```
Last login: Fri Aug  4 13:51:23 on ttys000

The default interactive shell is now zsh.
To update your account to use zsh, please run `chsh -s /bin/zsh`.
For more details, please visit https://support.apple.com/kb/HT208050.
Ankits-MacBook-Air:Program1 ankit$ ls
Server terminal screenshots.pdf c                        client1.c                      readme copy.txt
Ankits-MacBook-Air:Program1 ankit$ ./c localhost 1


Test Case 1: Transmission of 5 packets without errors and receiving ACK from server

Packet created:
---- Packet Number 1 ----
Start of Packet ID      :"0XFFFF"
Client ID               :"0XFF"
DATA                    :"0XFFF1"
Segment Number          :"1"
Length of payload       :"0X8"
End of Packet ID        :"0XFFFF"
------------------------


Sending Packet: Payload

ACK received

----ACK from Server 1----
Start of Packet ID      :"0XFFFF"
Client ID               :"0XFF"
ACK                     :"0XFFF2"
Received Segment Number Number :"1"
End of Packet ID        :"0XFFFF"
------------------------

Packet created:
---- Packet Number 2 ----
Start of Packet ID      :"0XFFFF"
Client ID               :"0XFF"
DATA                    :"0XFFF1"
Segment Number          :"2"
Length of payload       :"0X8"
End of Packet ID        :"0XFFFF"
------------------------


Sending Packet: Payload

ACK received

----ACK from Server 2----
Start of Packet ID      :"0XFFFF"
Client ID               :"0XFF"
ACK                     :"0XFFF2"
Received Segment Number Number :"2"
End of Packet ID        :"0XFFFF"
------------------------

Packet created:
---- Packet Number 3 ----
Start of Packet ID      :"0XFFFF"
Client ID               :"0XFF"
DATA                    :"0XFFF1"
Segment Number          :"3"
Length of payload       :"0X8"
End of Packet ID        :"0XFFFF"
------------------------
```

Packet 1 and its ACK

Packet 2 and its ACK

## Packet 3 and its ACK

```
Sending Packet: Payload

ACK received

----ACK from Server 3----
Start of Packet ID       :"0XFFFF"
Client ID                :"0XFF"
ACK                      :"0XFFF2"
Received Segment Number Number :"3"
End of Packet ID         :"0XFFFF"
------------------------

Packet created:
---- Packet Number 4 ----
Start of Packet ID       :"0XFFFF"
Client ID                :"0XFF"
DATA                     :"0XFFF1"
Segment Number           :"4"
Length of payload        :"0X8"
End of Packet ID         :"0XFFFF"
------------------------
```

## Packet 4 and its ACK

```
Sending Packet: Payload

ACK received

----ACK from Server 4----
Start of Packet ID       :"0XFFFF"
Client ID                :"0XFF"
ACK                      :"0XFFF2"
Received Segment Number Number :"4"
End of Packet ID         :"0XFFFF"
------------------------

Packet created:
---- Packet Number 5 ----
Start of Packet ID       :"0XFFFF"
Client ID                :"0XFF"
DATA                     :"0XFFF1"
Segment Number           :"5"
Length of payload        :"0X8"
End of Packet ID         :"0XFFFF"
------------------------
```

## Packet 5 and its ACK

```
Sending Packet: Payload

ACK received

----ACK from Server 5----
Start of Packet ID       :"0XFFFF"
Client ID                :"0XFF"
ACK                      :"0XFFF2"
Received Segment Number Number :"5"
End of Packet ID         :"0XFFFF"
------------------------
```

```
Test Case 2: Transmission of 1 error free packet and 4 packets with assigned errors

Packet 1: Error free packet
Packet created:
---- Packet Number 1 ----
Start of Packet ID      :"0XFFFF"
Client ID               :"0XFF"
DATA                    :"0XFFF1"
Segment Number          :"1"
Length of payload       :"0X8"
End of Packet ID        :"0XFFFF"
------------------------


Sending Packet: Payload

ACK received

----ACK from Server 1----
Start of Packet ID      :"0XFFFF"
Client ID               :"0XFF"
ACK                     :"0XFFF2"
Received Segment Number Number :"1"
End of Packet ID        :"0XFFFF"
------------------------

Packet 2: Simulation of 'Duplicate Packet' error
Packet created:
---- Packet Number 1 ----
Start of Packet ID      :"0XFFFF"
Client ID               :"0XFF"
DATA                    :"0XFFF1"
Segment Number          :"1"
Length of payload       :"0X8"
End of Packet ID        :"0XFFFF"
------------------------


Sending Packet: Payload

Rejected packet received
Type of Error: Duplicate packet.

-----Reject Packet 1-----
Start of Packet ID      :"0XFFFF"
Client ID               :"0XFF"
REJECT                  :"0XFFF3"
Reject sub code         :"0XFFF7"
Received Segment Number :"1"
End of Packet ID        :"0XFFFF"
------------------------

Packet 3: Simulation of 'Out of Sequence' error
Packet created:
---- Packet Number 3 ----
Start of Packet ID      :"0XFFFF"
Client ID               :"0XFF"
DATA                    :"0XFFF1"
Segment Number          :"3"
Length of payload       :"0X8"
End of Packet ID        :"0XFFFF"
------------------------

Sending Packet: Payload

Rejected packet received
Type of Error: Packet not in sequence
```

Test case 1: Packet accepted

Test case 2: Error - Duplicate packet

Test case 3: Error - Packet out of sequence

```
-----Reject Packet 3-----
Start of Packet ID       :"0XFFFF"
Client ID                :"0XFF"
REJECT                   :"0XFFF3"
Reject sub code          :"0XFFF4"
Received Segment Number :"3"
End of Packet ID         :"0XFFFF"
_____


Packet 4: Simulation of 'Length mismatch' error
Packet created
---- Packet Number 2 ----
Start of Packet ID       :"0XFFFF"
Client ID                :"0XFF"
DATA                     :"0XFFF1"
Segment Number           :"2"
Length of payload        :"0X44"
End of Packet ID         :"0XFFFF"
_____


Sending Packet: Payload

Rejected packet received
Type of Error: Length mismatch in Packet

-----Reject Packet 2-----
Start of Packet ID       :"0XFFFF"
Client ID                :"0XFF"
REJECT                   :"0XFFF3"
Reject sub code          :"0XFFF5"
Received Segment Number :"2"
End of Packet ID         :"0XFFFF"
_____


Packet 5: Simulation of 'End of packet missing' error
Packet created:
---- Packet Number 2 ----
Start of Packet ID       :"0XFFFF"
Client ID                :"0XFF"
DATA                     :"0XFFF1"
Segment Number           :"2"
Length of payload        :"0X8"
End of Packet ID         :"0XFFFF"
_____


End of packet changed
---- Packet Number 2 ----
Start of Packet ID       :"0XFFFF"
Client ID                :"0XFF"
DATA                     :"0XFFF1"
Segment Number           :"2"
Length of payload        :"0X8"
End of Packet ID         :"0XFFF0"
_____


Sending Packet: Payload

Rejected packet received
Type of Error: Missing End of packet

-----Reject Packet 2-----
Start of Packet ID       :"0XFFFF"
Client ID                :"0XFF"
REJECT                   :"0XFFF3"
Reject sub code          :"0XFFF6"
Received Segment Number :"2"
End of Packet ID         :"0XFFFF"
_____


Ankits-MacBook-Air:Program1 ankit$
```

**Test case 4: Error - Packet length mismatch**

**Test case 5: Error - End of packet missing**