

Q.1) Implement go back N ARQ protocol

Ans: To implement go back N ARQ protocol.

ALGORITHM: It is a specific instance of ARQ protocol, in which the sending protocol process continues to send a number of frames specified by a window size without ACK packet from receiver.

It is a special case of general sliding window protocol with transmit window size of N and receiver size of 1.

CODE:

```
#include <stdio.h>
#include <math.h>
int main()
{
    int window_size, sent=0, acknum, i, m, p;
    printf("Enter no. of bits");
    scanf("%d", &m);
    p = pow(2, m);
```

```
printf ("The no of Packets that are transmitted  
are : %d\n", p);
```

```
window size = pow(2, m) - 1;
```

```
printf ("The window size is: %d\n", window size);  
while (1)
```

```
{
```

```
for (i = 0; i < window size; i++)
```

```
{  
    printf ("Frame %d has been transmitted\n",  
        sent);
```

```
    sent ++;
```

```
    if (sent == window size)  
        break;
```

```
}
```

```
printf ("In Please enter the last acknowledged  
received: \n");
```

```
scanf ("%d", &acknow);
```

```
if (acknow == window size)  
    break;
```

```
do
```

```
    sent = acknow;
```

```
    }
```

```
    return 0;
```

```
}
```

Q/P:-

Enter no of bits: 3

The no of packets that has been sent is 8

The window size is 7

Frame 0 is transmitted

Frame 1 is transmitted

Frame 2 is transmitted

Frame 3 is transmitted

Frame 4 is transmitted

Frame 5 is transmitted

Frame 6 is transmitted

Please enter the last acknowledgment
received: 5

Now enter the last acknowledgment
received: 5

Frame 5 has been transmitted

Please enter the last acknowledgment
received: 6

Frame 6 has been transmitted