**package** crud\_operation;

**import** java.sql.\*;

**import** java.util.Scanner;

**public** **class** crud\_op {

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

crud\_op objTest = **new** crud\_op();

Scanner scanner = **new** Scanner(System.***in***);

**while** (**true**) {

System.***out***.println("\nChoose an operation:");

System.***out***.println("1. Create data");

System.***out***.println("2. Read table");

System.***out***.println("3. Update data");

System.***out***.println("4. Alter table");

System.***out***.println("5. Delete data");

System.***out***.println("6. Exit");

**int** choice = Integer.*parseInt*(scanner.nextLine());

**switch** (choice) {

**case** 1:

System.***out***.println("Enter sl\_no:");

String sl\_no = scanner.nextLine();

System.***out***.println("Enter name:");

String name = scanner.nextLine();

System.***out***.println("Enter marks:");

**int** mark = Integer.*parseInt*(scanner.nextLine());

objTest.create\_data(sl\_no, name, mark);

**break**;

**case** 2:

objTest.read\_table();

**break**;

**case** 3:

System.***out***.println("Enter your UPDATE query:");

String updateQuery = scanner.nextLine();

objTest.update\_data(updateQuery);

**break**;

**case** 4:

System.***out***.println("Enter ALTER query:");

String alterQuery = scanner.nextLine();

objTest.alter\_table(alterQuery);

**break**;

**case** 5:

System.***out***.println("Enter your DELETE query:");

String deleteQuery = scanner.nextLine();

objTest.delete\_data(deleteQuery);

**break**;

**case** 6:

System.***out***.println("Exiting program.");

scanner.close();

**return**;

**default**:

System.***out***.println("Invalid choice. Try again.");

}

}

}

**public** **void** create\_data(String sl\_no, String name, **int** mark) {

db\_connection obj\_db\_connection = **new** db\_connection();

Connection connection = obj\_db\_connection.get\_connection();

**try** {

String query = "INSERT INTO student VALUES (?, ?, ?)";

PreparedStatement ps = connection.prepareStatement(query);

ps.setString(1, sl\_no);

ps.setString(2, name);

ps.setInt(3, mark);

ps.executeUpdate();

System.***out***.println("Data inserted successfully.");

} **catch** (Exception e) {

System.***out***.println(e);

}

}

**public** **void** read\_table() {

db\_connection obj\_db\_connection = **new** db\_connection();

Connection connection = obj\_db\_connection.get\_connection();

Scanner sc = **new** Scanner(System.***in***);

Statement stmt = **null**;

ResultSet rs = **null**;

**try** {

System.***out***.println("Enter your SELECT query:");

String userQuery = sc.nextLine();

stmt = connection.createStatement();

rs = stmt.executeQuery(userQuery);

System.***out***.println("sl\_no\tname\tmarks");

**while** (rs.next()) {

String sl\_no = rs.getString("sl\_no");

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

**int** marks = rs.getInt("marks");

System.***out***.println(sl\_no + "\t" + name + "\t" + marks);

}

} **catch** (Exception e) {

System.***out***.println("Error: " + e.getMessage());

}

}

**public** **void** update\_data(String updateQuery) {

db\_connection obj\_db\_connection = **new** db\_connection();

Connection connection = obj\_db\_connection.get\_connection();

**try** {

Statement stmt = connection.createStatement();

**int** rowsaffected = stmt.executeUpdate(updateQuery);

**if** (rowsaffected > 0) {

System.***out***.println("Record updated successfully.");

} **else** {

System.***out***.println("No records updated.");

}

} **catch** (Exception e) {

System.***out***.println("Error executing update query: " + e.getMessage());

}

}

**public** **void** alter\_table(String alterQuery) {

db\_connection obj\_db\_connection = **new** db\_connection();

Connection connection = obj\_db\_connection.get\_connection();

**try** {

PreparedStatement ps = connection.prepareStatement(alterQuery);

ps.executeUpdate();

System.***out***.println("Table altered successfully.");

} **catch** (Exception e) {

System.***out***.println("Error altering table: " + e);

}

}

**public** **void** delete\_data(String deleteQuery) {

db\_connection obj\_db\_connection = **new** db\_connection();

Connection connection = obj\_db\_connection.get\_connection();

**try** {

Statement stmt = connection.createStatement();

**int** rowsaffected = stmt.executeUpdate(deleteQuery);

**if** (rowsaffected > 0) {

System.***out***.println("Record deleted successfully.");

} **else** {

System.***out***.println("No records deleted.");

}

} **catch** (Exception e) {

System.***out***.println("Error executing delete query: " + e.getMessage());

}

}

}