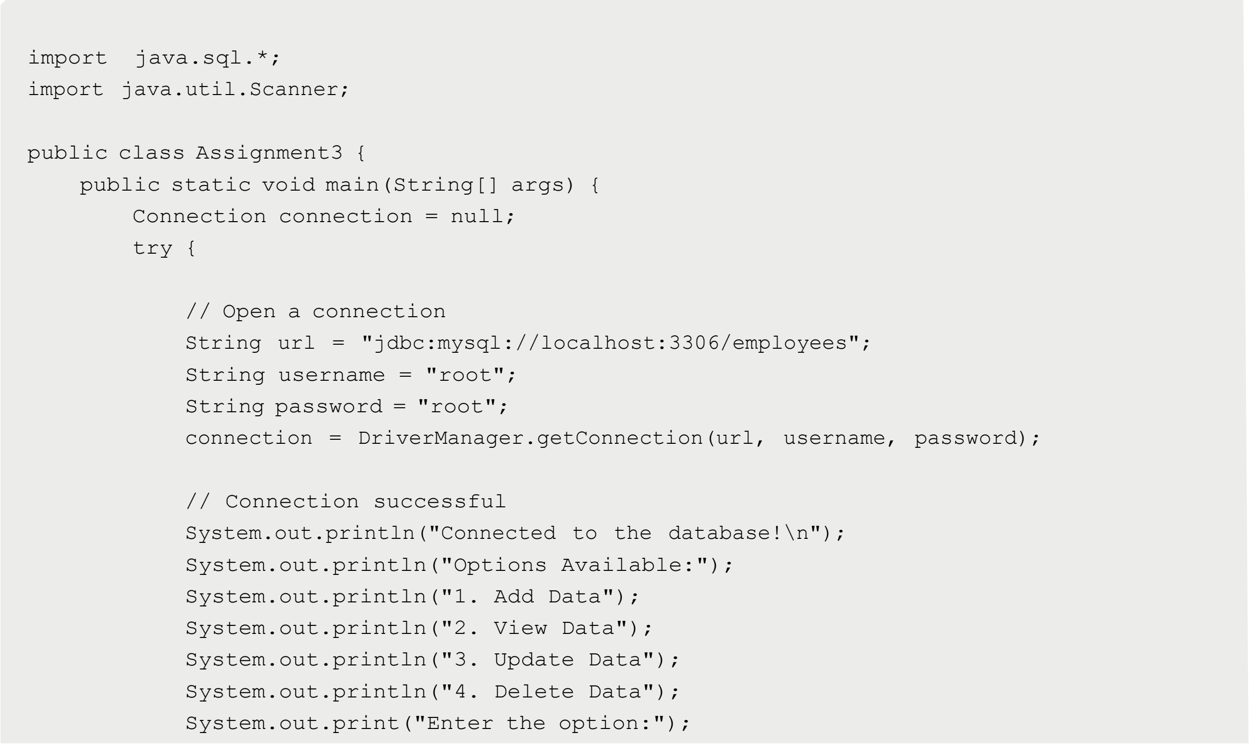
Mayur Gupta 20BCE2172

Assignment 3

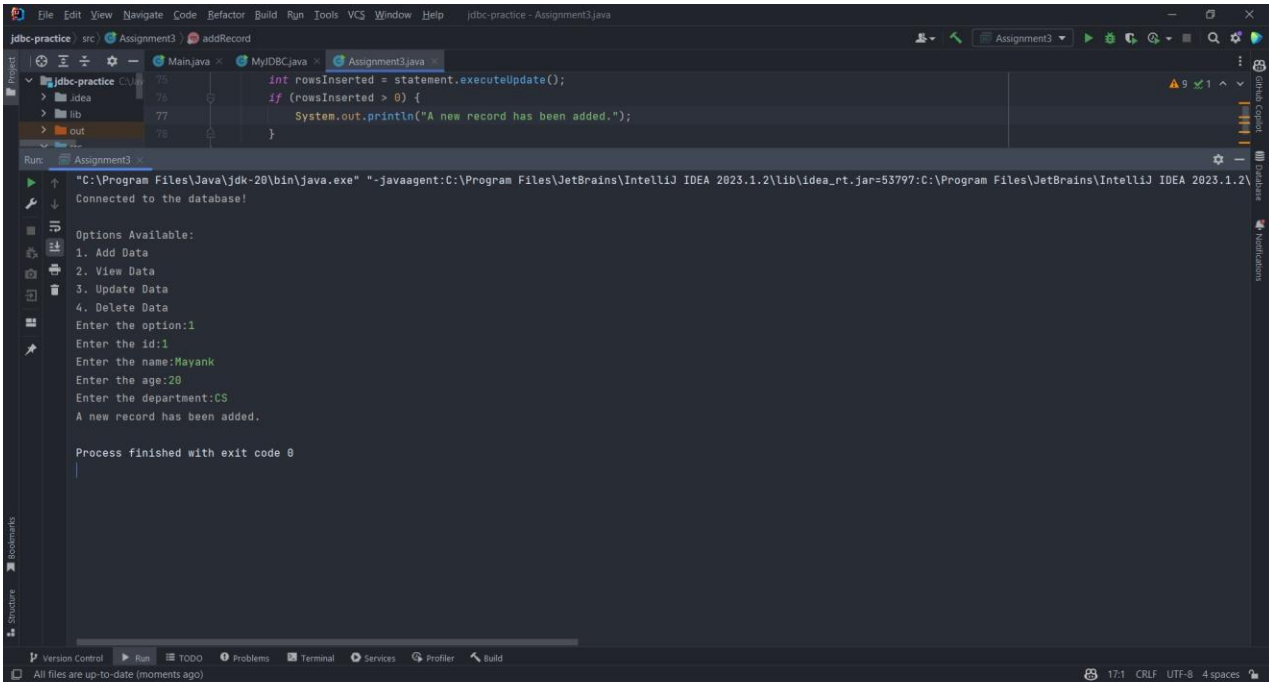
Add, View, Update and Delete data usingJDBC

Code:



```
import  java.sql.*;
import java.util.Scanner;

public class Assignment3 {
    public static void main(String[] args) {
        Connection connection = null;
        try {

            // Open a connection
            String url = "jdbc:mysql://localhost:3306/employees";
            String username = "root";
            String password = "root";
            connection = DriverManager.getConnection(url, username, password);

            // Connection successful
            System.out.println("Connected to the database!\n");
            System.out.println("Options Available:");
            System.out.println("1. Add Data");
            System.out.println("2. View Data");
            System.out.println("3. Update Data");
            System.out.println("4. Delete Data");
            System.out.print("Enter the option:");
            Scanner sc = new Scanner(System.in);int option =
            sc.nextInt();

            switch (option){
                case 1: addRecord(connection);break;
                case 2: viewRecords(connection);break;
                case 3: updateRecord(connection);break;
                case 4: deleteRecord(connection);break;
                default: System.out.println("Invalid Option");
            }
        } catch (SQLException e) {
            e.printStackTrace();
        } finally {
            if (connection != null) {try {
                    connection.close();
                } catch (SQLException e) {
                    e.printStackTrace();
                }
            }
        }
}

private static void addRecord(Connection connection) throws SQLException {int id,age;
        String name,department;

        Scanner sc = new Scanner(System.in);

        System.out.print("Enter the id:");id=sc.nextInt();
        sc.nextLine(); System.out.print("Enter the name:");
        name=sc.nextLine(); System.out.print("Enter the
        age:"); age=sc.nextInt();
        sc.nextLine();
        System.out.print("Enter the department:");
        department=sc.nextLine();

        String sql = "INSERT INTO employees (id, name, age, department) VALUES (?, ?, ?, ?)";PreparedStatement statement =
        connection.prepareStatement(sql);

        statement.setInt(1, id); statement.setString(2, name);
        statement.setInt(3, age); statement.setString(4, department);

        int rowsInserted = statement.executeUpdate();if (rowsInserted > 0) {
            System.out.println("A new record has been added.");
        }
    }

    private static void viewRecords(Connection connection) throws SQLException {String sql = "SELECT * FROM
        employees";
        Statement statement = connection.createStatement();ResultSet resultSet =
        statement.executeQuery(sql);

        System.out.println("Employee records:");
        System.out.println("ID\tName\tAge\tDepartment"); while (resultSet.next()) {
            int id = resultSet.getInt("id");
            String name = resultSet.getString("name");int age =
            resultSet.getInt("age");
            String department = resultSet.getString("department"); System.out.print(id + "\t" + name + "\t" + age + "\t" +

            department+"\n");

        }
    }

    private static void updateRecord(Connection connection) throws SQLException {int id,age;
        String name,department;

        Scanner sc = new Scanner(System.in);

        System.out.print("Enter the id to update:");id=sc.nextInt();
        sc.nextLine();

        String sql = "UPDATE employees SET name = ?, age = ?, department = ? WHERE id = ?";PreparedStatement statement =
        connection.prepareStatement(sql);

        System.out.print("Enter the name:");
        name=sc.nextLine(); System.out.print("Enter the
        age:"); age=sc.nextInt();
        sc.nextLine();
        System.out.print("Enter the department:");
        department=sc.nextLine();

        statement.setString(1, name); statement.setInt(2, age);
        statement.setString(3, department);statement.setInt(4, id);

        int rowsUpdated = statement.executeUpdate();if (rowsUpdated > 0)
        {
            System.out.println("The record has been updated.");
        }
    }
    private static void deleteRecord(Connection connection) throws SQLException {
        int id;
        Scanner sc = new Scanner(System.in);

        System.out.print("Enter the id to update:");
        id=sc.nextInt();

        String sql = "DELETE FROM employees WHERE id = ?";
        PreparedStatement statement = connection.prepareStatement(sql);

        statement.setInt(1, id);

        int rowsDeleted = statement.executeUpdate();
        if (rowsDeleted > 0) {
            System.out.println("The record has been deleted.");
        }
    }
}
```

Add data

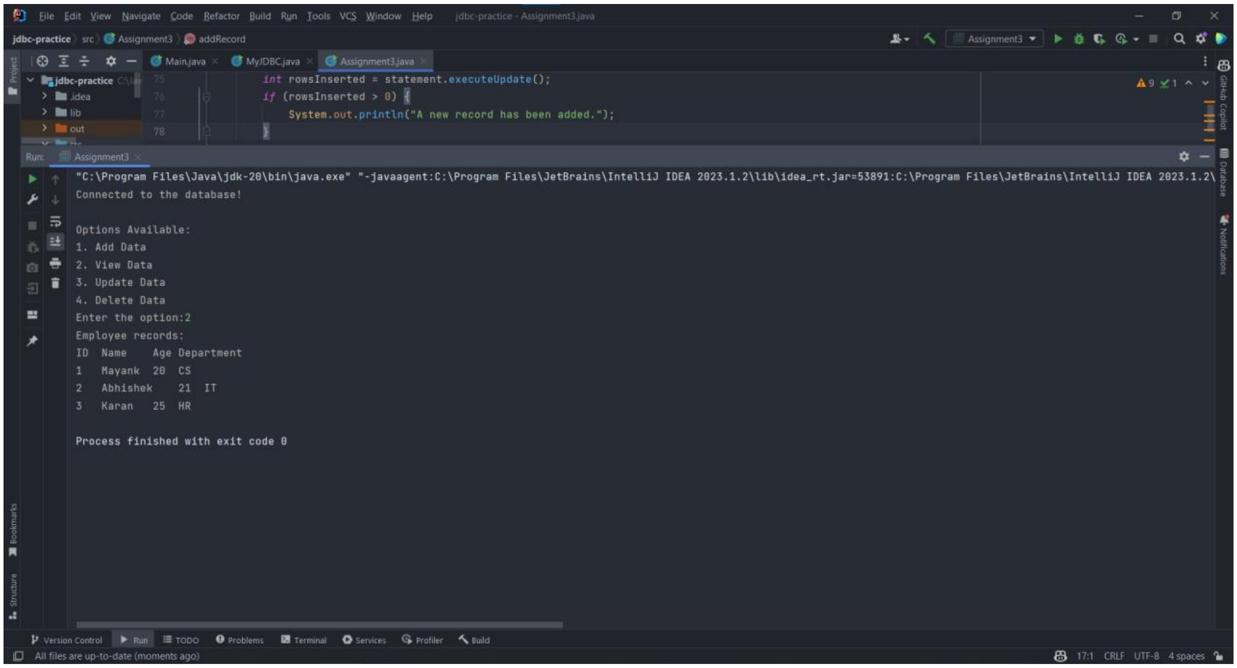


File Edit View Navigate Code Refactor Build Run Tools VCS Window Help jdbc-practice - Assignment3.java
jdbc-practice src Assignment3 addRecord
Main.java
MyJDBC.java
Assignment3.java
jdbc-practice
.idea
lib
out
Run: Assignment3
Version Control Run TODO Problems Terminal Services Profiler Build
All files are up-to-date (moments ago)
17:1 CRLF UTF-8 4 spaces

```
        int rowsInserted = statement.executeUpdate();
        if (rowsInserted > 0) {
            System.out.println("A new record has been added.");
        }
```

```
"C:\Program Files\Java\jdk-20\bin\java.exe" "-javaagent:C:\Program Files\JetBrains\IntelliJ IDEA 2023.1.2\lib\idea_rt.jar=53797:C:\Program Files\JetBrains\IntelliJ IDEA 2023.1.2\
Connected to the database!

Options Available:
1. Add Data
2. View Data
3. Update Data
4. Delete Data
Enter the option:1
Enter the id:1
Enter the name:Mayank
Enter the age:20
Enter the department:CS
A new record has been added.

Process finished with exit code 0
```

View Data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Assignment3
Main.java
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Assignment3.java
jdbc-practice
.idea
lib
out
Run: Assignment3
Version Control
Run
TODO
Problems
Terminal
Services
Profiler
Build
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17:1 CRLF UTF-8 4 spaces

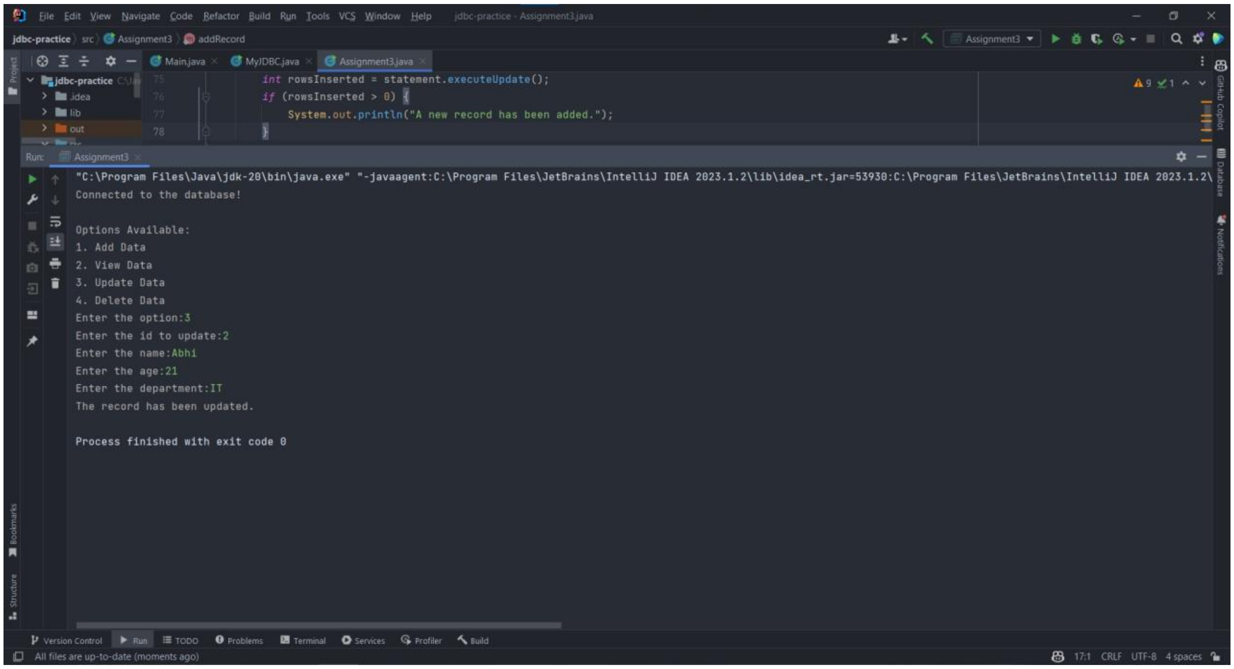
```java
        int rowsInserted = statement.executeUpdate();
        if (rowsInserted > 0) {
            System.out.println("A new record has been added.");
        }
```

```
"C:\Program Files\Java\jdk-20\bin\java.exe" "-javaagent:C:\Program Files\JetBrains\IntelliJ IDEA 2023.1.2\lib\idea_rt.jar=53891:C:\Program Files\JetBrains\IntelliJ IDEA 2023.1.2\
Connected to the database!

Options Available:
1. Add Data
2. View Data
3. Update Data
4. Delete Data
Enter the option:2
Employee records:
ID  Name    Age Department
1   Mayank  20  CS
2   Abhishek    21  IT
3   Karan   25  HR

Process finished with exit code 0
```

Update Data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Assignment3
Main.java
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Assignment3.java
jdbc-practice
.idea
lib
out
Run: Assignment3
Version Control
Run
TODO
Problems
Terminal
Services
Profiler
Build
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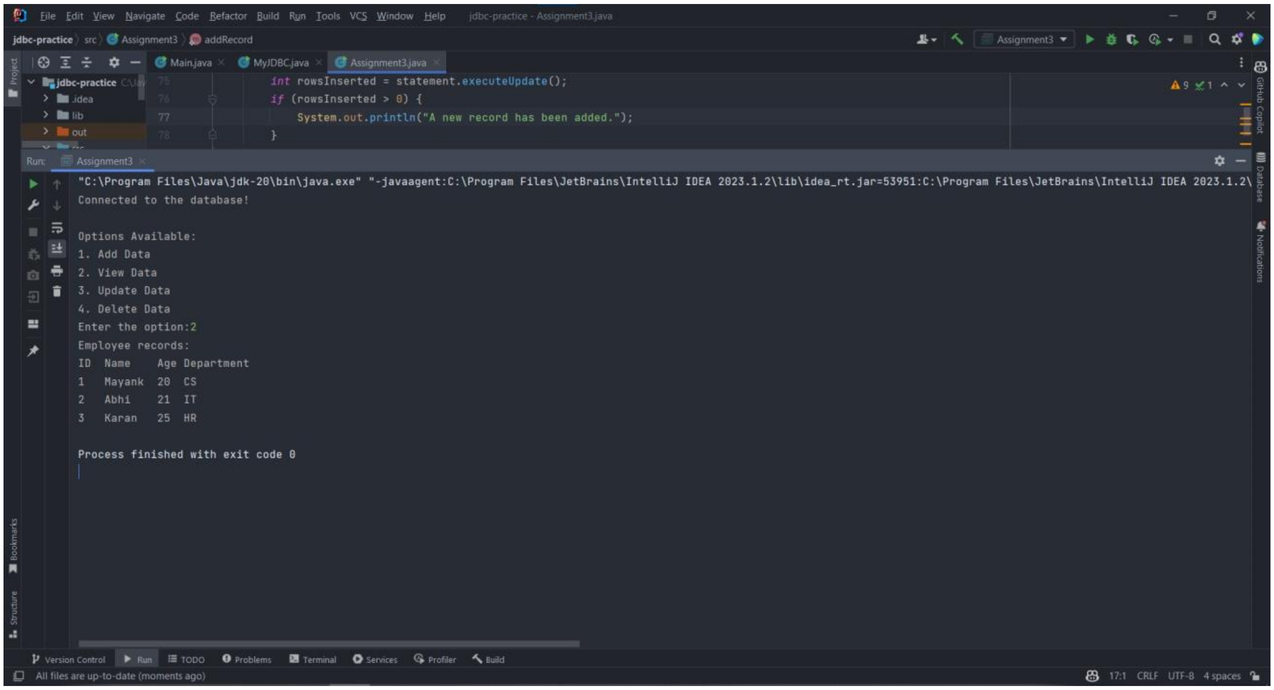
17:1 CRLF UTF-8 4 spaces

```java
        int rowsInserted = statement.executeUpdate();
        if (rowsInserted > 0) {
            System.out.println("A new record has been added.");
        }
```

```
"C:\Program Files\Java\jdk-20\bin\java.exe" "-javaagent:C:\Program Files\JetBrains\IntelliJ IDEA 2023.1.2\lib\idea_rt.jar=53930:C:\Program Files\JetBrains\IntelliJ IDEA 2023.1.2\
Connected to the database!

Options Available:
1. Add Data
2. View Data
3. Update Data
4. Delete Data
Enter the option:3
Enter the id to update:2
Enter the name:Abhi
Enter the age:21
Enter the department:IT
The record has been updated.

Process finished with exit code 0
```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jdbc-practice
.idea
lib
out
Run: Assignment3
Version Control
Run
TODO
Problems
Terminal
Services
Profiler
Build
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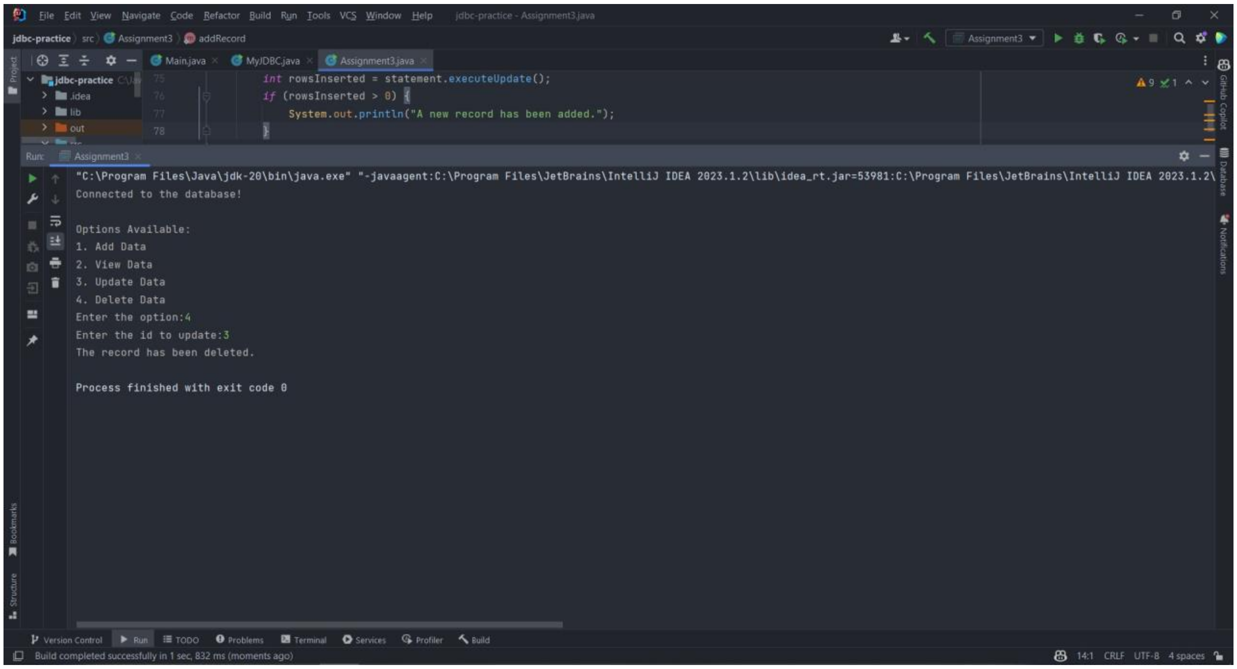
```
            int rowsInserted = statement.executeUpdate();
            if (rowsInserted > 0) {
                System.out.println("A new record has been added.");
            }
```

```
"C:\Program Files\Java\jdk-20\bin\java.exe" "-javaagent:C:\Program Files\JetBrains\IntelliJ IDEA 2023.1.2\lib\idea_rt.jar=53951:C:\Program Files\JetBrains\IntelliJ IDEA 2023.1.2\
Connected to the database!

Options Available:
1. Add Data
2. View Data
3. Update Data
4. Delete Data
Enter the option:2
Employee records:
ID  Name    Age Department
1   Mayank  20  CS
2   Abhi    21  IT
3   Karan   25  HR

Process finished with exit code 0
```

Delete Data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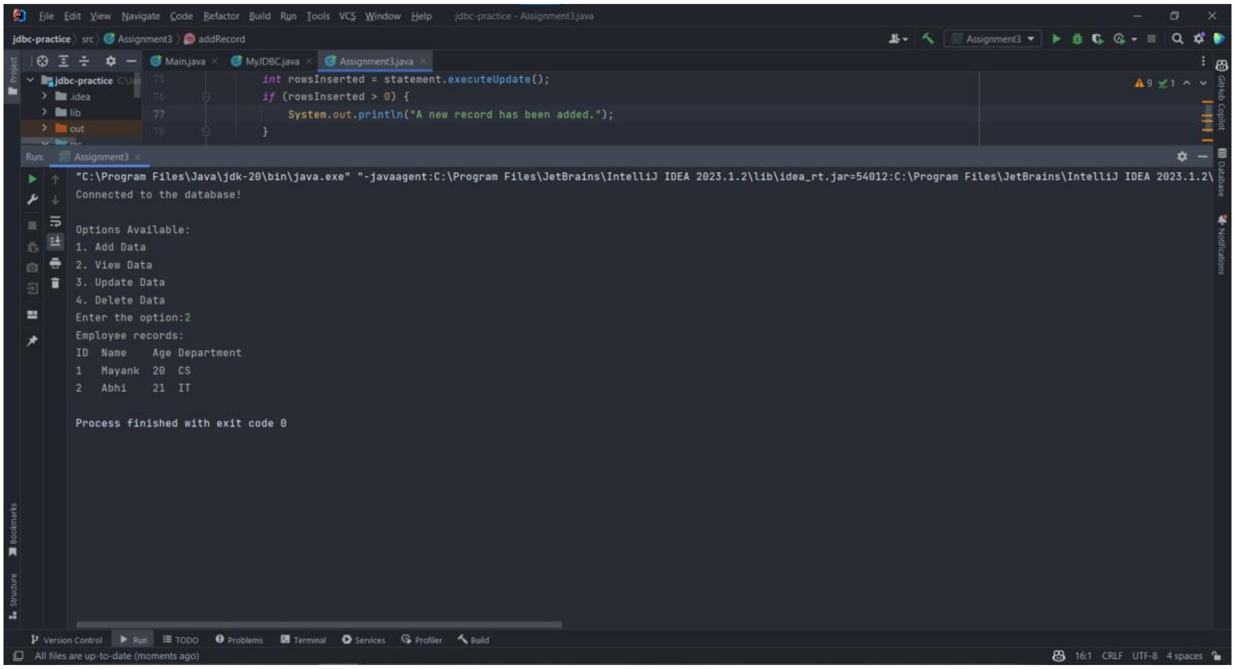
Run: Assignment3
Version Control
Run
TODO
Problems
Terminal
Services
Profiler
Build
Build completed successfully in 1 sec, 832 ms (moments ago)
14:1 CRLF UTF-8 4 spaces

```
            int rowsInserted = statement.executeUpdate();
            if (rowsInserted > 0) {
                System.out.println("A new record has been added.");
            }
```

```
"C:\Program Files\Java\jdk-20\bin\java.exe" "-javaagent:C:\Program Files\JetBrains\IntelliJ IDEA 2023.1.2\lib\idea_rt.jar=53981:C:\Program Files\JetBrains\IntelliJ IDEA 2023.1.2\
Connected to the database!

Options Available:
1. Add Data
2. View Data
3. Update Data
4. Delete Data
Enter the option:4
Enter the id to update:3
The record has been deleted.

Process finished with exit code 0
```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jdbc-practice
.idea
lib
out
Run: Assignment3
Version Control
Run
TODO
Problems
Terminal
Services
Profiler
Build
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16:1 CRLF UTF-8 4 spaces

```
            int rowsInserted = statement.executeUpdate();
            if (rowsInserted > 0) {
                System.out.println("A new record has been added.");
            }
```

```
"C:\Program Files\Java\jdk-20\bin\java.exe" "-javaagent:C:\Program Files\JetBrains\IntelliJ IDEA 2023.1.2\lib\idea_rt.jar=54012:C:\Program Files\JetBrains\IntelliJ IDEA 2023.1.2\
Connected to the database!

Options Available:
1. Add Data
2. View Data
3. Update Data
4. Delete Data
Enter the option:2
Employee records:
ID  Name    Age Department
1   Mayank  20  CS
2   Abhi    21  IT

Process finished with exit code 0
```