

Stop and Wait with ARQ Prashanth.S (19MID0020)

Code

```

1  import time as t
2  import random
3
4  def stop_n_wait(frame_number,Sn,Rn):
5      temp = frame_number
6      print("Number of frames : ",frame_number)
7      while (frame_number>0):
8          print("\nSending the frame : ",Sn)
9          n = (random.randint(0,frame_number-1)) % frame_number
10
11         if (n%frame_number)==0:
12             for x in range(1,2):
13                 print("\nWaiting for {} seconds".format(x))
14                 t.sleep(x)
15
16             print("No info from the receiver, about frame-{} so resend".format(n))
17             print("Re-Sending frame : ",Sn)
18
19             n = (random.randint(0,frame_number-1)) % frame_number
20
21         if temp==Rn:
22             print("Acknowledgement for the frame : ",Rn)
23             print("end")
24             break
25
26         else:
27             print("Acknowledgement for the frame : ",Rn+1)
28             ## after successfull transmission, reduce the frame number
29             frame_number = frame_number - 1
30             Sn+=1 ## incrementing the Sn to the next frame
31             Rn+=1 ## incrementing the Rn to the next frame
32
33
34  if __name__ == '__main__':
35      frame_number = int(input(("Enter the number of frames : ")))
36      Sn = 1 ## sender frame-number
37      Rn = 1 ## receiver frame-number
38      stop_n_wait(frame_number,Sn,Rn)
39

```

Output

```
Enter the number of frames : 10
Number of frames : 10

Sending the frame : 1
Acknowledgement for the frame :: 2

Sending the frame : 2
Acknowledgement for the frame :: 3

Sending the frame : 3

Waiting for 1 seconds
No info from the receiver, about frame-3 so resending the frame-3
onceagain
Re-Sending frame : 3
Acknowledgement for the frame :: 4

Sending the frame : 4
Acknowledgement for the frame :: 5

Sending the frame : 5
Acknowledgement for the frame :: 6

Sending the frame : 6

Waiting for 1 seconds
No info from the receiver, about frame-6 so resending the frame-6
onceagain
Re-Sending frame : 6
Acknowledgement for the frame :: 7

Sending the frame : 7
Acknowledgement for the frame :: 8

Sending the frame : 8
Acknowledgement for the frame :: 9

Sending the frame : 9
Acknowledgement for the frame :: 10

Sending the frame : 10

Waiting for 1 seconds
No info from the receiver, about frame-10 so resending the frame-10
onceagain
Re-Sending frame : 10
_
```

```
Acknowledgement for the frame : 10  
end
```

```
***Repl Closed***
```