Sliding Window Protocol

//SENDER PROGRAM

import java.net.\*;

import java.io.\*;

import java.rmi.\*;

public class slidsender {

public static void main(String a[]) throws Exception {

ServerSocket ser = new ServerSocket(10);

Socket s = ser.accept();

DataInputStream in = new DataInputStream(System. in );

DataInputStream in1 = new DataInputStream(s.getInputStream());

String sbuff[] = new String[8];

PrintStream p;

int sptr = 0, sws = 8, nf, ano, i;

String ch;

do {

p = new PrintStream(s.getOutputStream());

System.out.print("Enter the no. of frames : ");

nf = Integer.parseInt(in .readLine());

p.println(nf);

if (nf <= sws - 1) {

System.out.println("Enter " + nf + " Messages to be send\n");

for (i = 1; i <= nf; i++) {

sbuff[sptr] = in .readLine();

p.println(sbuff[sptr]);

sptr = ++sptr % 8;

}

sws -= nf;

System.out.print("Acknowledgment received");

ano = Integer.parseInt(in1.readLine());

System.out.println(" for " + ano + " frames");

sws += nf;

} else {

System.out.println("The no. of frames exceeds window size");

break;

}

System.out.print("\nDo you wants to send some more frames : ");

ch = in .readLine();

p.println(ch);

}

while (ch.equals("yes"));

s.close();

}

}

//RECEIVER PROGRAM

import java.net.\*;

import java.io.\*;

class slidreceiver {

public static void main(String a[]) throws Exception {

Socket s = new Socket(InetAddress.getLocalHost(), 10);

DataInputStream in = new DataInputStream(s.getInputStream());

PrintStream p = new PrintStream(s.getOutputStream());

int i = 0, rptr = -1, nf, rws = 8;

String rbuf[] = new String[8];

String ch;

System.out.println();

do {

nf = Integer.parseInt( in .readLine());

if (nf <= rws - 1) {

for (i = 1; i <= nf; i++) {

rptr = ++rptr % 8;

rbuf[rptr] = in .readLine();

System.out.println("The received Frame " + rptr + " is : " + rbuf[rptr]);

}

rws -= nf;

System.out.println("\nAcknowledgment sent\n");

p.println(rptr + 1);

rws += nf;

} else break;

ch = in .readLine();

}

while (ch.equals("yes"));

}

}

OUTPUT:

//SENDER OUTPUT

Enter the no. of frames : 4

Enter 4 Messages to be send

hiii

how r u

i am fine

how is evryone

Acknowledgment received for 4 frames

Do you wants to send some more frames : no

//RECEIVER OUTPUT

The received Frame 0 is : hiii

The received Frame 1 is : how r u

The received Frame 2 is : i am fine

The received Frame 3 is : how is evryone

Acknowledgment sent