DEPARTMENT) VALUES (?, ?, ?, ?, ?)";  
 String query = "SELECT \* FROM Worker";  
  
 PreparedStatement ps = conn.prepareStatement(sql);  
  
  
 ps.setString(1, "Ravi");  
 ps.setString(2, "Sharma");  
 ps.setDouble(3, 75000.0);  
 ps.setTimestamp(4, Timestamp.*valueOf*("2024-05-20 09:00:00"));  
 ps.setString(5, "Tech");  
 ps.executeUpdate();  
  
 ps.setString(1, "Anjali");  
 ps.setString(2, "Mehra");  
 ps.setDouble(3, 65000.0);  
 ps.setTimestamp(4, Timestamp.*valueOf*("2024-05-21 09:00:00"));  
 ps.setString(5, "Marketing");  
 ps.executeUpdate();  
  
 System.*out*.println("2 workers inserted successfully!");  
  
 ps.close();  
 conn.close();  
 } catch (Exception e) {  
 e.printStackTrace();  
 }  
 }  
}

**2)**

import java.sql.\*;  
import java.util.Scanner;  
  
public class Insert {  
 public static void main(String[] args) {  
 String url = "jdbc:mysql://localhost:3306/ORG123";  
 String user = "root";  
 String password = "Harsh@1372";  
 try (  
 Connection conn = DriverManager.*getConnection*(url, user, password);  
 Scanner scanner = new Scanner(System.*in*)  
 ) {  
 Class.*forName*("com.mysql.cj.jdbc.Driver");  
 System.*out*.print("First Name: ");  
 String firstName = scanner.nextLine();  
 System.*out*.print("Last Name: ");  
 String lastName = scanner.nextLine();  
 System.*out*.print("Salary: ");  
 double salary = scanner.nextDouble();  
 scanner.nextLine();  
 System.*out*.print("Department: ");  
 String department = scanner.nextLine();  
 String insertSQL = "INSERT INTO Worker (FIRST\_NAME, LAST\_NAME, SALARY, JOINING\_DATE, DEPARTMENT) VALUES (?, ?, ?, NOW(), ?)";  
 PreparedStatement insertStmt = conn.prepareStatement(insertSQL);  
 insertStmt.setString(1, firstName);  
 insertStmt.setString(2, lastName);  
 insertStmt.setDouble(3, salary);  
 insertStmt.setString(4, department);  
  
 int rowsInserted = insertStmt.executeUpdate();  
 System.*out*.println(rowsInserted + " row(s) inserted successfully.\n");  
  
 insertStmt.close();  
 String selectSQL = "SELECT \* FROM Worker";  
 Statement selectStmt = conn.createStatement();  
 ResultSet rs = selectStmt.executeQuery(selectSQL);  
  
 System.*out*.printf("%-5s %-15s %-15s %-10s %-20s %-15s%n",  
 "ID", "First Name", "Last Name", "Salary", "Joining Date", "Department");  
  
 while (rs.next()) {  
 System.*out*.printf("%-5d %-15s %-15s %-10.2f %-20s %-15s%n",  
 rs.getInt("WORKER\_ID"),  
 rs.getString("FIRST\_NAME"),  
 rs.getString("LAST\_NAME"),  
 rs.getDouble("SALARY"),  
 rs.getTimestamp("JOINING\_DATE"),  
 rs.getString("DEPARTMENT"));  
 }  
  
 rs.close();  
 selectStmt.close();  
  
 } catch (Exception e) {  
 e.printStackTrace();  
 }  
 }  
}

**READ(OPERATION)**

**1)**

import java.sql.\*;  
  
public class Read {  
 public static void main(String[] args) {  
 String url = "jdbc:mysql://localhost:3306/ORG123";  
 String user = "root";  
 String password = "Harsh@1372";  
 try {  
 Class.*forName*("com.mysql.cj.jdbc.Driver");  
 Connection conn = DriverManager.*getConnection*(url, user, password);  
  
 String sql = " SELECT DISTINCT DEPARTMENT\n" +  
 "FROM Worker;";  
 Statement stmt = conn.createStatement();  
 ResultSet rs = stmt.executeQuery(sql);  
  
  
 System.*out*.println(  
 "Department");  
  
 while (rs.next()) {  
 System.*out*.println(  
 rs.getString("DEPARTMENT"));  
 }  
  
 } catch (Exception e) {  
 e.printStackTrace();  
 }  
 }  
}

**2)**

import java.sql.\*;  
  
public class Read1 {  
 public static void main(String[] args) {  
 String url = "jdbc:mysql://localhost:3306/ORG123";  
 String user = "root";  
 String password = "Harsh@1372";  
  
 try {  
 Class.*forName*("com.mysql.cj.jdbc.Driver");  
 Connection conn = DriverManager.*getConnection*(url, user, password);  
 String sql = "SELECT WORKER\_ID, FIRST\_NAME, LAST\_NAME, SALARY, DEPARTMENT " +  
 "FROM Worker WHERE SALARY BETWEEN 90000 AND 100000";  
 Statement stmt = conn.createStatement();  
 ResultSet rs = stmt.executeQuery(sql);  
 System.*out*.printf("%-10s %-15s %-15s %-10s %-15s%n",  
 "WORKER\_ID", "FIRST\_NAME", "LAST\_NAME", "SALARY", "DEPARTMENT");  
  
 while (rs.next()) {  
 System.*out*.printf("%-10d %-15s %-15s %-10.2f %-15s%n",  
 rs.getInt("WORKER\_ID"),  
 rs.getString("FIRST\_NAME"),  
 rs.getString("LAST\_NAME"),  
 rs.getDouble("SALARY"),  
 rs.getString("DEPARTMENT"));  
 }  
  
 } catch (Exception e) {  
 e.printStackTrace();  
 }  
 }  
}

**UPDATE(Using Scanner)**

**1)**

import java.sql.\*;  
import java.util.Scanner;  
  
public class Update {  
 public static void main(String[] args) {  
 String url = "jdbc:mysql://localhost:3306/ORG123";  
 String user = "root";  
 String password = "Harsh@1372";  
  
 try (  
 Connection conn = DriverManager.*getConnection*(url, user, password);  
 Scanner scanner = new Scanner(System.*in*)  
 ) {  
 Class.*forName*("com.mysql.cj.jdbc.Driver");  
 System.*out*.print("Enter WORKER\_ID to update: ");  
 int workerId = scanner.nextInt();  
  
 System.*out*.print("Enter new Salary: ");  
 double newSalary = scanner.nextDouble();  
 String sql = "UPDATE Worker SET SALARY = ? WHERE WORKER\_ID = ?";  
 PreparedStatement pstmt = conn.prepareStatement(sql);  
 pstmt.setDouble(1, newSalary);  
 pstmt.setInt(2, workerId);  
  
 int rowsUpdated = pstmt.executeUpdate();  
  
 String select = "SELECT \* FROM Worker WHERE WORKER\_ID = ?";  
 PreparedStatement showStmt = conn.prepareStatement(select);  
 showStmt.setInt(1, workerId);  
 ResultSet rs = showStmt.executeQuery();  
  
 System.*out*.println("\nUpdated Worker Info:");  
 while (rs.next()) {  
 System.*out*.printf("%-5d %-15s %-15s %-10.2f %-20s %-15s%n",  
 rs.getInt("WORKER\_ID"),  
 rs.getString("FIRST\_NAME"),  
 rs.getString("LAST\_NAME"),  
 rs.getDouble("SALARY"),  
 rs.getTimestamp("JOINING\_DATE"),  
 rs.getString("DEPARTMENT"));  
 }  
  
 } catch (Exception e) {  
 e.printStackTrace();  
 }  
 }  
}

**ALTER(Using Scanner)**

import java.sql.\*;  
import java.util.Scanner;  
  
public class Alter{  
 public static void main(String[] args) {  
 String url = "jdbc:mysql://localhost:3306/ORG123";  
 String user = "root";  
 String password = "Harsh@1372";  
  
 try (  
 Scanner scanner = new Scanner(System.*in*);  
 Connection conn = DriverManager.*getConnection*(url, user, password)  
 ) {  
 Class.*forName*("com.mysql.cj.jdbc.Driver");  
 System.*out*.print("Enter new column name: ");  
 String columnName = scanner.nextLine().trim();  
  
 System.*out*.print("Enter data type: ");  
 String dataType = scanner.nextLine().trim();  
 String alterQuery = "ALTER TABLE Worker ADD COLUMN " + columnName + " " + dataType;  
  
 Statement stmt = conn.createStatement();  
 stmt.executeUpdate(alterQuery);  
 System.*out*.println(" Column " + columnName + "' of type '" + dataType + "' added successfully.");  
  
 stmt.close();  
 } catch (Exception e) {  
 e.printStackTrace();  
 }  
 }  
}

**DELETE**

**1)**

import java.sql.\*;  
import java.util.Scanner;  
  
public class Delete {  
 public static void main(String[] args) {  
 String url = "jdbc:mysql://localhost:3306/ORG123";  
 String user = "root";  
 String password = "Harsh@1372";  
  
 try (  
 Scanner scanner = new Scanner(System.*in*);  
 Connection conn = DriverManager.*getConnection*(url, user, password)  
 ) {  
 Class.*forName*("com.mysql.cj.jdbc.Driver");  
  
 System.*out*.print("Enter WORKER\_ID to delete: ");  
 int workerId = scanner.nextInt();  
  
 String sql = "DELETE FROM Worker WHERE WORKER\_ID = ?";  
 PreparedStatement pstmt = conn.prepareStatement(sql);  
 pstmt.setInt(1, workerId);  
  
 int rowsAffected = pstmt.executeUpdate();  
 System.*out*.println(" Worker with ID " + workerId + " deleted successfully.");  
  
 pstmt.close();  
 } catch (Exception e) {  
 e.printStackTrace();  
 }  
 }  
}

**2)**

import java.sql.\*;  
import java.util.Scanner;  
  
public class Delete1 {  
 public static void main(String[] args) {  
 String url = "jdbc:mysql://localhost:3306/ORG123";  
 String user = "root";  
 String password = "Harsh@1372";  
  
 try (  
 Scanner scanner = new Scanner(System.*in*);  
 Connection conn = DriverManager.*getConnection*(url, user, password)  
 ) {  
 Class.*forName*("com.mysql.cj.jdbc.Driver");  
  
 System.*out*.print("Enter column name to delete from Worker table: ");  
 String columnName = scanner.nextLine().trim();  
  
 String sql = "ALTER TABLE Worker DROP COLUMN " + columnName;  
  
 Statement stmt = conn.createStatement();  
 stmt.executeUpdate(sql);  
  
 System.*out*.println(" Column " + columnName + "' deleted successfully.");  
  
 stmt.close();  
 } catch (Exception e) {  
 e.printStackTrace();  
 }  
 }  
}