CSE3003 Lab 9

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Experiment : Stop and Wait Protocol using socket program in Java

stopwaitreceiver.java

```java
import java.io.*;
import java.net.*;
class stopwaitreceiver
{
 public static void main(String args[])throws Exception
 {
  stopwaitreceiver swr = new stopwaitreceiver();
  swr.run();
 }
  public void run() throws Exception
 {
  String temp="any message",str="exit";
  ServerSocket myss=new ServerSocket(9999);
  Socket ss_accept=myss.accept();
  BufferedReader ss_bf=new BufferedReader(new
InputStreamReader(ss_accept.getInputStream()));
  PrintStream myps=new PrintStream(ss_accept.getOutputStream());
  while(temp.compareTo(str)!=0)
  {
   Thread.sleep(1000);
   temp=ss_bf.readLine();
   if(temp.compareTo(str)==0)
   { break;}
   System.out.println("Frame "+temp+" was received");
   Thread.sleep(500);
   myps.println("Received");
  }
   System.out.println("ALL FRAMES  WERE RECEIVED SUCCESSFULLY");
 }
}
```

stopwaitsender.java

```java
import java.io.*;
import java.net.*;
import java.util.Scanner;
class stopwaitsender
{
 public static void main(String args[]) throws Exception
```

```java
{
 stopwaitsender sws = new stopwaitsender();
 sws.run();
}
public void run() throws Exception
{
 Scanner sc=new Scanner(System.in);
 System.out.println("Enter no of frames to be sent:");
 int n=sc.nextInt();
 Socket myskt=new Socket("localhost",9999);
 PrintStream myps=new PrintStream(myskt.getOutputStream());
 for(int i=0;i<=n;)
 {
  if(i==n)
  {
        myps.println("exit");
   break;
  }
  System.out.println("Frame no "+i+" is sent");
  myps.println(i);

        BufferedReader bf=new BufferedReader(new
InputStreamReader(myskt.getInputStream()));
    String ack=bf.readLine();
  if(ack!=null)
  {
        System.out.println("Acknowledgement was Received from receiver");
   i++;
   Thread.sleep(4000);
  }
  else
  {
        myps.println(i);
  }
 }
}
}
```

OUTPUT:

```
job@debian:~/Documents/VITAP/Sem 4/CSE3003 Computer Networks/Lab/javaprogram$ java stopwaitsender
Enter no of frames to be sent:
4
Frame no 0 is sent
Acknowledgement was Received from receiver
Frame no 1 is sent
Acknowledgement was Received from receiver
Frame no 2 is sent
Acknowledgement was Received from receiver
Frame no 3 is sent
Acknowledgement was Received from receiver
```

```
job@debian:~/Documents/VITAP/Sem 4/CSE3003 Computer Networks/Lab/javaprogram$ java stopwaitreceiver
Frame 0 was received
Frame 1 was received
Frame 2 was received
Frame 3 was received
ALL FRAMES  WERE RECEIVED SUCCESSFULLY
```