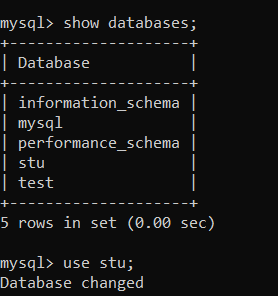
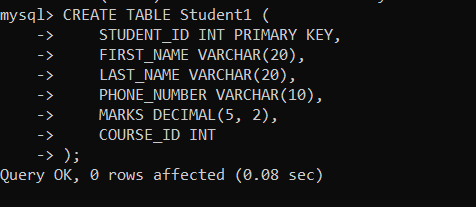
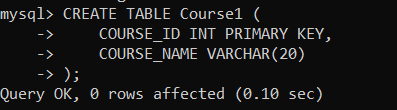
**LAB-9**

1. **Perform the following tasks:**
2. Create Student table with following attributes (STUDENT\_ID , FIRST\_NAME, LAST\_NAME, PHONE\_NUMBER, MARKS, COURSE\_ID).

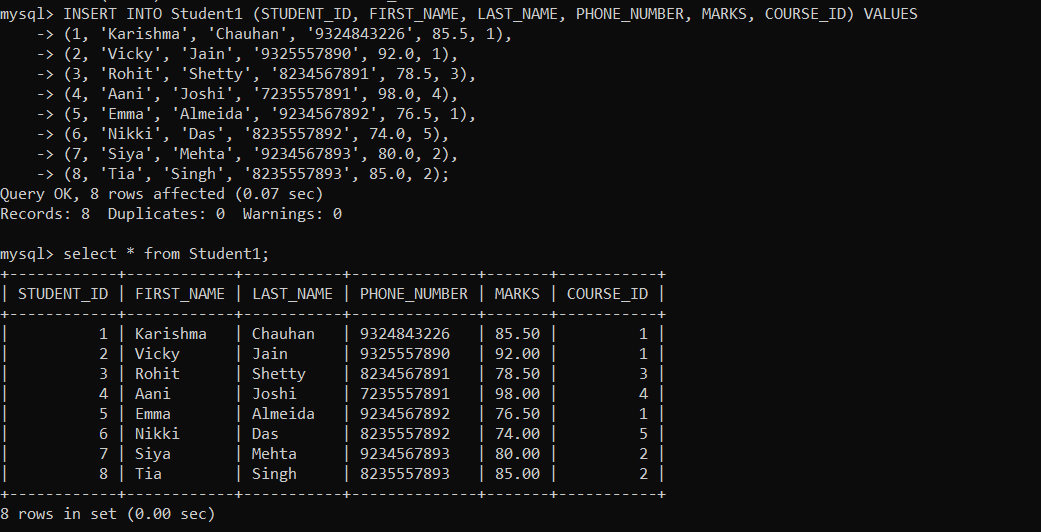


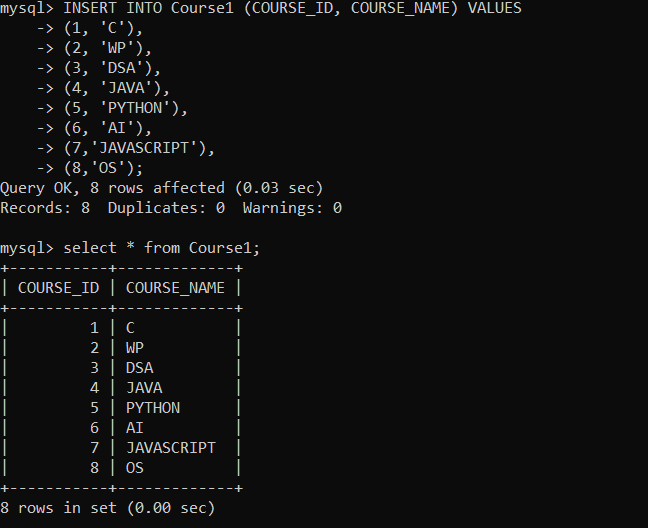


1. Create Course table with following attributes (COURSE\_ID, COURSE\_NAME).



1. Write a SQL statement to insert 8 records with your own value into the tables.





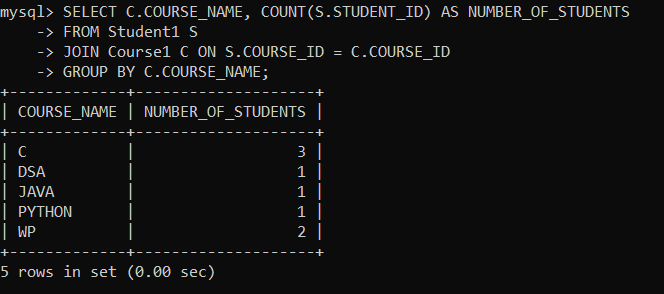
1. Write a query to get the number of students with the same course.

SELECT C.COURSE\_NAME, COUNT(S.STUDENT\_ID) AS NUMBER\_OF\_STUDENTS

FROM Student1 S

JOIN Course1 C ON S.COURSE\_ID = C.COURSE\_ID

GROUP BY C.COURSE\_NAME;

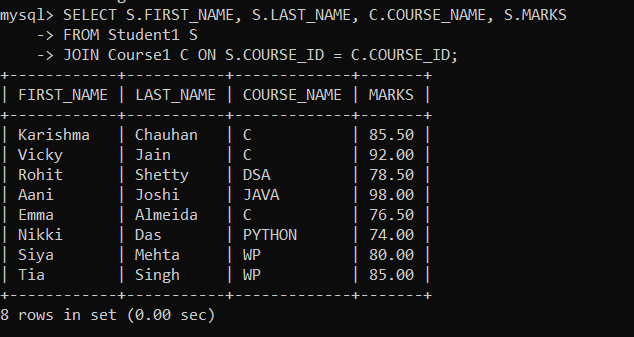


1. Write a query to get the student name, course name and marks of the students.

SELECT S.FIRST\_NAME, S.LAST\_NAME, C.COURSE\_NAME, S.MARKS

FROM Student1 S

JOIN Course1 C ON S.COURSE\_ID = C.COURSE\_ID;



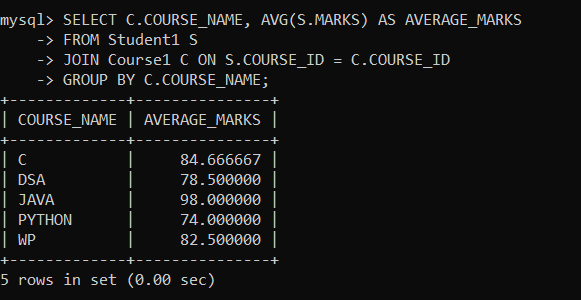
1. Write a query to get the Average marks of students course wise.

SELECT C.COURSE\_NAME, AVG(S.MARKS) AS AVERAGE\_MARKS

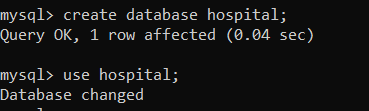
FROM Student1 S

JOIN Course1 C ON S.COURSE\_ID = C.COURSE\_ID

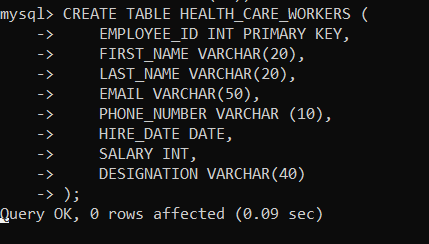
GROUP BY C.COURSE\_NAME;



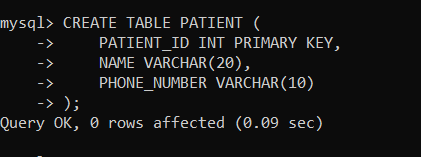
1. Create database for hospital management system & Perform the following tasks:



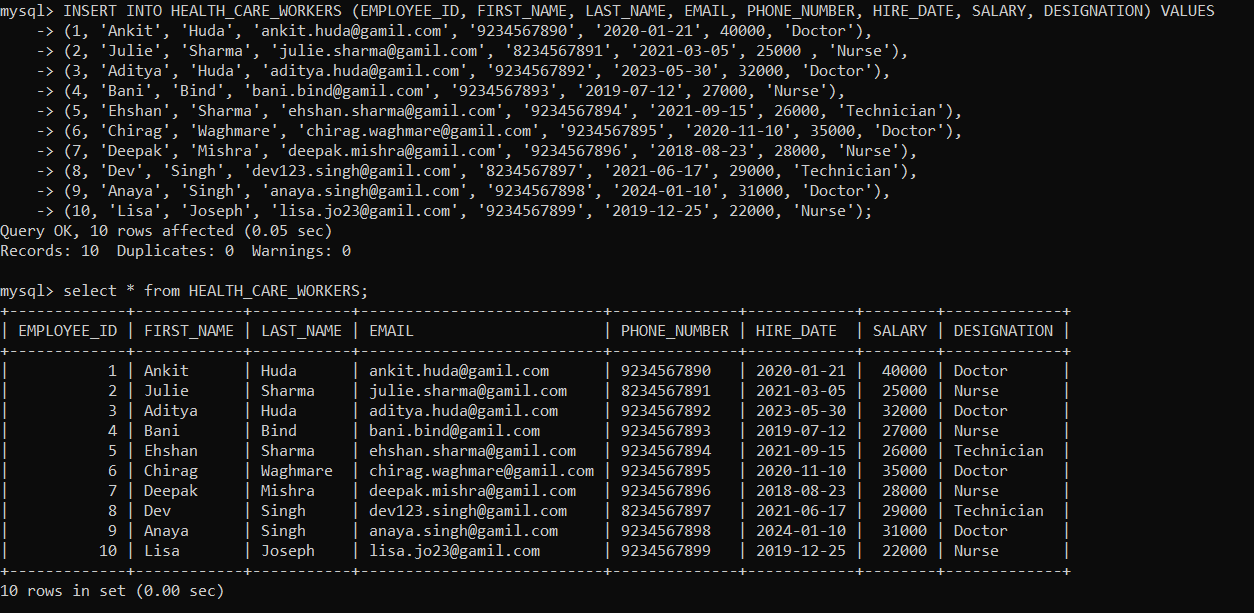
1. Create HEALTH CARE WORKERS table with following attributes (EMPLOYEE\_ID , FIRST\_NAME, LAST\_NAME,EMAIL, PHONE\_NUMBER, HIRE\_DATE, SALARY, DESIGNATION).

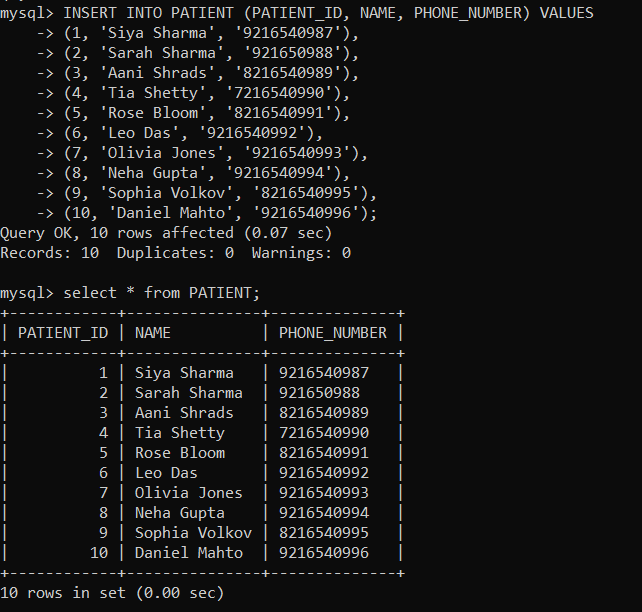


1. Create PATIENT table with following attributes (PATIENT\_ID,NAME, PHONE\_NUMBER).



1. Write a SQL statement to insert 10 records with your own value into the tables.

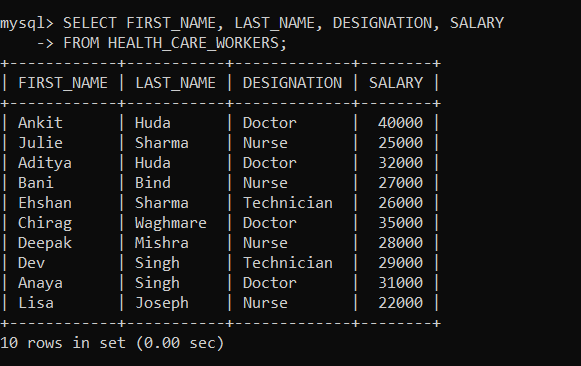




1. Write a query to get the names (first\_name, last\_name),Designation, salary.

SELECT FIRST\_NAME, LAST\_NAME, DESIGNATION, SALARY

FROM HEALTH\_CARE\_WORKERS;

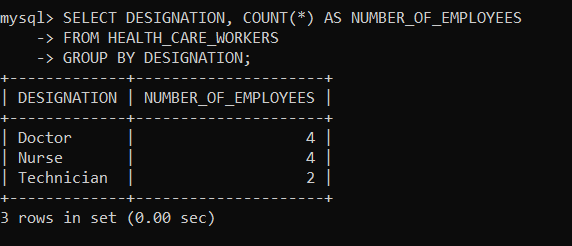


1. Write a query to get the number of employees with the same Designation

SELECT DESIGNATION, COUNT(\*) AS NUMBER\_OF\_EMPLOYEES

FROM HEALTH\_CARE\_WORKERS

GROUP BY DESIGNATION;

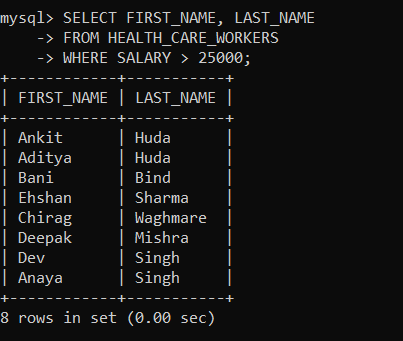


1. Write a query to get employee name who are getting salary more than 25000.

SELECT FIRST\_NAME, LAST\_NAME

FROM HEALTH\_CARE\_WORKERS

WHERE SALARY > 25000;



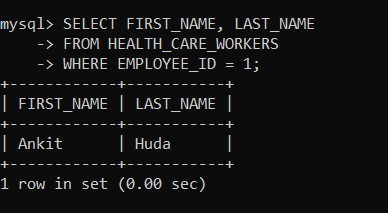
g. Fetch HEALTH CARE WORKERS name using their employee id.lowing structures:

Customers Table: customer\_id (Primary Key) first\_name Last\_name

SELECT FIRST\_NAME, LAST\_NAME

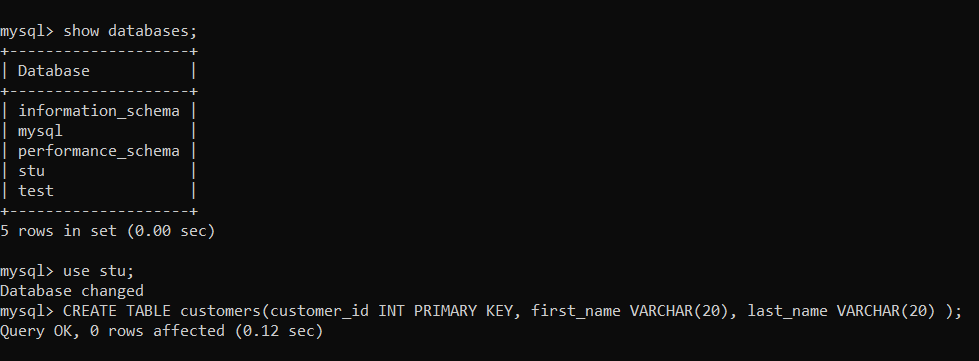
FROM HEALTH\_CARE\_WORKERS

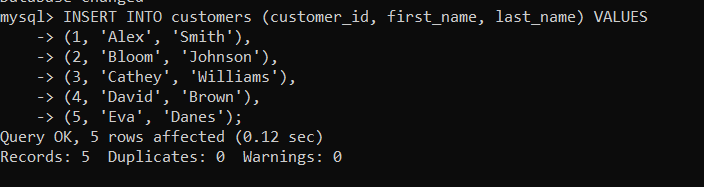
WHERE EMPLOYEE\_ID = 1;



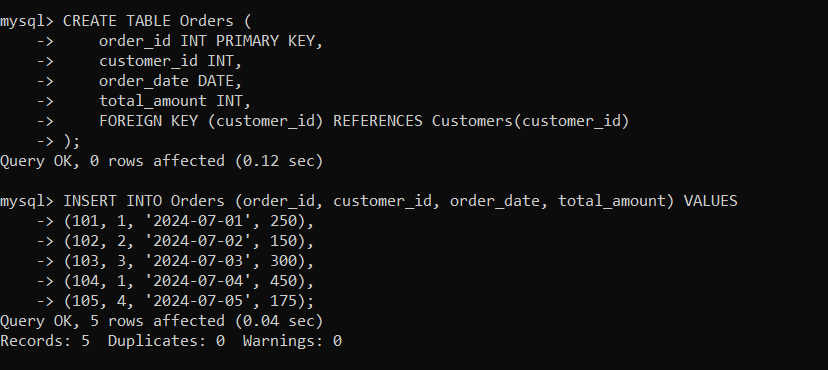
3.Consider two tables, customers and orders, with the following structures:

Customers Table: customer\_id (Primary Key) first\_name Last\_name



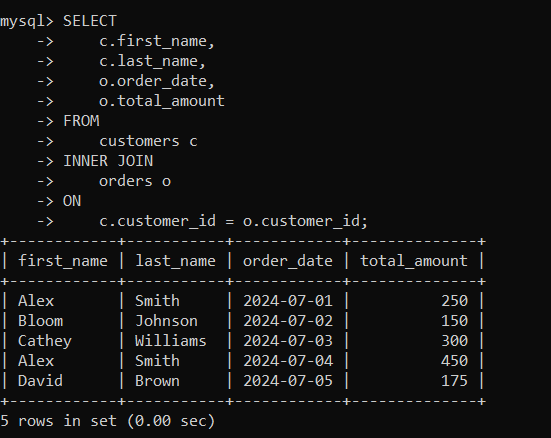


Orders Table: order\_id (Primary Key) customer\_id (Foreign Key) order\_date Total\_amount



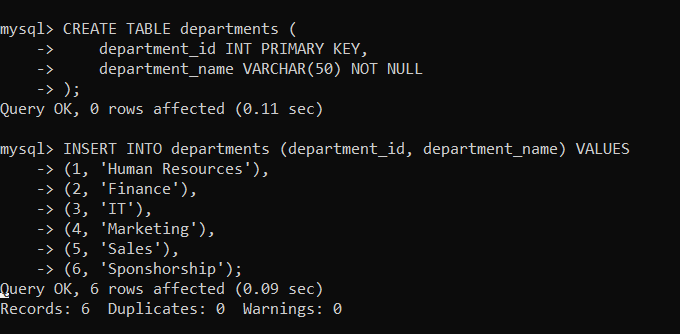
Write an SQL query to retrieve the first and last names of customers along with the order date and total amount of their orders.

Use an INNER JOIN to connect the two tables.

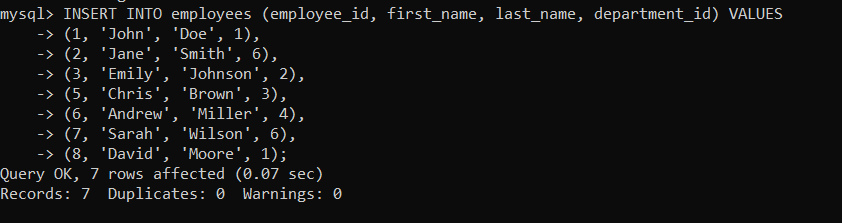


4.Consider two tables, departments and employees, with the following structures:

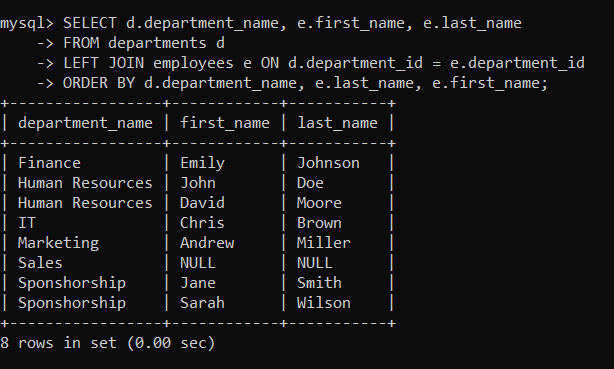
Departments Table: department\_id (Primary Key) department\_name



Employees Table: employee\_id (Primary Key) first\_name last\_name department\_id (Foreign Key)



Write an SQL query to retrieve a list of all departments and the names of employees who belong to each department. Use a LEFT JOIN to include departments that have no employees.



5. Write a program to show JDBC connection with MYSQL and perform the following operations:

Create table Customer with following fields:

Custno, Custame,Custaddress,Phoneno, City, Pincode, Country

Insert 5 records in Customer table.

a. Insert values

b. Delete values

c. update city name Shimla to Shilong.

d. Show table in the console

**PROGRAM-**

**package** DataStructure;

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

**import** java.sql.Connection;

**import** java.sql.DriverManager;

**import** java.sql.ResultSet;

**import** java.sql.Statement;

**public** **class** Create {

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

String url = "jdbc:mysql://localhost:3306/school ";

String user = "root";

String password = "123456789";

//Table creation is here..

**try** {

Class.*forName*("com.mysql.cj.jdbc.Driver");

Connection con = DriverManager.*getConnection*(url, user, password);

Statement stmt = con.createStatement();

//Table values insertion is here...

String insert = "INSERT INTO customer\_detail VALUES ('CUST001', 'John Doe', '123 Main St', '+1234567890', 'New York', '10001', 'USA'),('CUST002', 'Jane Smith', '456 Elm St', '+1987654321', 'Los Angeles', '90001', 'USA'),('CUST003', 'Alice Johnson', '789 Oak Ave', '+4455667788', 'London', 'SW1A 1AA', 'UK'),('CUST004', 'Juan Martinez', '234 Calle Principal', '+1122334455', 'Madrid', '28001', 'Spain'),('CUST005', 'Hiroshi Tanaka', '567 Ginza Street', '+81987654321', 'Tokyo', '100-0001', 'Japan')";

stmt.addBatch(insert);

stmt.executeBatch();

//System.out.println("Record Inserted Successfully.");

//Table Record Deletion is here...

/\*

String delete = "DELETE customer\_detail WHERE country = 'UK'";

stmt.addBatch(delete);

stmt.executeBatch();

System.out.println("Record Deleted Successfully.");

/\*String update ="UPDATE customer\_detail SET city = 'Shilong' WHERE city = 'Shimla'";

stmt.addBatch(update);

stmt.executeBatch();

System.out.println("Record Updated Successfully.");

\*/

String sql = "SELECT cust\_no, cust\_name, cust\_address, phoneno, city, pincode, country FROM customer\_detail";

ResultSet rs = stmt.executeQuery(sql);

// 4. Printing the table header

System.***out***.println("+-----------+-----------------+----------------------+-------------+---------------+------------+--------------+");

System.***out***.println("| Cust No | Cust Name | Cust Address | Phone No | City | Pincode | Country |");

System.***out***.println("+-----------+-----------------+----------------------+-------------+---------------+------------+--------------+");

// 5. Iterating through the result set and printing each row

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

String custNo = rs.getString("cust\_no");

String custName = rs.getString("cust\_name");

String custAddress = rs.getString("cust\_address");

String phoneNo = rs.getString("phoneno");

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

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

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

// Print each row of data

System.***out***.printf("| %-9s | %-15s | %-20s | %-11s | %-13s | %-10s | %-12s |\n",

custNo, custName, custAddress, phoneNo, city, pincode, country);

}

// 6. Printing the table footer

System.***out***.println("+-----------+-----------------+----------------------+-------------+---------------+------------+--------------+");

rs.close();

stmt.close();

con.close();

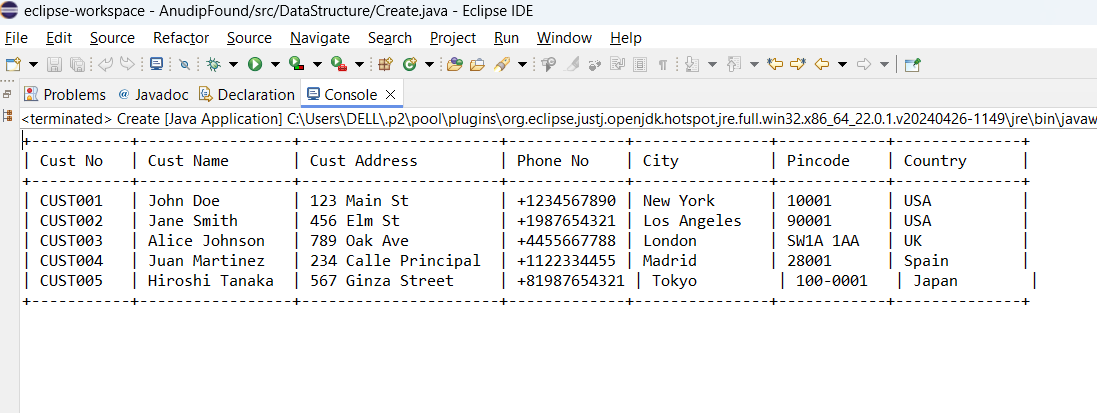
}**catch**(Exception e) {

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

}

}

Output:-



1. Insert values

Code:-

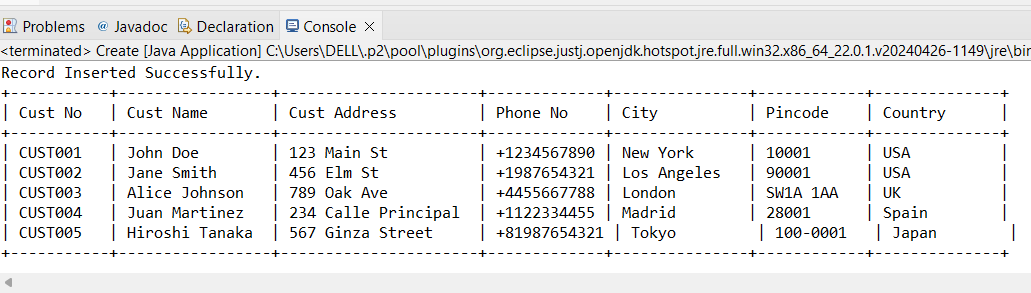
String insert = "INSERT INTO customer\_detail VALUES ('CUST001', 'John Doe', '123 Main St', '+1234567890', 'New York', '10001', 'USA'),('CUST002', 'Jane Smith', '456 Elm St', '+1987654321', 'Los Angeles', '90001', 'USA'),('CUST003', 'Alice Johnson', '789 Oak Ave', '+4455667788', 'London', 'SW1A 1AA', 'UK'),('CUST004', 'Juan Martinez', '234 Calle Principal', '+1122334455', 'Madrid', '28001', 'Spain'),('CUST005', 'Hiroshi Tanaka', '567 Ginza Street', '+81987654321', 'Tokyo', '100-0001', 'Japan')";

stmt.addBatch(insert);

stmt.executeBatch();

System.out.println("Record Inserted Successfully.");

Output:-



1. Delete values

Code:-

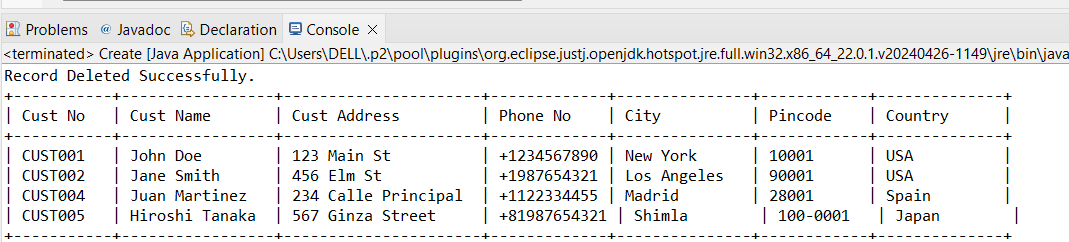
String delete = "DELETE customer\_detail WHERE country = 'UK'";

stmt.addBatch(delete);

stmt.executeBatch();

System.***out***.println("Record Deleted Successfully.");

Output:-



1. update city name Shimla to Shilong.

Code:-

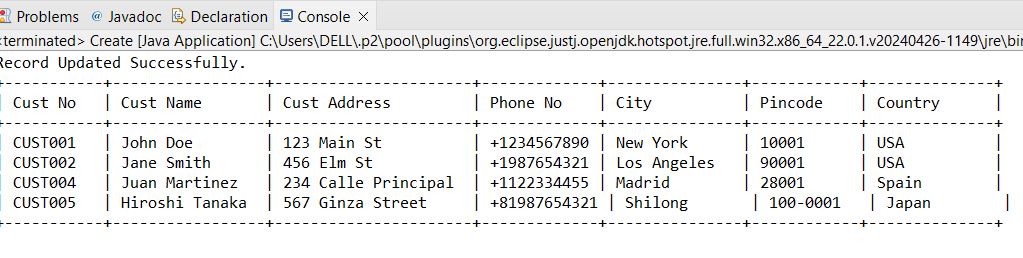
String update ="UPDATE customer\_detail SET city = 'Shilong' WHERE city = 'Shimla'";

stmt.addBatch(update);

stmt.executeBatch();

System.out.println("Record Updated Successfully.");

Output:-



d.    Show table in the console

Ouput:-

