Program to implement RMI(Remote Method Invocation).

Input:

Remote Interface:

```
import java.rmi.*;

public interface InterfaceProg extends Remote{
    public void crudOpInJDBC() throws RemoteException;
}
```

Implementing the Remote Interface:

```
import java.rmi.*;
import java.rmi.server.*;
import java.sql.*;
import java.util.*;

public class RemoteForProg extends UnicastRemoteObject implements
InterfaceProg {
    RemoteForProg() throws RemoteException{
        super();
    }

    @Override
    public void crudOpInJDBC() throws RemoteException {
        try {
            Scanner sc = new Scanner(System.in);
            Class.forName("com.mysql.jdbc.Driver");
            Connection con =
DriverManager.getConnection("jdbc:mysql://localhost:3306/pracdb", "root", "");

            Statement statement = con.createStatement();
            String ch;
            while (true) {
                System.out.println("1. Insertion        2. Deletion     3.
Display      4. Modify      5. Exit");
                System.out.print("Enter your choice: ");
                ch = sc.nextLine();
                if (ch.equals("1")) {
                    System.out.println("Name to be inserted: new");
                    // String name = sc.nextLine();
                    System.out.println("Enrollment to be inserted: 1906140");
                    // String enroll = sc.nextLine();
```

```
                    int rs = statement.executeUpdate("INSERT INTO
`students`(`Name`, `Enrollment`) VALUES('new','1906140')");
                    if (rs == 1) {
                        System.out.println("Data inserted successfully!\n");
                    } else {
                        System.out.println("Failed to insert!");
                    }
                } else if (ch.equals("2")) {
                    System.out.println("Enter the id to be deleted: ");
                    String id = sc.nextLine();
                    int rs = statement.executeUpdate("DELETE FROM `students`
WHERE Id=" + id);
                    if (rs == 1) {
                        System.out.println("Data deleted successfully!\n");
                    } else {
                        System.out.println("Failed to delete!");
                    }
                } else if (ch.equals("3")) {
                    ResultSet rs = statement.executeQuery("SELECT * FROM
students");
                    System.out.println(
                            "**********************************************
************************************");
                    while (rs.next())
                        System.out.println(rs.getInt(1) + "  " +
rs.getString(2) + "  " + rs.getString(3));

                    System.out.println(
                            "**********************************************
************************************\n");

                } else if (ch.equals("4")) {
                    System.out.println("Enter the id to be modified: ");
                    String id = sc.nextLine();
                    System.out.println("Enter the new name: ");
                    String name = sc.nextLine();
                    int rs = statement.executeUpdate("UPDATE `students` SET
`Name`='Thakare' WHERE Id=1");
                    if (rs == 1) {
                        System.out.println("Data updated successfully!\n");
                    } else {
                        System.out.println("Failed to update!");
                    }
                } else {
                    break;
                }
            }
```

```
            con.close();
        } catch (Exception e) {
            System.out.println(e);
        }
    }


}
```

Server Side RMI:

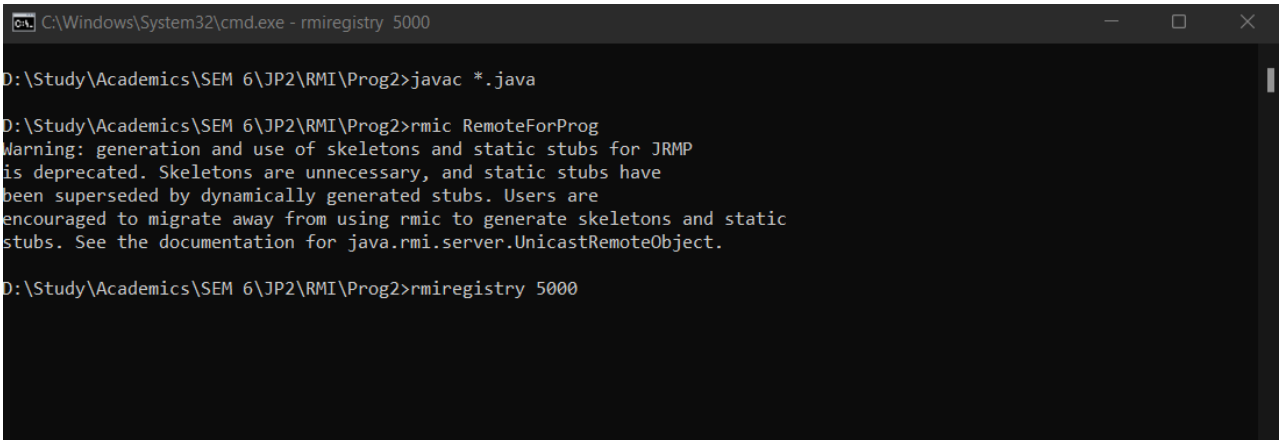
```
import java.rmi.*;
import java.rmi.registry.*;

public class ServerSide {
   public static void main(String[] args) {
        try {
            InterfaceProg skeleton = new RemoteForProg();
            Naming.rebind("rmi://localhost:5000/JdbcCrud", skeleton);
        }catch (Exception e) {
            System.out.println("Error at server: "+e);
        }
   }
}
```

Client Side RMI:

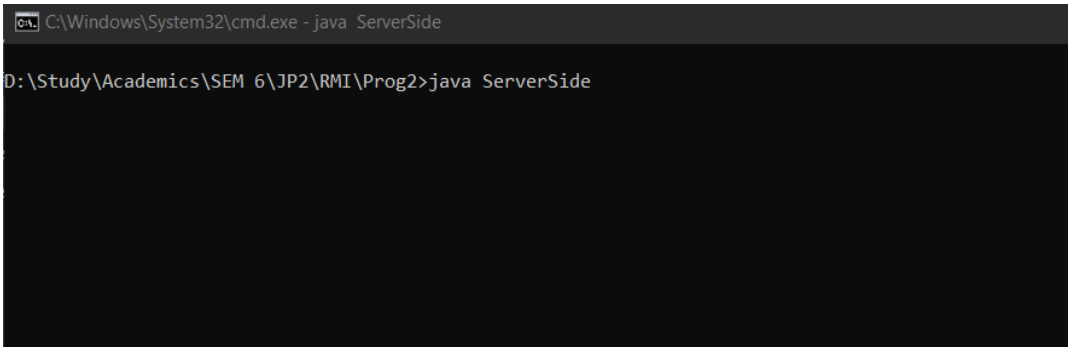
```
import java.rmi.*;

public class ClientSide {
   public static void main(String[] args) {
        try {
            InterfaceProg stub = (InterfaceProg)
Naming.lookup("rmi://localhost:5000/JdbcCrud");
            stub.crudOpInJDBC();
        }catch (Exception e) {
            System.out.println("Error at client: "+e);
        }
   }
}
```

Output :

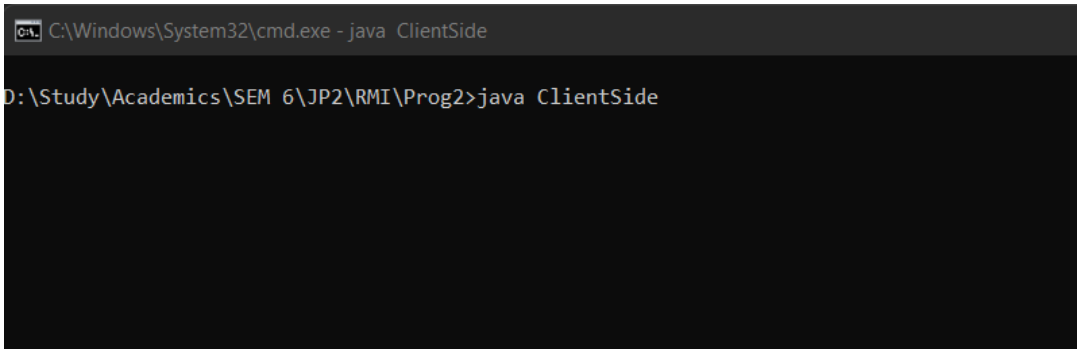
CMD 1:



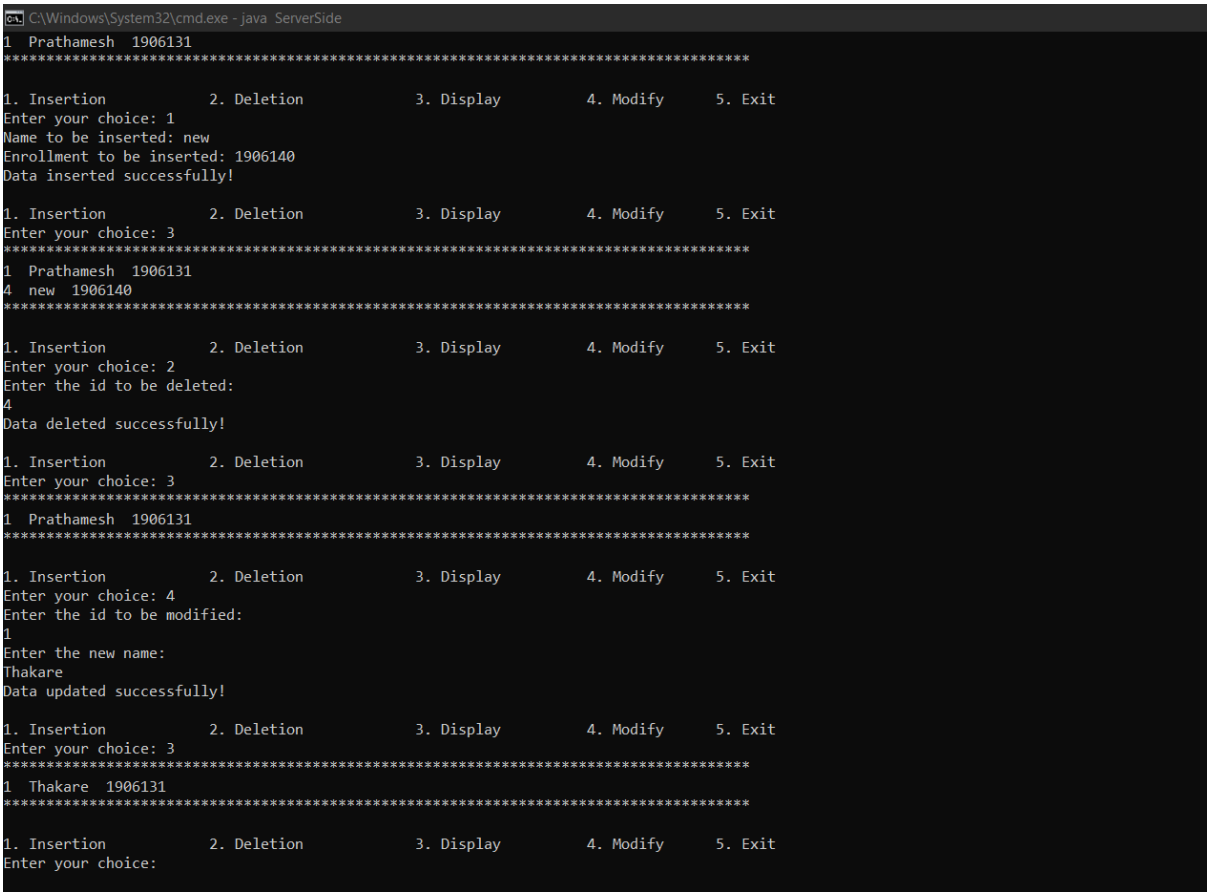
CMD 2:



CMD 3:



JDBC Output


C:\Windows\System32\cmd.exe - java ServerSide
1 Prathamesh 1906131
1. Insertion 2. Deletion 3. Display 4. Modify 5. Exit
Enter your choice: 1
Name to be inserted: new
Enrollment to be inserted: 1906140
Data inserted successfully!
1. Insertion 2. Deletion 3. Display 4. Modify 5. Exit
Enter your choice: 3
1 Prathamesh 1906131
4 new 1906140
1. Insertion 2. Deletion 3. Display 4. Modify 5. Exit
Enter your choice: 2
Enter the id to be deleted:
4
Data deleted successfully!
1. Insertion 2. Deletion 3. Display 4. Modify 5. Exit
Enter your choice: 3
1 Prathamesh 1906131
1. Insertion 2. Deletion 3. Display 4. Modify 5. Exit
Enter your choice: 4
Enter the id to be modified:
1
Enter the new name:
Thakare
Data updated successfully!
1. Insertion 2. Deletion 3. Display 4. Modify 5. Exit
Enter your choice: 3
1 Thakare 1906131
1. Insertion 2. Deletion 3. Display 4. Modify 5. Exit
Enter your choice: