

ASSIGNMENT 3
MODERN APPLICATION DEVELOPMENT WITH
JAVA SPRING BOOT

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TASK – To implement Java Database connectivity with MySQL in Java.

Code:

```
import java.sql.Connection;
import java.sql.DriverManager;
import java.sql.PreparedStatement;
import java.sql.SQLException;
import java.util.Scanner;

public class JDBCCEX {
    public static void main(String[] args) {
        try {
            // Register JDBC driver
            Class.forName("com.mysql.cj.jdbc.Driver");

            // Establish connection
            Connection conn =
DriverManager.getConnection("jdbc:mysql://localhost:3306/week2", "root",
"Mainhuninja@19");
            System.out.println("Connection successful");

            Scanner scanner = new Scanner(System.in);
            System.out.println("Press 1 to enter a record, press 2 to update a record,
press 3 to delete a record: ");
            int choice = scanner.nextInt();

            switch (choice) {
                case 1:
                    // Insert operation
                    PreparedStatement insertStatement = conn.prepareStatement("INSERT
INTO STUDENT VALUES (?, ?, ?, ?, ?)");
                    System.out.println("Enter student ID: ");
                    int id = scanner.nextInt();
                    scanner.nextLine(); // Consume the newline character

                    System.out.println("Enter student first name: ");
                    String firstName = scanner.nextLine();

                    System.out.println("Enter student last name: ");
                    String lastName = scanner.nextLine();

                    System.out.println("Enter student city: ");
                    String city = scanner.nextLine();

                    System.out.println("Enter student state: ");
                    String state = scanner.nextLine();

                    insertStatement.setInt(1, id);
                    insertStatement.setString(2, firstName);
                    insertStatement.setString(3, lastName);
                    insertStatement.setString(4, city);
                    insertStatement.setString(5, state);

                    int insertResult = insertStatement.executeUpdate();
                    if (insertResult != 0) {
                        System.out.println("Insertion of record successful");
                    } else {
                        System.out.println("Insertion unsuccessful");
                    }
                }
            }
        } catch (Exception e) {
            e.printStackTrace();
        }
    }
}
```

```

        }
        break;

    case 2:
        // Update operation
        PreparedStatement updateStatement = conn.prepareStatement("UPDATE
STUDENT SET city = ? WHERE id = ?");
        System.out.println("Enter student ID: ");
        int updateId = scanner.nextInt();
        scanner.nextLine(); // Consume the newline character

        System.out.println("Enter new city: ");
        String newCity = scanner.nextLine();

        updateStatement.setString(1, newCity);
        updateStatement.setInt(2, updateId);

        int updateResult = updateStatement.executeUpdate();
        if (updateResult != 0) {
            System.out.println("Update successful");
        } else {
            System.out.println("Update unsuccessful");
        }
        break;

    case 3:
        // Delete operation
        PreparedStatement deleteStatement = conn.prepareStatement("DELETE
FROM STUDENT WHERE id = ?");
        System.out.println("Enter student ID: ");
        int deleteId = scanner.nextInt();

        deleteStatement.setInt(1, deleteId);

        int deleteResult = deleteStatement.executeUpdate();
        if (deleteResult != 0) {
            System.out.println("Deletion successful");
        } else {
            System.out.println("Deletion unsuccessful");
        }
        break;

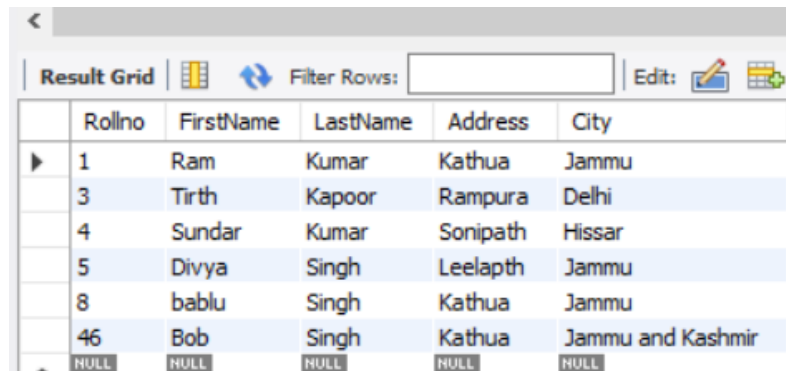
    default:
        System.out.println("Invalid choice");
        break;
    }

    conn.close();
} catch (Exception e) {
    System.out.print(e.getMessage());
}
}
}

```

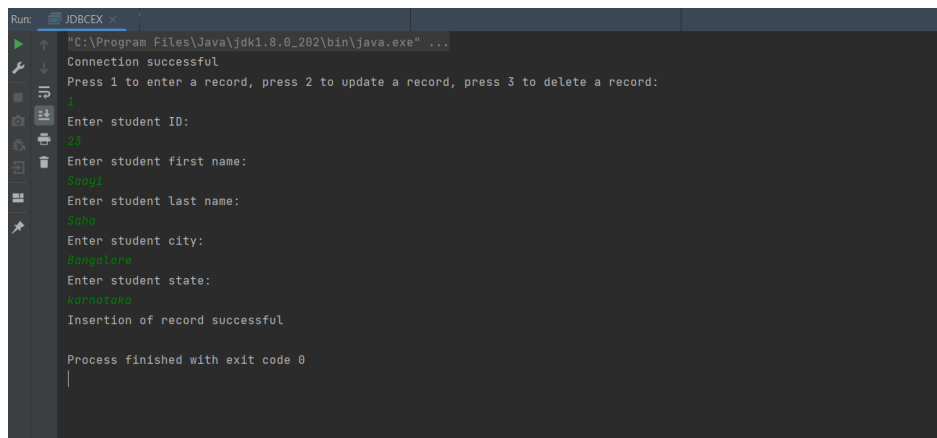
1. Let us insert an record in the database.

Initial database:



	Rollno	FirstName	LastName	Address	City
▶	1	Ram	Kumar	Kathua	Jammu
	3	Tirth	Kapoor	Rampura	Delhi
	4	Sundar	Kumar	Sonipath	Hissar
	5	Divya	Singh	Leelapth	Jammu
	8	bablu	Singh	Kathua	Jammu
	46	Bob	Singh	Kathua	Jammu and Kashmir
	NULL	NULL	NULL	NULL	NULL

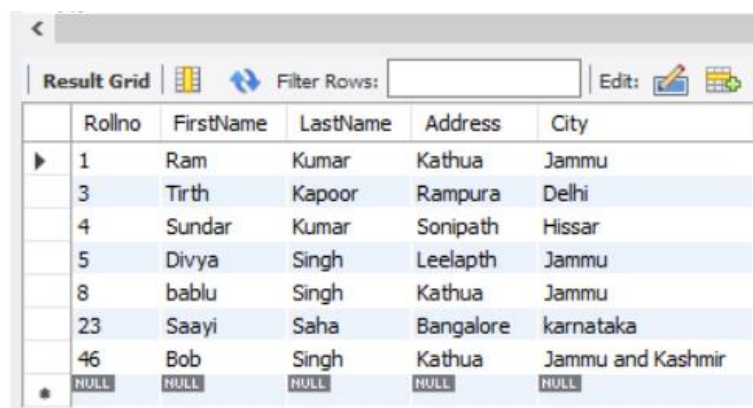
Inserting record:



```
Run: JDBCEX
"C:\Program Files\Java\jdk1.8.0_202\bin\java.exe" ...
Connection successful
Press 1 to enter a record, press 2 to update a record, press 3 to delete a record:
1
Enter student ID:
23
Enter student first name:
Saayi
Enter student last name:
Saha
Enter student city:
Bangalore
Enter student state:
karnataka
Insertion of record successful

Process finished with exit code 0
```

Table after record insertion:



	Rollno	FirstName	LastName	Address	City
▶	1	Ram	Kumar	Kathua	Jammu
	3	Tirth	Kapoor	Rampura	Delhi
	4	Sundar	Kumar	Sonipath	Hissar
	5	Divya	Singh	Leelapth	Jammu
	8	bablu	Singh	Kathua	Jammu
	23	Saayi	Saha	Bangalore	karnataka
	46	Bob	Singh	Kathua	Jammu and Kashmir
	NULL	NULL	NULL	NULL	NULL

2. Updating a record.

```
Run: JDBCEX x
"C:\Program Files\Java\jdk1.8.0_202\bin\java.exe" ...
Connection successful
Press 1 to enter a record, press 2 to update a record, press 3 to delete a record:
2
Enter student ID:
23
Enter new city:
Jammu
Update successful

Process finished with exit code 0
```

Rollno	FirstName	LastName	Address	City
1	Ram	Kumar	Kathua	Jammu
3	Tirth	Kapoor	Rampura	Delhi
4	Sundar	Kumar	Sonipath	Hissar
5	Divya	Singh	Leelapth	Jammu
8	bablu	Singh	Kathua	Jammu
23	Saayi	Saha	Bangalore	Jammu
46	Bob	Singh	Kathua	Jammu and Kashmir
NULL	NULL	NULL	NULL	NULL

3. Deleting a record

Initial Table :


Rollno	FirstName	LastName	Address	City
1	Ram	Kumar	Kathua	Jammu
3	Tirth	Kapoor	Rampura	Delhi
4	Sundar	Kumar	Sonipath	Hissar
5	Divya	Singh	Leelapth	Jammu
8	bablu	Singh	Kathua	Jammu
23	Saayi	Saha	Bangalore	Jammu
46	Bob	Singh	Kathua	Jammu and Kashmir
NULL	NULL	NULL	NULL	NULL

Running Query:

```
Run: JDBCEX x
"C:\Program Files\Java\jdk1.8.0_202\bin\java.exe" ...
Connection successful
Press 1 to enter a record, press 2 to update a record, press 3 to delete a record:
3
Enter student ID:
23
Deletion successful

Process finished with exit code 0
```

Table after deleting student with roll no = 23.

Result Grid					
Filter Rows: <input type="text"/>					
Edit: 					
	Rollno	FirstName	LastName	Address	City
▶	1	Ram	Kumar	Kathua	Jammu
	3	Tirth	Kapoor	Rampura	Delhi
	4	Sundar	Kumar	Sonipath	Hissar
	5	Divya	Singh	Leelapth	Jammu
	8	bablu	Singh	Kathua	Jammu
	46	Bob	Singh	Kathua	Jammu and Kashmir
*	NULL	NULL	NULL	NULL	NULL