**Chuoi.java**

import java.rmi.\*;

import java.rmi.Remote;

import java.rmi.RemoteException;

public interface Chuoi extends Remote{

public String chuoihoa(String s) throws RemoteException;

public String chuoithuong(String s) throws RemoteException;

public String daochuoi(String s) throws RemoteException;

public int demkitu(String s) throws RemoteException;

}

**ChuoiClient.java**

import java.rmi.Naming;

import java.net.MalformedURLException;

import java.rmi.Naming;

import java.rmi.NotBoundException;

import java.rmi.RemoteException;

import java.util.Scanner;

public class ChuoiClient {

public static void menu() {

System.out.println("1. Viet hoa chuoi");

System.out.println("2. Viet thuong chuoi");

System.out.println("3. Dao chuoi");

System.out.println("4. Dem tu");

System.out.println("0. Ket thuc chuong trinh");

}

public static void main(String[] args) {

System.out.println("Client dang khoi dong");

Scanner scn= new Scanner(System.in);

try {

Chuoi ch= (Chuoi) Naming.lookup("rmi://localhost:9988/Mychuoi");

menu();

System.out.println("Nhap thao tac can thuc hien");

int chon= scn.nextInt();

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

while(chon>0) {

switch(chon) {

case 1:

System.out.println("Nhap chuoi can viet hoa: ");

scn.nextLine();

String s=scn.nextLine();

System.out.println("Chuoi viet hoa la: "+ ch.chuoihoa(s));

break;

case 2:

System.out.println("Nhap chuoi can viet thuong: ");

scn.nextLine();

String s1=scn.nextLine();

System.out.println("Chuoi viet thuong la: "+ ch.chuoithuong(s1));

break;

case 3:

System.out.println("Nhap chuoi can dao nguoc: ");

scn.nextLine();

String s2=scn.nextLine();

System.out.println("Chuoi bi dao la: "+ ch.daochuoi(s2));

break;

case 4:

System.out.println("Nhap chuoi can dem ki tu");

scn.nextLine();

String s3=scn.nextLine();

System.out.println("So tu trong chuoi: "+ch.demkitu(s3));

break;

case 0:

System.out.println("Ket thuc chuong trinh!!!1");

break;

default:

System.err.println("Nhap thao tac sai!!!");

break;

}

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

menu();

System.out.println("Nhap thao tac can thuc hien: ");

chon=scn.nextInt();

}

} catch (MalformedURLException | RemoteException | NotBoundException e) {

// TODO Auto-generated catch block

e.printStackTrace();

}

}

}

**ChuoiImpl.java**

import java.rmi.\*;

public class ChuoiImpl implements Chuoi{

public static final char SPACE = ' ';

public static final char TAB = '\t';

public static final char BREAK\_LINE = '\n';

public String chuoihoa(String s) throws RemoteException{

return s.toUpperCase();

}

public String chuoithuong(String s) throws RemoteException{

return s.toLowerCase();

}

public String daochuoi(String s) throws RemoteException{

String dc= new StringBuffer(s).reverse().toString();

return dc;

}

public int demkitu(String s) throws RemoteException{

if(s==null){

return -1;

}

int count =0;

int size=s.length();

boolean notCounted = true;

for (int i = 0; i < size; i++) {

if (s.charAt(i) != SPACE && s.charAt(i) != TAB

&& s.charAt(i) != BREAK\_LINE) {

if(notCounted) {

count++;

notCounted = false;

}

} else {

notCounted = true;

}

}

return count;

}

}

**ChuoiServer.java**

import java.net.MalformedURLException;

import java.rmi.AlreadyBoundException;

import java.rmi.Naming;

import java.rmi.RemoteException;

import java.rmi.registry.LocateRegistry;

import java.rmi.server.UnicastRemoteObject;

public class ChuoiServer {

public static void main(String[] args) throws MalformedURLException, AlreadyBoundException {

System.out.println("Server dang khoi dong");

int port=9988;

try {

LocateRegistry.createRegistry(port);

ChuoiImpl ch= new ChuoiImpl();

UnicastRemoteObject.exportObject(ch,port);

Naming.bind("rmi://localhost:9988/Mychuoi", ch);

System.out.println("Server da ket noi");

} catch (RemoteException e) {

// TODO Auto-generated catch block

e.printStackTrace();

}

}

}

**Bài 2**

**\*Client**

import java.net.MalformedURLException;

import java.rmi.Naming;

import java.rmi.NotBoundException;

import java.rmi.RemoteException;

import java.util.Scanner;

public class Client {

public static void menu( ) {

System.out.println("1. Viet hoa chuoi");

System.out.println("2. Viet thuong chuoi");

System.out.println("3. Dao chuoi");

System.out.println("4. Dem tu");

System.out.println("0. Ket thuc chuong trinh");

}

public static void main(String[]args) {

System.out.println("Client dang khoi dong");

Scanner scn= new Scanner(System.in);

try {

Chuoi ch=(Chuoi) Naming.lookup("rmi://localhost:9988/Mychuoi");

menu();

System.out.println("Nhap thao tac can thuc hien");

int chon= scn.nextInt();

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

while(chon>0) {

switch(chon) {

case 1:

System.out.println("Nhap chuoi can viet hoa:");

scn.nextLine();

String s=scn.nextLine();

System.out.println("Chuoi viet hoa la:"+ ch.chuoiHoa(s));

break;

case 2:

System.out.println("Nhap chuoi can viet thuong:");

scn.nextLine();

String s1=scn.nextLine();

System.out.println("Chuoi viet thuong la:"+ ch.chuoiThuong(s1));

break;

case 3:

System.out.println("Nhap chuoi can dao nguoc:");

scn.nextLine();

String s2=scn.nextLine();

System.out.println("Chuoi bi dao la:"+ ch.daoChuoi(s2));

break;

case 4:

System.out.println("Nhap chuoi can dem ki tu:");

scn.nextLine();

String s3=scn.nextLine();

System.out.println("So ky tu co trong chuoi:"+ ch.demKiTu(s3));

break;

case 0:

System.out.println("Ket thuc chuong trinhf!!!:");

break;

default:

System.err.println("Nhap thao tac sai!!!");

break;

}

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

menu();

System.out.println("Nhap thao tac can thuc hien:");

chon=scn.nextInt();

}

}catch (MalformedURLException | RemoteException | NotBoundException e) {

e.printStackTrace();

}

}

}

**\*Imp**

import java.rmi.\*;

public class ChuoiImpl implements Chuoi{

public static final char SPACE = '\t';

public static final char tab = '\t';

public static final char BREAK\_LINE = '\n';

public String chuoiHoa(String s) throws RemoteException{

return s.toUpperCase();

}

public String chuoiThuong(String s) throws RemoteException{

return s.toLowerCase();

}

public String daoChuoi(String s) throws RemoteException{

String daoChuoi = new StringBuffer(s).reverse().toString();

return daoChuoi;

}

public int demKiTu(String s) throws RemoteException{

if(s==null) {

return -1;

}

int count = 0;

int size = s.length();

boolean notCounted = true;

for(int i =0; i<size;i++) {

if(s.charAt(i) != SPACE && s.charAt(i) != tab &&s.charAt(i) != BREAK\_LINE) {

if(notCounted) {

count++;

notCounted = false;

}

else {

notCounted =true;

}

}

return count;

}

return size;

}

}

**Interface**

import java.rmi.\*;

public interface Chuoi extends Remote{

public String chuoiHoa(String s) throws RemoteException;

public String chuoiThuong(String s) throws RemoteException;

public String daoChuoi(String s) throws RemoteException;

public int demKiTu(String s) throws RemoteException;

}

**Server**

import java.net.MalformedURLException;

import java.rmi.AlreadyBoundException;

import java.rmi.Naming;

import java.rmi.RemoteException;

import java.rmi.registry.LocateRegistry;

import java.rmi.server.UnicastRemoteObject;

public class Server {

public static void main(String[] args) throws MalformedURLException, AlreadyBoundException{

System.out.println("Server dang khoi dong ");

int port=9988;

try {

LocateRegistry.createRegistry(port);

ChuoiImpl ch = new ChuoiImpl();

UnicastRemoteObject.exportObject(ch,port);

Naming.bind("rmi://localhost:9988/Mychuoi", ch);

System.out.println("server da ket noi");

}catch (RemoteException e) {

e.printStackTrace();

}

}

}

**Tích tổng**

import java.io.BufferedReader;

import java.io.FileReader;

import java.io.IOException;

import java.io.PrintStream;

import java.net.ServerSocket;

import java.net.Socket;

import java.util.Scanner;

public class Bai3\_server {

public static void main(String[] args) {

try {

ServerSocket server = new ServerSocket(9000);

System.out.println("Server da duoc tao");

Socket client = server.accept();

System.out.println("Client da ket noi den server");

Scanner inFromClient = new Scanner(client.getInputStream());

PrintStream outToClient = new PrintStream(client.getOutputStream());

outToClient.println("1-nhan \t 2-cong");

int choose = inFromClient.nextInt();

int n=inFromClient.nextInt();

int tong=0,tich=1;

switch(choose)

{

case 1:

{

for(int i=1;i<=n;i++)

tich\*=i;

outToClient.println(tich);

break;

}

case 2:

{

for(int i=1;i<=n;i++)

tong+=i;

outToClient.println(tong);

break;

}

}

}

catch (IOException e) {

// TODO Auto-generated catch block

e.printStackTrace();

}

}

}

import java.io.IOException;

import java.io.PrintStream;

import java.net.Socket;

import java.net.UnknownHostException;

import java.util.Scanner;

public class Bai3\_client {

public static void main(String[] args) {

try {

Socket client = new Socket("LocalHost", 9000);

System.out.println("Client da duoc tao");

Scanner inFromServer = new Scanner(client.getInputStream());

PrintStream outToServer = new PrintStream(client.getOutputStream());

System.out.println("server: " + inFromServer.nextLine());

Scanner scan = new Scanner(System.in);

int cl = scan.nextInt();

int n=scan.nextInt();

outToServer.println(cl);

outToServer.println(n);

System.out.println("server: " + inFromServer.nextInt());

} catch (UnknownHostException e) {

// TODO Auto-generated catch block

e.printStackTrace();

} catch (IOException e) {

// TODO Auto-generated catch block

e.printStackTrace();

}

}

}