A]. Aim: Using MySQL create College database. Create table Book and student. Retrieve the Book and student information from college database using Remote Object Communication concept.

DBClient.java

import java.rmi.\*;

import java.io.\*;

public class DBClient

{

public static void main(String[] args)

{

String db="", sql="", ch="", ch1="", res="";

try

{

BufferedReader br= new BufferedReader(new InputStreamReader(System.in));

while(true)

{

System.out.println("Retrieve College Information.");

db="college";

System.out.println("Select an option");

System.out.println("a) Retrieve Student Information.");

System.out.println("b) Retreive Books Information.");

System.out.println("Enter your choice: ");

ch1=br.readLine();

if(ch1.equals("a"))

{

sql="select \* from student";

}

else if(ch1.equals("b"))

{

sql="select \* from book";

}

else

{

System.out.println("Please select a valid option.");

System.exit(0);

}

DBIntf id=(DBIntf)Naming.lookup("rmi://localhost:1099/DBConn");

res=id.getData(sql,db);

System.out.println(res);

}

}

catch (Exception e)

{

e.printStackTrace();

}

}

}

DBIntf.java

import java.rmi.\*;

public interface DBIntf extends Remote

{

public String getData(String s, String db) throws RemoteException;

}

DBCollege.java

import java.rmi.\*;

import java.rmi.server.\*;

import java.sql.\*;

public class DBCollege extends UnicastRemoteObject implements DBIntf{

String str="", str1="";

public DBCollege() throws RemoteException {}

public String getData(String sql, String dsn) throws RemoteException {

String URL="jdbc:mysql://localhost/"+dsn; //dsn=data source name

try {

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

Connection con=DriverManager.

getConnection(URL,"root","");

System.out.println("Database Connected Successfully.");

Statement s=con.createStatement();

ResultSet rs=s.executeQuery(sql);

ResultSetMetaData rsmd=rs.getMetaData();

str1="";

str="";

for(int i=1;i<=rsmd.getColumnCount();i++) {

str1=str1+rsmd.getColumnName(i)+"\t"; }

System.out.println();

while(rs.next()) {

for(int i=1;i<=rsmd.getColumnCount();i++) {

str=str+rs.getString(i)+"\t"; }

str=str+"\n"; } }

catch(Exception e) {

e.printStackTrace(); }

return(str1+"\n"+str); }}

DBServer.java

import java.rmi.\*;

import java.rmi.registry.Registry;

public class DBServer {

public static void main(String[] args) {

try {

Registry r= java.rmi.registry.LocateRegistry.

createRegistry(1099);

DBCollege di=new DBCollege();

Naming.rebind("DBConn",(Remote) di);

System.out.println("Server Registered."); }

catch(Exception e) {

e.printStackTrace();} } }