

```
//Insert multiple in coursereregistration

package jdbc_demo;

import java.sql.Connection;
import java.sql.DriverManager;
import java.sql.PreparedStatement;

public class InsertMultipleCourses {

    public static void main(String[] args) {

        String url="jdbc:mysql://localhost:3306/course_db";

        String user ="root";

        String password = "Mukesh@2003";

        String [][] courses= {

            {"21","JavaFullStack","George","34"},

            {"22",".NetFullStack","Robert","30"},

            {"23","AI ML","Guido","24"},

            {"24","Cloud Computing","Charless","14"},

            {"25","PythonFullstack","Romeo","27"}

        };

        try {

            //load

            Class.forName("com.mysql.cj.jdbc.Driver");

            //connection
```

```

        Connection con =
DriverManager.getConnection(url,user,password);

        //System.out.println("Connected to database");

        String sqlin= "INSERT INTO
courses(course_id,course_name,faculty,credits) VALUES(?,?,?,?)"
con.prepareStatement(sqlin);

        PreparedStatement stmt =

con.prepareStatement(sqlin);

        for (String[] stud : courses) {
            stmt.setInt(1, Integer.parseInt(stud[0]));
            stmt.setString(2, stud[1]);
            stmt.setString(3, stud[2]);
            stmt.setInt(4, Integer.parseInt(stud[3]));
            stmt.executeUpdate();
        }

        System.out.println("All records are inserted
sucessfully");

        stmt.close();

        con.close();

    }

    catch(Exception e) {

        System.out.println("Connection error"+e);

    }

}

}

}

//OUTPUT

```

ID	Name	Faculty	Cresdits
21	JavaFullStack	George	34
22	.NetFullStack	Robert	30
23	AI ML	Elon	40
24	Cloud Computing	Charless	14
25	PythonFullstack	Romeo	27

```
//select
```

```
package jdbc_demo;
```

```
import java.sql.Connection;
```

```
import java.sql.DriverManager;
```

```
import java.sql.ResultSet;
```

```
import java.sql.Statement;
```

```
public class SelectListCourses {
```

```
    public static void main(String[] args) {
```

```
        String url="jdbc:mysql://localhost:3306/course_db";
```

```
        String user ="root";
```

```
        String password = "Mukesh@2003";
```

```
        try {
```

```
            //load
```

```
            Class.forName("com.mysql.cj.jdbc.Driver");
```

```
            //connection
```

```
            Connection con =
```

```
            DriverManager.getConnection(url,user,password);
```

```

Statement stmt = con.createStatement();

String sql = "SELECT * FROM courses";

ResultSet rs = stmt.executeQuery(sql);

System.out.println("ID\tName\tFaculty\tCresdits");

System.out.println("-----");

while(rs.next())

{

    int course_id = rs.getInt("course_id");

    String course_name =

rs.getString("course_name");

    String faculty = rs.getString("faculty");

    int credits = rs.getInt("credits");

    System.out.println(course_id + "\t" +

course_name + "\t" + faculty + "\t"+credits);

}

stmt.close();

con.close();

}

catch(Exception e) {

    System.out.println("Connection error"+e);

}

}

}

```

o/p:

ID	Name	Faculty	Cresdits
----	------	---------	----------

21	JavaFullStack	George	34
22	.NetFullStack	Robert	30
23	AI ML	Elon	40
24	Cloud Computing	Charless	14
25	PythonFullstack	Romeo	27

//update

package jdbc_demo;

import java.sql.Connection;

import java.sql.DriverManager;

import java.sql.PreparedStatement;

public class UpdateCourse {

public static void main(String[] args) {

String url = "jdbc:mysql://localhost:3306/course_db";

String user = "root";

String password = "Mukesh@2003";

try {

 // Load the MySQL JDBC Driver

 Class.forName("com.mysql.cj.jdbc.Driver");

 // Establish the connection

 Connection con = DriverManager.getConnection(url, user, password);

 // SQL UPDATE query

```

String sql = "UPDATE courses SET faculty = ?, credits = ? WHERE course_id = ?";

// Prepare the statement
PreparedStatement pstmt = con.prepareStatement(sql);

// Set values (example: update course_id 23's faculty to 'Elon' and credits to 40)
pstmt.setString(1, "Mellon");
pstmt.setInt(2, 40);
pstmt.setInt(3, 23);

int rowsUpdated = pstmt.executeUpdate();

if (rowsUpdated > 0) {
    System.out.println("Record updated successfully!");
} else {
    System.out.println("No course found with the given course_id.");
}

pstmt.close();
con.close();

} catch (Exception e) {
    System.out.println("Connection error: " + e);
}
}

}

Output: Record updated successfully!

//delete

```

```
package jdbc_demo;

import java.sql.Connection;
import java.sql.DriverManager;
import java.sql.PreparedStatement;

public class DeleteCourse {

    public static void main(String[] args) {

        String url = "jdbc:mysql://localhost:3306/course_db";
        String user = "root";
        String password = "Mukesh@2003";

        try {

            // Load MySQL JDBC Driver
            Class.forName("com.mysql.cj.jdbc.Driver");

            // Establish the connection
            Connection con = DriverManager.getConnection(url, user, password);

            // SQL DELETE query
            String sql = "DELETE FROM courses WHERE course_id = ?";

            // Prepare the statement
            PreparedStatement pstmt = con.prepareStatement(sql);

            // Set value (example: delete course with course_id 23)
            pstmt.setInt(1, 23);
```

```

int rowsDeleted = pstmt.executeUpdate();

if (rowsDeleted > 0) {
    System.out.println("Record deleted successfully!");
} else {
    System.out.println("No course found with the given course_id.");
}

pstmt.close();
con.close();

} catch (Exception e) {
    System.out.println("Connection error: " + e);
}
}
}

```

Output:

course_id	course_name	faculty	credits
21	JavaFullStack	George	34
22	.NetFullStack	Robert	30
24	Cloud Computing	Charless	14
25	PythonFullstack	Romeo	27

Case study 2:

Insert product:

```
package jdbc_demo;
```



```
import java.sql.*;

public class InsertProduct {

    public static void main(String[] args) {

        String url = "jdbc:mysql://localhost:3306/inventory_db";

        String user = "root";

        String password = "Mukesh@2003";

        try {

            Class.forName("com.mysql.cj.jdbc.Driver");

            Connection con = DriverManager.getConnection(url, user, password);

            String sql = "INSERT INTO products(product_id, product_name, quantity, price)
VALUES (?, ?, ?, ?)";

            PreparedStatement pstmt = con.prepareStatement(sql);

            pstmt.setInt(1, 101);

            pstmt.setString(2, "Bluetooth Speaker");

            pstmt.setInt(3, 50);

            pstmt.setDouble(4, 1499.99);

            int rows = pstmt.executeUpdate();

            System.out.println(rows + " product inserted.");

            pstmt.close();

            con.close();

        } catch (Exception e) {

            e.printStackTrace();

        }

    }

}
```

```
}  
}
```

OUTPUT:

1 product inserted.

//Select

```
package jdbc_demo;
```

```
import java.sql.*;
```

```
public class ViewProducts {
```

```
    public static void main(String[] args) {
```

```
        String url = "jdbc:mysql://localhost:3306/inventory_db";
```

```
        String user = "root";
```

```
        String password = "Mukesh@2003";
```

```
        try {
```

```
            Class.forName("com.mysql.cj.jdbc.Driver");
```

```
            Connection con = DriverManager.getConnection(url, user, password);
```

```
            Statement stmt = con.createStatement();
```

```
            ResultSet rs = stmt.executeQuery("SELECT * FROM products");
```

```
            System.out.println("ID\tName\tQty\tPrice");
```

```
            System.out.println("-----");
```

```
            while (rs.next()) {
```

```
                int id = rs.getInt("product_id");
```

```
                String name = rs.getString("product_name");
```

```

        int qty = rs.getInt("quantity");

        double price = rs.getDouble("price");

        System.out.println(id + "\t" + name + "\t" + qty + "\t" + price);
    }

    stmt.close();
    con.close();
} catch (Exception e) {
    e.printStackTrace();
}
}
}

```

Output:

ID	Name	Qty	Price
101	Bluetooth Speaker	50	1499.99

//Update

```
package jdbc_demo;
```

```
import java.sql.*;
```

```

public class UpdateProduct {

    public static void main(String[] args) {

        String url = "jdbc:mysql://localhost:3306/inventory_db";

        String user = "root";

        String password = "Mukesh@2003";
    }
}

```

```
try {  
    Class.forName("com.mysql.cj.jdbc.Driver");  
    Connection con = DriverManager.getConnection(url, user, password);  
  
    String sql = "UPDATE products SET quantity = ? WHERE product_id = ?";  
    PreparedStatement pstmt = con.prepareStatement(sql);  
  
    pstmt.setInt(1, 40); // New quantity  
    pstmt.setInt(2, 101); // product_id to update  
  
    int rows = pstmt.executeUpdate();  
    System.out.println(rows + " product(s) updated.");  
  
    pstmt.close();  
    con.close();  
} catch (Exception e) {  
    e.printStackTrace();  
}  
}
```

Output:

1 product(s) updated.