**Practical 2**

**Aim:**

2.3 Write RMI application where client will send Enrolment number and Name of a student to the server. Server will Open a database connection and store the Information in Database.

**Description:**

PostgreSQL is a powerful, open source object-relational database system. It has more than 15 years of active development and a proven architecture that has earned it a strong reputation for reliability, data integrity, and correctness.

PostgreSQL (pronounced as **post-gress-Q-L**) is an open source relational database management system ( DBMS ) developed by a worldwide team of volunteers. PostgreSQL is not controlled by any corporation or other private entity and the source code is available free of charge.

PostgreSQL runs on all major operating systems, including Linux, UNIX (AIX, BSD, HP-UX, SGI IRIX, Mac OS X, Solaris, Tru64), and Windows. It supports text, images, sounds, and video, and includes programming interfaces for C / C++ , Java , Perl , Python , Ruby, Tcl and Open Database Connectivity (ODBC).

PostgreSQL supports a large part of the SQL standard and offers many modern features including the following:

* Complex SQL queries
* SQL Sub-selects
* Foreign keys
* Trigger
* Views
* Transactions
* Multiversion concurrency control (MVCC)
* Streaming Replication (as of 9.0)
* Hot Standby (as of 9.0)

**Program code:**

**RemoteInsert:-**

**import** java**.**rmi**.\*;**

public interface RemoteInsert **extends** Remote**{**

void insert**(**int id**,** String name**)throws** Exception**;**

**}**

**ServerInsert:-**

**import** java**.**rmi**.\*;**

**import** java**.**rmi**.**server**.\*;**

**import** java**.**lang**.**String**;**

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

**import** java**.**util**.\*;**

public class ServerInsert **extends**

UnicastRemoteObject **implements** RemoteInsert**{**

public ServerInsert**()throws** Exception**{**

**super();**

**}**

public void insert**(**int id**,**String name**){**

Connection c**=null;**

Statement s**=null;**

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

**try{**

Class**.**forName**(**"org.postgresql.Driver"**);**

c**=**DriverManager**.**getConnection**(**"jdbc:postgresql://localhost:5432/rmi"**,**"postgres"**,**"1014"**);**

s**=**c**.**createStatement**();**

String query**=**"insert into Student values("**+**id**+**",'"**+**name**+**"');"**;**

s**.**executeUpdate**(**query**);**

System**.**out**.**println**(**"Date Inserted"**);**

**}**

**catch(**Exception e**){**

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

**}**

**}**

**}**

**ServerI:-**

**import** java**.**rmi**.\*;**

**import** java**.**net**.\*;**

public class ServerI

**{**

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

**{**

**try**

**{**

ServerInsert s**=new** ServerInsert**();**

Naming**.**rebind**(**"SERVICEI"**,**s**);**

System**.**out**.**println**(**"Server Started "**);**

**}**

**catch(**Exception e**)**

**{**

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

**}**

**}**

**}**

**ClientI:-**

**import** java**.**rmi**.\*;**

**import** java**.**io**.\*;**

**import** java**.**util**.\*;**

public class ClientI**{**

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

**try{**

String ip**=**"rmi://localhost/SERVICEI"**;**

RemoteInsert s1**=(**RemoteInsert**)**Naming**.**lookup**(**ip**);**

System**.**out**.**println**(**"Enrollment No:-130050131070"**);**

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

System**.**out**.**print**(**"number of insertion:"**);**

int i**=**sc**.**nextInt**();**

**while(**i**!=**0**){**

System**.**out**.**print**(**"number Id:"**);**

int id**=**sc**.**nextInt**();**

System**.**out**.**print**(**"number name:"**);**

String name**=**sc**.**next**();**

s1**.**insert**(**id**,**name**);**

i**--;**

**}**

**}**

**catch(**Exception e**){**

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

e**.**printStackTrace**();**

**}**

**}**

**}**

**Input Output:**





