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CODE :

```
#include<stdio.h>

#include<stdlib.h>

#include<sys/types.h>

#include<windows.h>

int sent()

{

    int windowSize,sent=0,i,ack;

    printf("input windowSize:\n");

    scanf("%d",&windowSize);

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

    {

        printf("frame %d transmitted.\n",sent);

        printf("frame %d recieved.\n",sent);

        sent++;

        if(sent == windowSize)

            break;

    }

    return 0;

}

int frameLoss()

{

    int loss,windowSize,i,sent=0;

    printf("input windowSize:\n");

    scanf("%d",&windowSize);

    printf("input the frame to be lost:");

    scanf("%d",&loss);

    loss=loss-1;
```

```

while(1)
{
for( i = 0; i < windowSize; i++)
{
printf("frame %d
transmitted.\n",sent);
printf("frame %d recieved.\n",sent);
sent++;
if(sent == loss)
break;
else if(sent == windowSize)
break;
}
if(loss>=0 && loss<=windowSize)
{
printf("\nframe %d was lost, Re-transmitting the
frame.\n",loss);
Sleep(20);
sent=loss;
loss=-1;
}
if(sent == windowSize)
break;
}
return 0;
}

int acknowledgement()
{
int ack,windowSize,i,sent=0;
printf("input windowSize:\n");
scanf("%d",&windowSize);
printf("input the acknowledgement to be lost:");
scanf("%d",&ack);

while(1)

```

```

{
for( i = 0; i < windowSize; i++)
{
printf("frame %d
transmitted.\n",sent);
sent++;
if(sent == ack)
break;
else if(sent == windowSize)
{
printf("frame %d recieved.\n",sent-1);
break;
}
printf("frame %d hrecieved.\n",sent-1);
}
if(ack>=0 && ack<=windowSize)
{
printf("\nAcknowledgement for frame %d has not
been recieved, Re-transmitting the frame.\n",ack-1);
Sleep(20);
sent=ack-1;
ack=-1;
}
if(sent == windowSize)
break;
}
return 0;
}
int main()
{

int ch;
while(1)
{
printf("1.Transmission success(no corruption)\n2.Frame

```

```

is lost\n3.no Acknowledgement (lost)\n4.Quit\n");

scanf("%d",&ch);

switch (ch)
{
case 1 :
sent();
break;
case 2 :
frameloss();
break;
case 3 :
acknowledgement();
break;
case 4 :
exit(0);
default :
printf("input any of the option:\n");
break;
}
}

return 0;
}

```

OUTPUT :

