**Sliding window protocol**

**Program:**

#include<stdio.h>

#include<stdlib.h>

#include<math.h>

int n,r;

struct frame

{

char ack, data[15];

}frm[10];

int sender(void);

void recvfrm(void);

void resend(void);

void resend1(void);

void goback(void);

void selective(void);

int main()

{

int c;

while(1)

{

printf("\n\n1.Selective repeat ARQ\n2.Goback ARQ\n3.exit");

printf("\nEnter ur choice : \t");

scanf("%d",&c);

switch(c)

{

case 1:

selective();

break;

case 2:

goback();

break;

case 3:

exit(0);

break;

}

}

}

void goback()

{

sender();

recvfrm();

resend1();

printf("\n All packets sent successfully\n");

}

void selective()

{

sender();

recvfrm();

resend();

printf("\nAll packets sent successfully");

}

int sender()

{

int i;

printf("\nEnter the no. of packets to be sent : \t");

scanf("%d",&n);

for(i=0;i<n;i++)

{printf("\nEnter data for packets[%d] : \t",i);

scanf("%s",&frm[i].data);

frm[i].ack='y';

}

return 0;

}

void recvfrm()

{

int i;

rand();

r=rand()%n;

frm[r].ack='n';

for(i=0;i<n;i++)

{

if(frm[i].ack=='n')

printf("\nThe packet number %d is not received\n",r);

}

}

void resend()

{

printf("\nResending packet %d",r);

sleep(2);

frm[r].ack='y';

printf("\nThe received packet is %s",frm[r].data);

}

void resend1()

{

int i;

printf("\n Resending from packet %d",r);

for(i=r-2;i<n;i++)

{

sleep(2);

frm[i].ack='y';

printf("\nReceived data of parent %d is %s",i,frm[i].data);

}

}

**Output:**

[201603052@Putty ~]$ vi socketslide.c

[201603052@Putty ~]$ cc socketslide.c

[201603052@Putty ~]$ ./a.out

1.Selective repeat ARQ

2.Goback ARQ

3.exit

Enter ur choice : 1

Enter the no. of packets to be sent : 2

Enter data for packets[0] : 2

Enter data for packets[1] : 3

The packet number 0 is not received

Resending packet 0

The received packet is 2

All packets sent successfully

1.Selective repeat ARQ

2.Goback ARQ

3.exit

Enter ur choice : 2

Enter the no. of packets to be sent : 3

Enter data for packets[0] : 2

Enter data for packets[1] : 3

Enter data for packets[2] : 4

The packet number 1 is not received

Resending from packet 1

Received data of parent 0 is 2

Received data of parent 1 is 3

Received data of parent 2 is 4

All packets sent successfully

1.Selective repeat ARQ

2.Goback ARQ

3.exit

Enter ur choice : 3

[201603052@Putty ~]$

[201603052@Putty ~]$