Task 1: Connect to Mysql Database

In this task I have created one class **MysqlDBConnection** in which i created **myDBgetConnection()** method. In this methos I write Database Connection code as following.

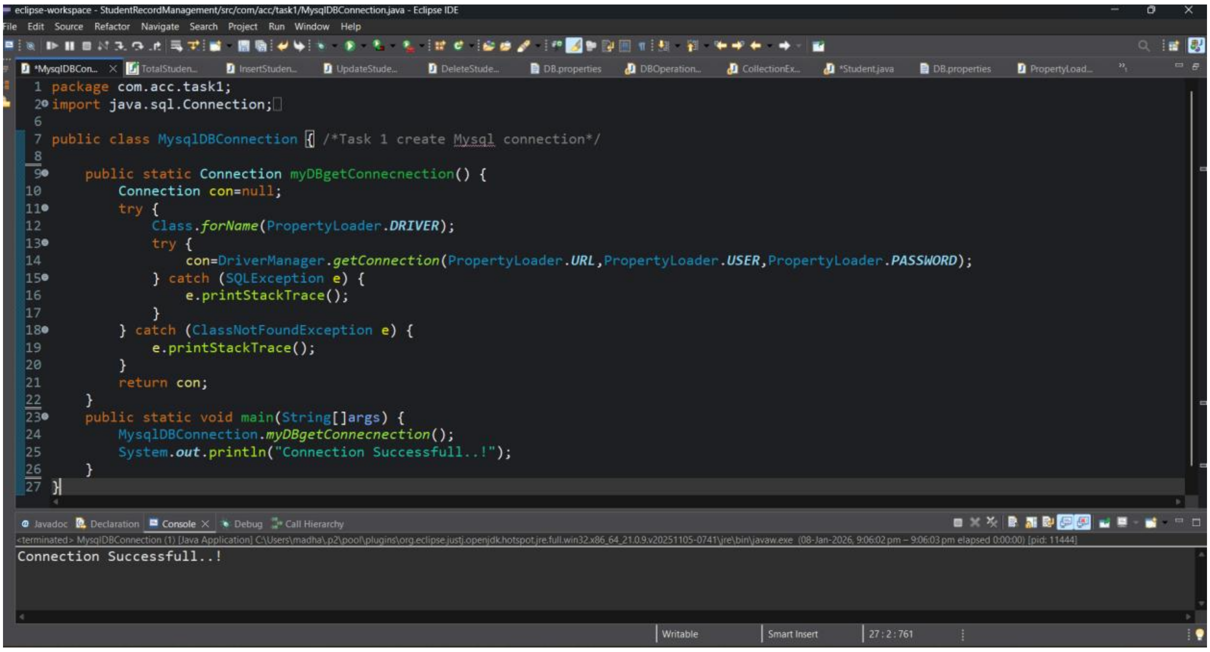
1. Created **Connection con** reference variable

2.**Rrgistered Driver** using **DriverManager.getConnection()** method and pass the url,username,password

3.Call the **myDBgetConnection()** method in main method

4.Run the program

5.Output- printed message **“Connection successful..!”.**



eclipse-workspace - StudentRecordManagement/src/com/acc/task1/MysqlDBConnection.java - Eclipse IDE

File Edit Source Refactor Navigate Search Project Run Window Help
*MysqlDBCon... TotalStuden... InsertStuden... UpdateStude... DeleteStude... DB.properties DBOperation... CollectionEx... *Student.java DB.properties PropertyLoad...

```java
package com.acc.task1;
import java.sql.Connection;

public class MysqlDBConnection { /*Task 1 create Mysql connection*/

    public static Connection myDBgetConnecnection() {
        Connection con=null;
        try {
            Class.forName(PropertyLoader.DRIVER);
            try {
                con=DriverManager.getConnection(PropertyLoader.URL,PropertyLoader.USER,PropertyLoader.PASSWORD);
            } catch (SQLException e) {
                e.printStackTrace();
            }
        } catch (ClassNotFoundException e) {
            e.printStackTrace();
        }
        return con;
    }
    public static void main(String[]args) {
        MysqlDBConnection.myDBgetConnecnection();
        System.out.println("Connection Successfull..!");
    }
}
```

```
<terminated> MysqlDBConnection (1) [Java Application] C:\Users\madha\.p2\pool\plugins\org.eclipse.justj.openjdk.hotspot.jre.full.win32.x86_64_21.0.9.v20251105-0741\jre\bin\javaw.exe (08-Jan-2026, 9:06:02 pm – 9:06:03 pm elapsed 0:00:00) [pid: 11444]
Connection Successfull..!
```

Task 2: Display All Students

In this task I have Display all the record from database using “Select Query” through java application.I creaded one class **TotalStudent** ,in which I created **displayAllStudent()** method In this method I write the logic for printing Student records from database .

1.Created connection by calling method **myDBgetConnection()** which contains connection code.

2.Used **Statement Interface** for creating statement

3 execucute the query using **executeQuery();**

4.storeed record in **resultSet rs**

5.Retrive records from **rs** using getInt/getString method and stored in **object** of type **TotalStudent.**

6.Created the reference of **List<Total Student> stu** and created **Object of Arraylist** --(Used Generic Collection)

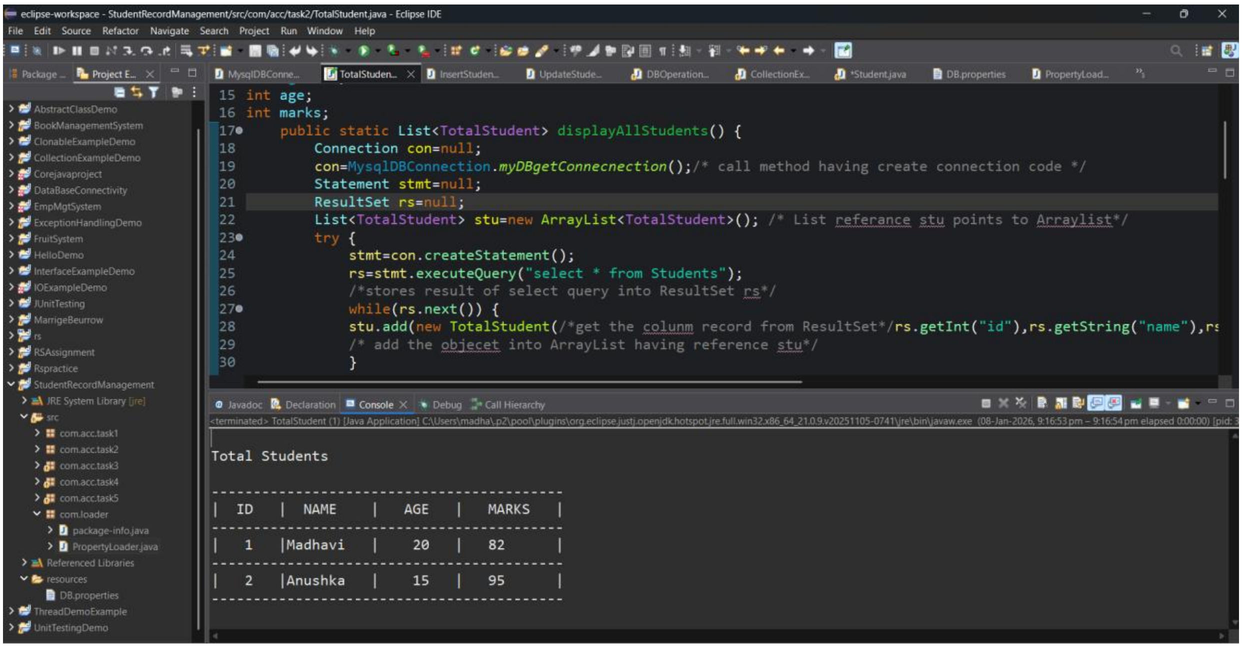
7.Stored the **TotalStudent type object** into **ArrayList stu** using **add()** method of collection.

8.closed connection using **close()** method.

9. Returned **ArrayList stu.**

10.Call **displayAllStudent()** in main method.

11.Print record from **ArrayList stu** using **Inhance for Loop**



eclipse-workspace - StudentRecordManagement/src/com/acc/task2/TotalStudent.java - Eclipse IDE

```java
int age;
int marks;
    public static List<TotalStudent> displayAllStudents() {
        Connection con=null;
        con=MysqlDBConnection.myDBgetConnecnection();/* call method having create connection code */
        Statement stmt=null;
        ResultSet rs=null;
        List<TotalStudent> stu=new ArrayList<TotalStudent>(); /* List referance stu points to Arraylist*/
        try {
            stmt=con.createStatement();
            rs=stmt.executeQuery("select * from Students");
            /*stores result of select query into ResultSet rs*/
            while(rs.next()) {
            stu.add(new TotalStudent(/*get the colunm record from ResultSet*/rs.getInt("id"),rs.getString("name"),rs
            /* add the objecet into ArrayList having reference stu*/
            }
```

<terminated> TotalStudent (1) [Java Application] C:\Users\madha\.p2\pool\plugins\org.eclipse.justj.openjdk.hotspot.jre.full.win32.x86_64_21.0.9.v20251105-0741\jre\bin\javaw.exe (08-Jan-2026, 9:16:53 pm – 9:16:54 pm elapsed 0:00:00) [pid: 3

```
Total Students

---------------------------------------
|  ID   |  NAME      |   AGE   |   MARKS    |
---------------------------------------
|   1   |Madhavi     |    20   |   82       |
---------------------------------------
|   2   |Anushka     |    15   |   95       |
---------------------------------------
```

Task 3: Insert Student Record

In this task I have insert the student Details into the database. through the java application

Using “insert Query”.I created one class **InsertStudentRecord** in this class I created one method **stuInfoInsertion()** containing the logic of Inert record into database as follow.

1.Created connection by calling method **myDBgetConnection()** which contains connection code.

2.create statement using **PreparedStatement psmt**

3.call **preparedStatement()** and pass insert query as argument.

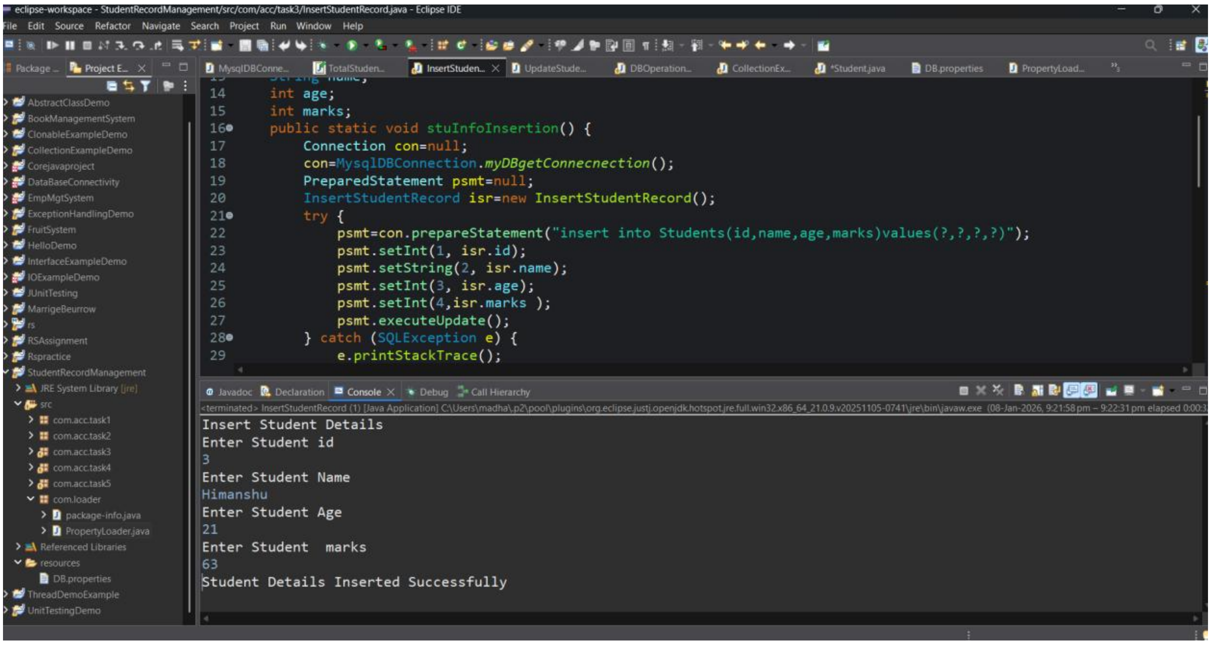
4.take value from user using **Scanner** object

5.stored that value using setInt() method into **psmt** and pass to insert query .

6.execute the statement using **executeUpdate() .**

7. closed connection using **close()** method.

8.call **stuInfoInsertion()** in main method and print Insetion successfull message.



eclipse-workspace - StudentRecordManagement/src/com/acc/task3/InsertStudentRecord.java - Eclipse IDE

```java
    int age;
    int marks;
    public static void stuInfoInsertion() {
        Connection con=null;
        con=MysqlDBConnection.myDBgetConnecnection();
        PreparedStatement psmt=null;
        InsertStudentRecord isr=new InsertStudentRecord();
        try {
            psmt=con.prepareStatement("insert into Students(id,name,age,marks)values(?,?,?,?)");
            psmt.setInt(1, isr.id);
            psmt.setString(2, isr.name);
            psmt.setInt(3, isr.age);
            psmt.setInt(4,isr.marks );
            psmt.executeUpdate();
        } catch (SQLException e) {
            e.printStackTrace();
```

<terminated> InsertStudentRecord (1) [Java Application] C:\Users\madha\.p2\pool\plugins\org.eclipse.justj.openjdk.hotspot.jre.full.win32.x86_64_21.0.9.v20251105-0741\jre\bin\javaw.exe (08-Jan-2026, 9:21:58 pm – 9:22:31 pm elapsed 0:00:3

```
Insert Student Details
Enter Student id
3
Enter Student Name
Himanshu
Enter Student Age
21
Enter Student  marks
63
Student Details Inserted Successfully
```

Task 4: Update Student Marks

In this task I have update the student **marks** by student **id** using “update query” through java application. I have created one class **UpdateStudentRecord** in which I created **stuInfoupdation()** method containing logic for updating record of database as follow.

1.Created connection by calling method **myDBgetConnection()** which contains connection code.

2.create statement using **PreparedStatement psmt**

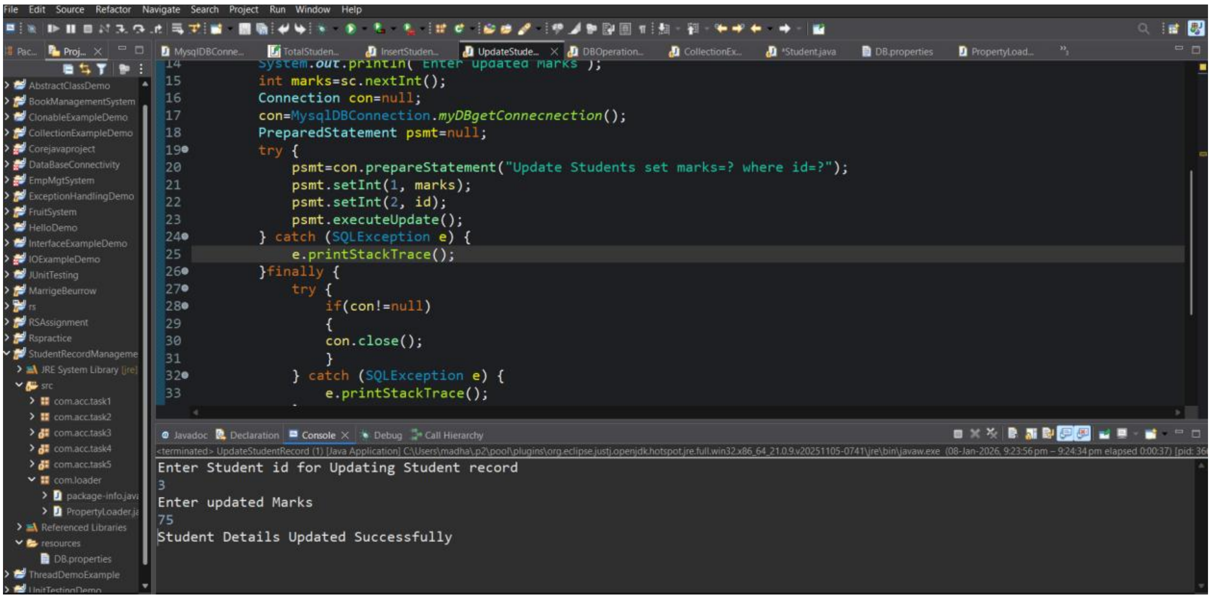
3.take value of id from user using **Scanner** object

4.call **preparedStatement()** and pass update query as argument.

5.execute the statement using **executeUpdate() .**

6. closed connection using **close()** method.

8.call **stuInfoupdation()** in main method and print updation successfull message.



```java
        System.out.println("Enter updated Marks");
        int marks=sc.nextInt();
        Connection con=null;
        con=MysqlDBConnection.myDBgetConnecnection();
        PreparedStatement psmt=null;
        try {
            psmt=con.prepareStatement("Update Students set marks=? where id=?");
            psmt.setInt(1, marks);
            psmt.setInt(2, id);
            psmt.executeUpdate();
        } catch (SQLException e) {
            e.printStackTrace();
        }finally {
            try {
                if(con!=null)
                {
                con.close();
                }
            } catch (SQLException e) {
                e.printStackTrace();
```

```
<terminated> UpdateStudentRecord (1) [Java Application] C:\Users\madha\.p2\pool\plugins\org.eclipse.justj.openjdk.hotspot.jre.full.win32.x86_64_21.0.9.v20251105-0741\jre\bin\javaw.exe (08-Jan-2026, 9:23:56 pm – 9:24:34 pm elapsed 0:00:37) [pid: 36
Enter Student id for Updating Student record
3
Enter updated Marks
75
Student Details Updated Successfully
```

Task 5: Delete Student Record

In this task I have delete the student record by student **id** using “delete query” through java application. I have created one class **DeleteStudentRecord** in which I created **stuInfoDeletion()** method containing logic for deleting record from database as follow.

1.Created connection by calling method **myDBgetConnection()** which contains connection code.

2.create statement using **PreparedStatement psmt**

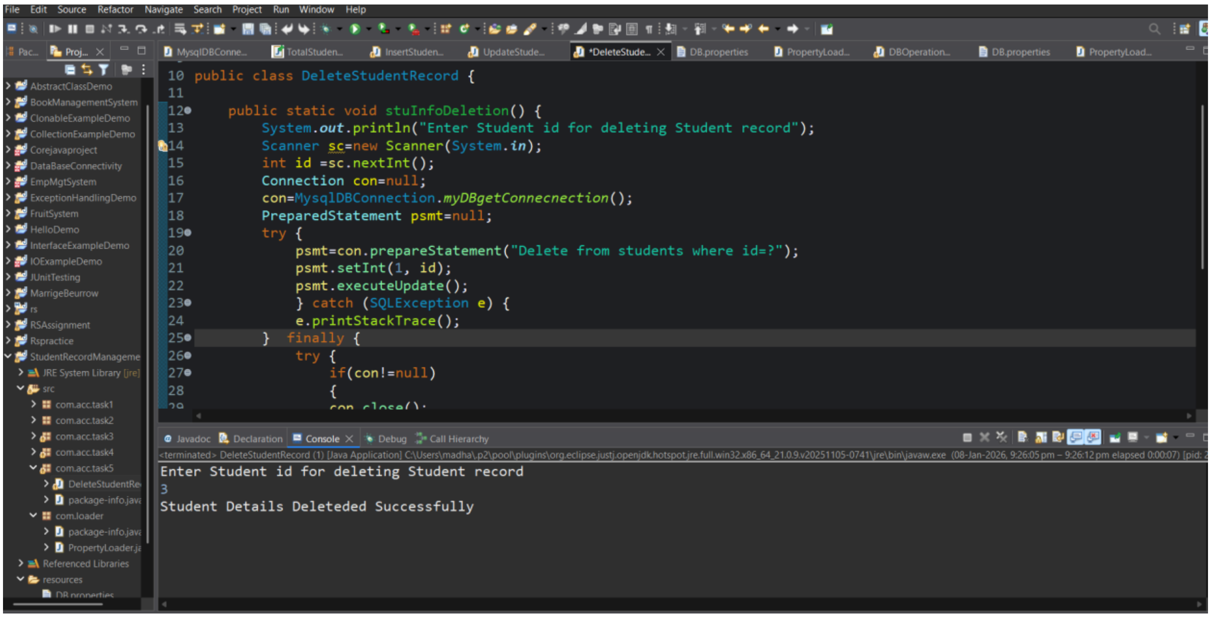
3.take value of id from user using **Scanner** object

4.call **preparedStatement()** and pass delete query as argument.

5.execute the statement using **executeUpdate() .**

6. closed connection using **close()** method.

8.call **stuInfoDeletion()** in main method and print updation successfull message.



```java
public class DeleteStudentRecord {

    public static void stuInfoDeletion() {
        System.out.println("Enter Student id for deleting Student record");
        Scanner sc=new Scanner(System.in);
        int id =sc.nextInt();
        Connection con=null;
        con=MysqlDBConnection.myDBgetConnecnection();
        PreparedStatement psmt=null;
        try {
            psmt=con.prepareStatement("Delete from students where id=?");
            psmt.setInt(1, id);
            psmt.executeUpdate();
            } catch (SQLException e) {
            e.printStackTrace();
        }  finally {
            try {
                if(con!=null)
                {
                con.close();
```

```
<terminated> DeleteStudentRecord (1) [Java Application] C:\Users\madha\.p2\pool\plugins\org.eclipse.justj.openjdk.hotspot.jre.full.win32.x86_64_21.0.9.v20251105-0741\jre\bin\javaw.exe  (08-Jan-2026, 9:26:05 pm – 9:26:12 pm elapsed 0:00:07) [pid:
Enter Student id for deleting Student record
3
Student Details Deleteded Successfully
```