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EXPERIMENT: 30

AIM: To implement sliding window protocol using JAVA programming.

PROGRAM:

// 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,rpctr=-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++)
{ rpctr=++rpctr%8; rbuf[rpctr]=in.readLine();
System.out.println("The received Frame " +rpctr+" is : "+rbuf[rpctr]); } rws-=nf;
System.out.println("\nAcknowledgment sent\n"); p.println(rpctr+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 everyone

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 everyone Acknowledgment sent

RESULT: Therefore sliding window protocol has been successfully executed using JAVA programming.