Exercise 9

A.

Aim: To establish a connection to a MySQL database using JDBC.

Description: This program demonstrates how to connect to a MySQL database using JDBC. It specifies the database URL, username, and password, attempts to establish a connection, and prints a success message if the connection is successful. If the connection fails, it catches the exception and prints an error message.

PROGRAM:

```
import java.sql.Connection;

import java.sql.DriverManager;

import java.sql.SQLException;

public class JDBCConnect {
    public static void main(String[] args) {
        String url = "jdbc:mysql://localhost:3306/yourDatabase";
        String user = "yourUsername";
        String password = "yourPassword";

        try {
            Connection connection =
DriverManager.getConnection(url, user, password);
```

```java
        System.out.println("Connected to the database successfully!");

        connection.close();

    } catch (SQLException e) {

        System.out.println("Connection failed!");

        e.printStackTrace();

    }

  }

}
```

output:

Connection failed!

java.sql.SQLException: No suitable driver found for jdbc:mysql://localhost:3306/yourDatabase

    at java.sql/java.sql.DriverManager.getConnection(DriverManager.java:702)

    at java.sql/java.sql.DriverManager.getConnection(DriverManager.java:228)

    at JDBCConnect.main(JDBCConnect.java:12)

B.

Aim: To insert new records into a specified table in a MySQL database.

Description: This program connects to a MySQL database and inserts a new record into a specified table. It prepares an SQL

INSERT statement with placeholders, sets the values for those placeholders, and executes the statement. It also reports the number of rows affected by the insertion. Proper error handling is included to manage any issues that may arise during the operation.

Program:

```java
import java.sql.Connection;

import java.sql.DriverManager;

import java.sql.PreparedStatement;

import java.sql.SQLException;

public class JDBCInsert {
    public static void main(String[] args) {
        String url = "jdbc:mysql://localhost:3306/yourDatabase";
        String user = "yourUsername";
        String password = "yourPassword";

        String sql = "INSERT INTO yourTable (column1, column2) VALUES (?, ?)";

        try (Connection connection = DriverManager.getConnection(url, user, password);
             PreparedStatement preparedStatement = connection.prepareStatement(sql)) {

            preparedStatement.setString(1, "value1");
            preparedStatement.setString(2, "value2");
```

```java
            int rowsAffected = preparedStatement.executeUpdate();

            System.out.println("Inserted " + rowsAffected + " row(s) into the database.");

        } catch (SQLException e) {

            System.out.println("Insertion failed!");

            e.printStackTrace();

        }

    }

}
```

output:

Insertion failed!

java.sql.SQLException: No suitable driver found for jdbc:mysql://localhost:3306/yourDatabase

    at java.sql/java.sql.DriverManager.getConnection(DriverManager.java:702)

    at java.sql/java.sql.DriverManager.getConnection(DriverManager.java:228)

    at JDBCInsert.main(JDBCInsert.java:14)

c.

Aim: To delete specific records from a specified table in a MySQL database.

Description: This program connects to a MySQL database and deletes records from a specified table based on a given condition. It prepares an SQL DELETE statement with a placeholder for the condition, sets the value for that placeholder, and executes the statement. It also reports how many rows were deleted and includes error handling to address potential issues during the operation.

Program:

import java.sql.Connection;

import java.sql.DriverManager;

import java.sql.PreparedStatement;

import java.sql.SQLException;

public class JDBCDelete {
    public static void main(String[] args) {
        String url = "jdbc:mysql://localhost:3306/yourDatabase";
        String user = "yourUsername";
        String password = "yourPassword";

        String sql = "DELETE FROM yourTable WHERE column1 = ?";

        try (Connection connection = DriverManager.getConnection(url, user, password);
            PreparedStatement preparedStatement = connection.prepareStatement(sql)) {

```java
            preparedStatement.setString(1, "valueToDelete");

            int rowsAffected = preparedStatement.executeUpdate();
            System.out.println("Deleted " + rowsAffected + " row(s) from the database.");

        } catch (SQLException e) {
            System.out.println("Deletion failed!");
            e.printStackTrace();
        }
    }
}
```

output:

Deletion failed!

java.sql.SQLException: No suitable driver found for jdbc:mysql://localhost:3306/yourDatabase

    at java.sql/java.sql.DriverManager.getConnection(DriverManager.java:702)

    at java.sql/java.sql.DriverManager.getConnection(DriverManager.java:228)

    at JDBCDelete.main(JDBCDelete.java:14)