EXPERIMENT-9

IMPLEMENT SELECTIVE REPEAT ARQ

AIM: Implement selective repeat ARQ protocol

ALGORITHM: In this algorithm, sender sends a number of frames specified by a window size even without the need to wait for individual ACK from the receiver as in Go-back N ARQ. The receiver may selectively reject a single frame, which may be retransmitted alone; The receiver accepts out-of-order frames and buffers them. The sender individually retransmits frames that have timed out.

CODE:

```
#include<stdio.h>
#include<math.h>
int main()
{
  int windowsize,sent=0,ack,i,m,j,
  int n,*;
```

```
printf ("Enter no of bits");
scanf ("%d", &m);
p= pow (2,m);
printf ("The no of packets has transmitted
are : %d \n", p);
windowsize = pow (2,m-1);
printf ("The windowsize is: %d \n", windowsize);
while (1)
{
 while (n>0)
 {
 for (i=0; i<windowsize; i++)
 {
 printf ("Frame %d has been transmitted \n",
 sent);
 sent++;
 if (sent == windowsize)
 break;
 }
n=0;
}
```

```
printf("\n Please enter the ack
  received \n");
scanf("%d", &acknw);
if (acknw > windowsize)
{ printf(" All previous packets received");
  break;
}
else
{ sent = acknw;
  printf("Resend the %d packet", sent);
}
return 0;
}
```

o/p:

Enter no of bits: 3

The no of packets to be transmitted are: 3

The window size is: 4

Frame 0 is transmitted

Frame 1 is transmitted

Frame 2 is transmitted

Frame 3 is transmitted

Now enter the acknowledgment received

4

Resend the 4 packet

Now enter the acknowledgment received

4

All packets sent successfully