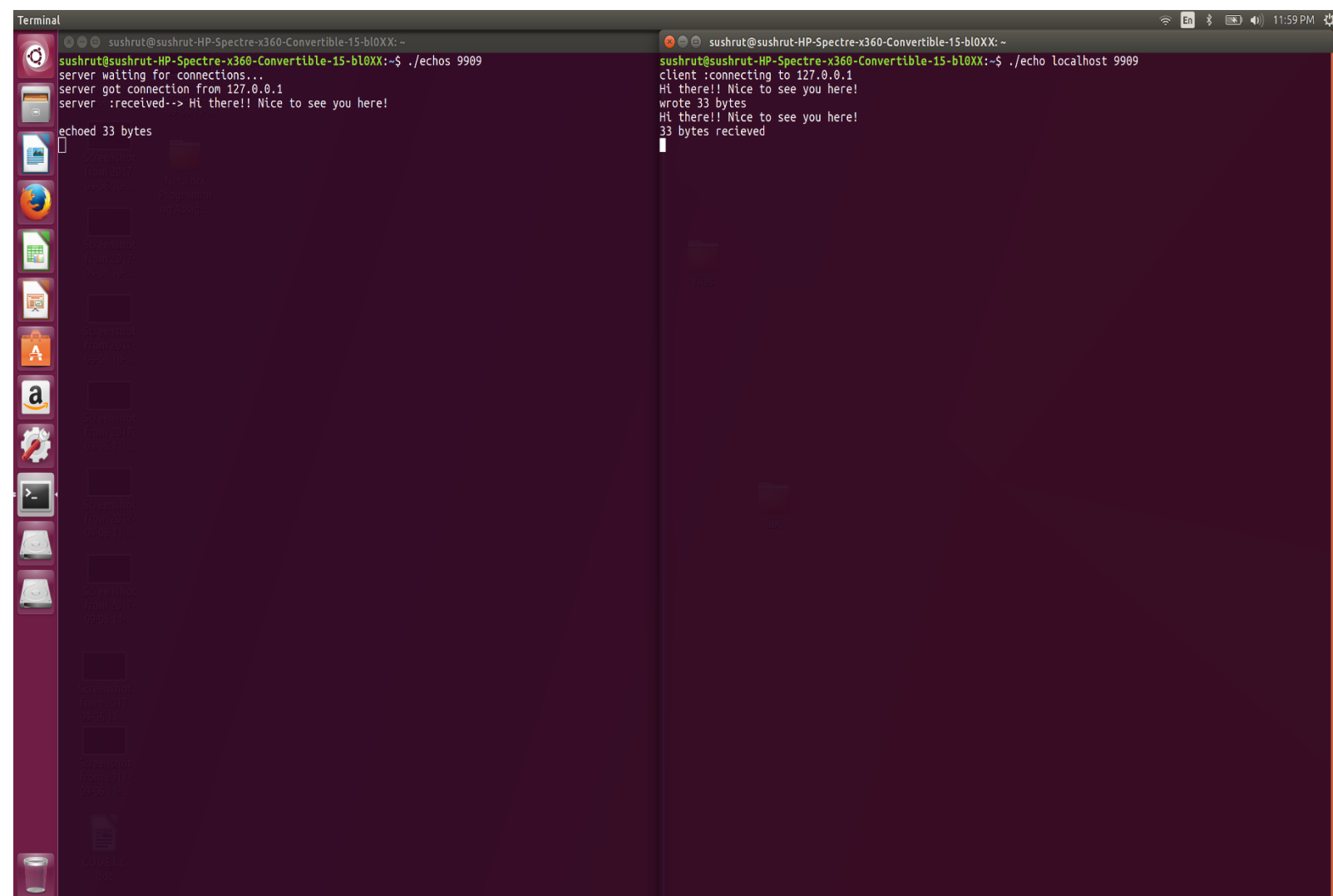


TEST CASES

TEST CASE-1

A). Line of text terminated by a newline.



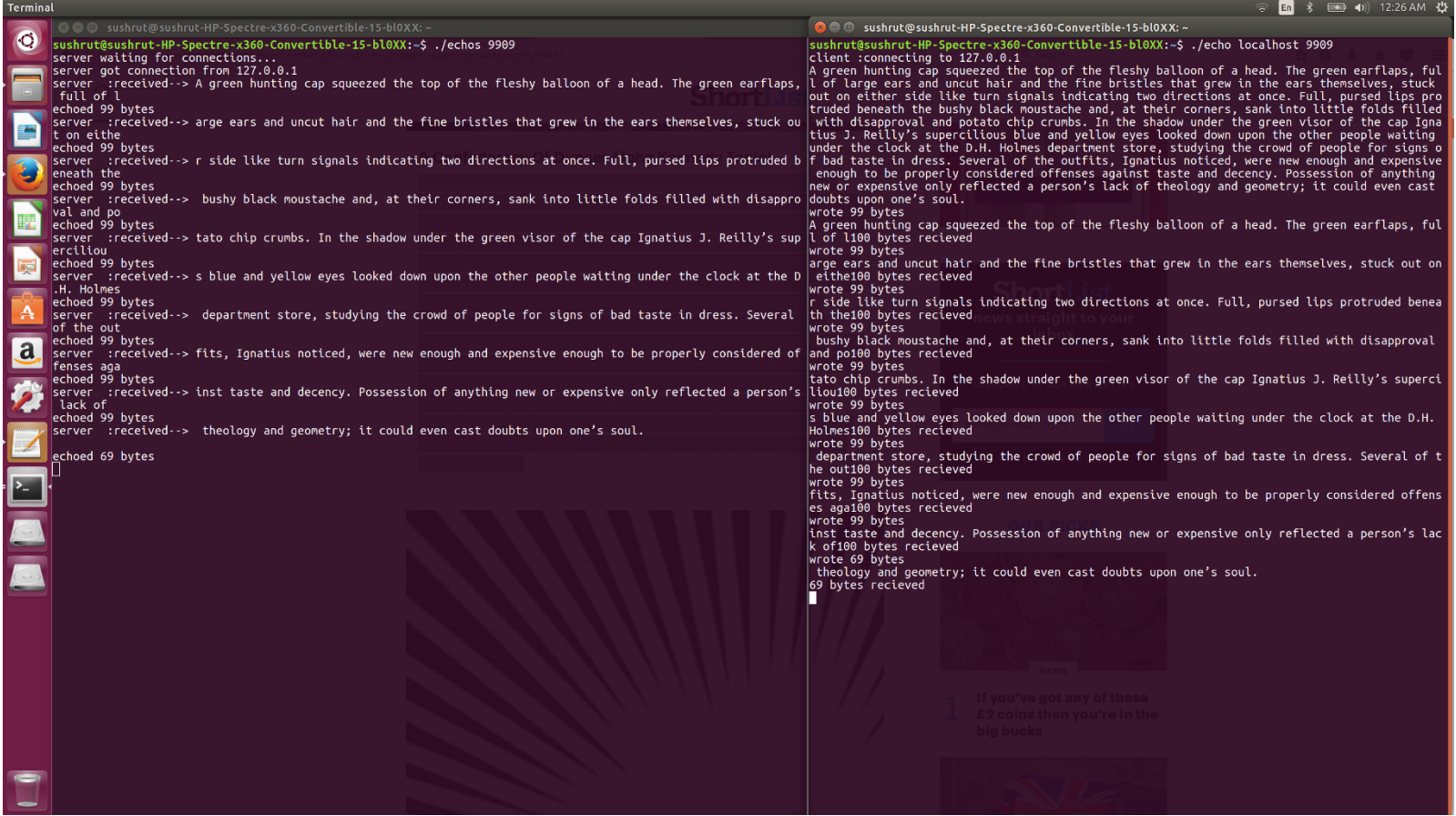
```
sushrut@sushrut-HP-Spectre-x360-Convertible-15-bl0XX: ~  
sushrut@sushrut-HP-Spectre-x360-Convertible-15-bl0XX:~$ ./echos 9909  
server waiting for connections...  
server got connection from 127.0.0.1  
server :received-> Hi there!! Nice to see you here!  
echoed 33 bytes  
[RECEIVED MESSAGE]
```

```
sushrut@sushrut-HP-Spectre-x360-Convertible-15-bl0XX: ~  
sushrut@sushrut-HP-Spectre-x360-Convertible-15-bl0XX:~$ ./echo localhost 9909  
client :connecting to 127.0.0.1  
Hi there!! Nice to see you here!  
wrote 33 bytes  
Hi there!! Nice to see you here!  
33 bytes recieved  
[SENT MESSAGE]
```

We are running the Server and the Client side-by-side. On the left screen, the server has been set to the port – 9909. Client, on the right hand side, has been given the command line arguments of port number and localhost IP address, which resolves to 127.0.0.1. After a connection is established with the client the server screen shows–“server got connection from 127.0.0.1”. A message is sent from the client–“Hi there! Nice to see you here!” (33 bytes). The server receives the message, prints and echoes it back. The server receives the echo and prints it too.

TEST CASE-2

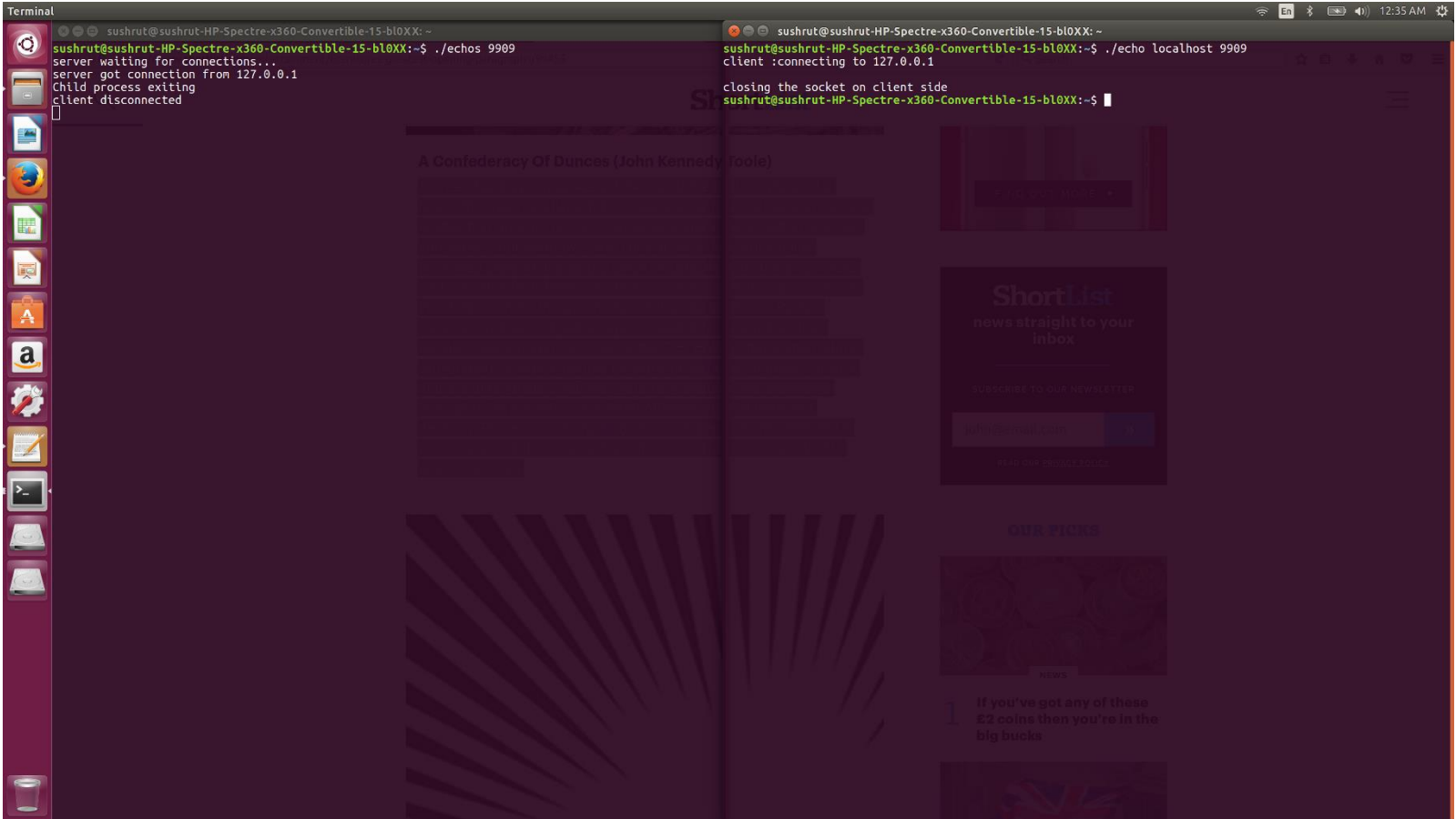
B). Line of text the maximum line length without a newline.



The entered paragraph from the client side has more than the number of bytes set as the buffer limit. The set buffer limit is 100 bytes. This makes the echoing of the paragraph possible only in more than one round, as is shown on the screen.

TEST CASE-3

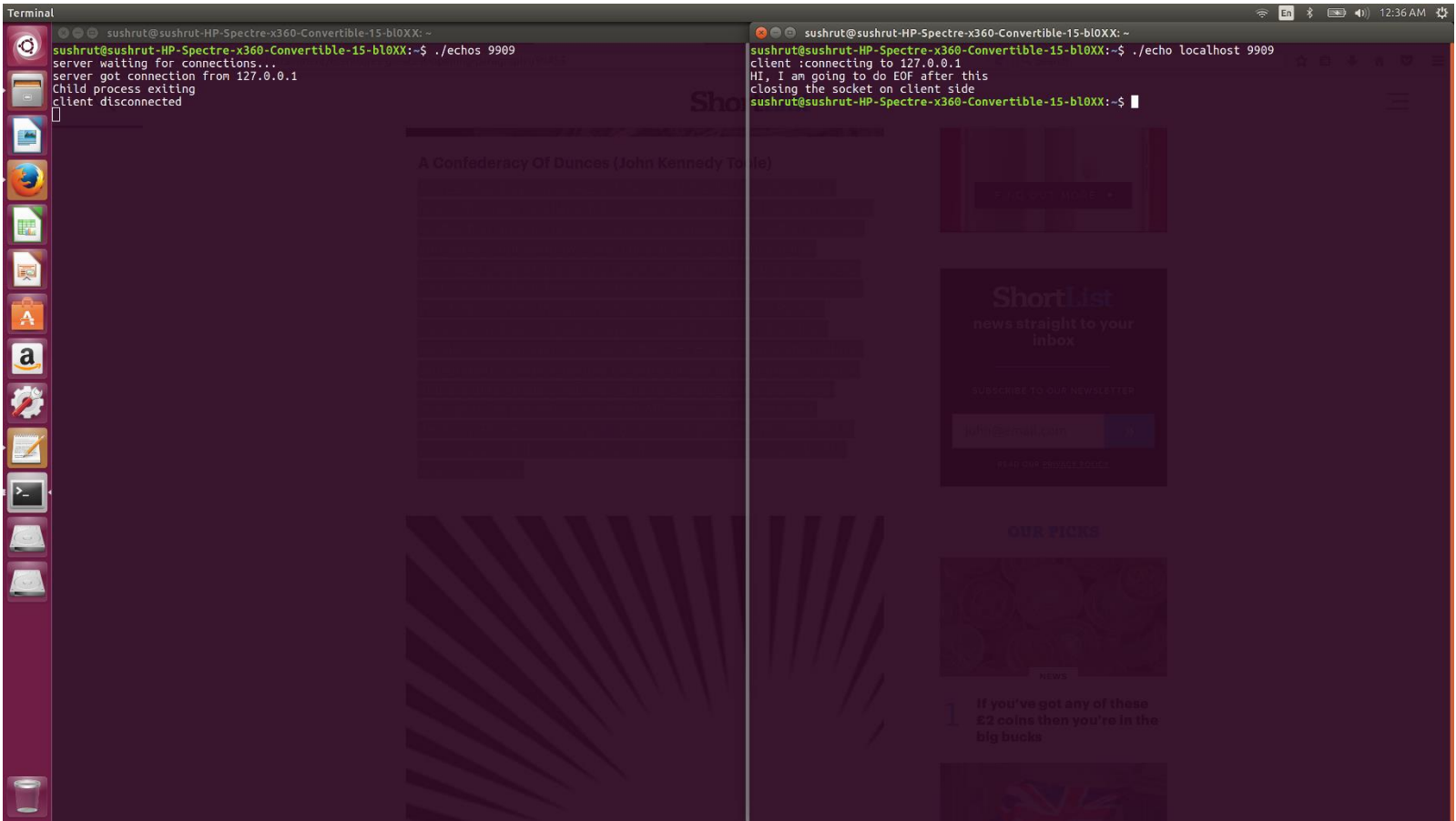
C). Line with no characters and EOF.



Entering EOF (CTRL+D) on the client window, without any characters, disconnects the client socket and exits. As soon as the client closes the socket, the server receives the TCP FIN packet and the server child process' read() command returns with a 0. The child process then exits.

TEST CASE-4

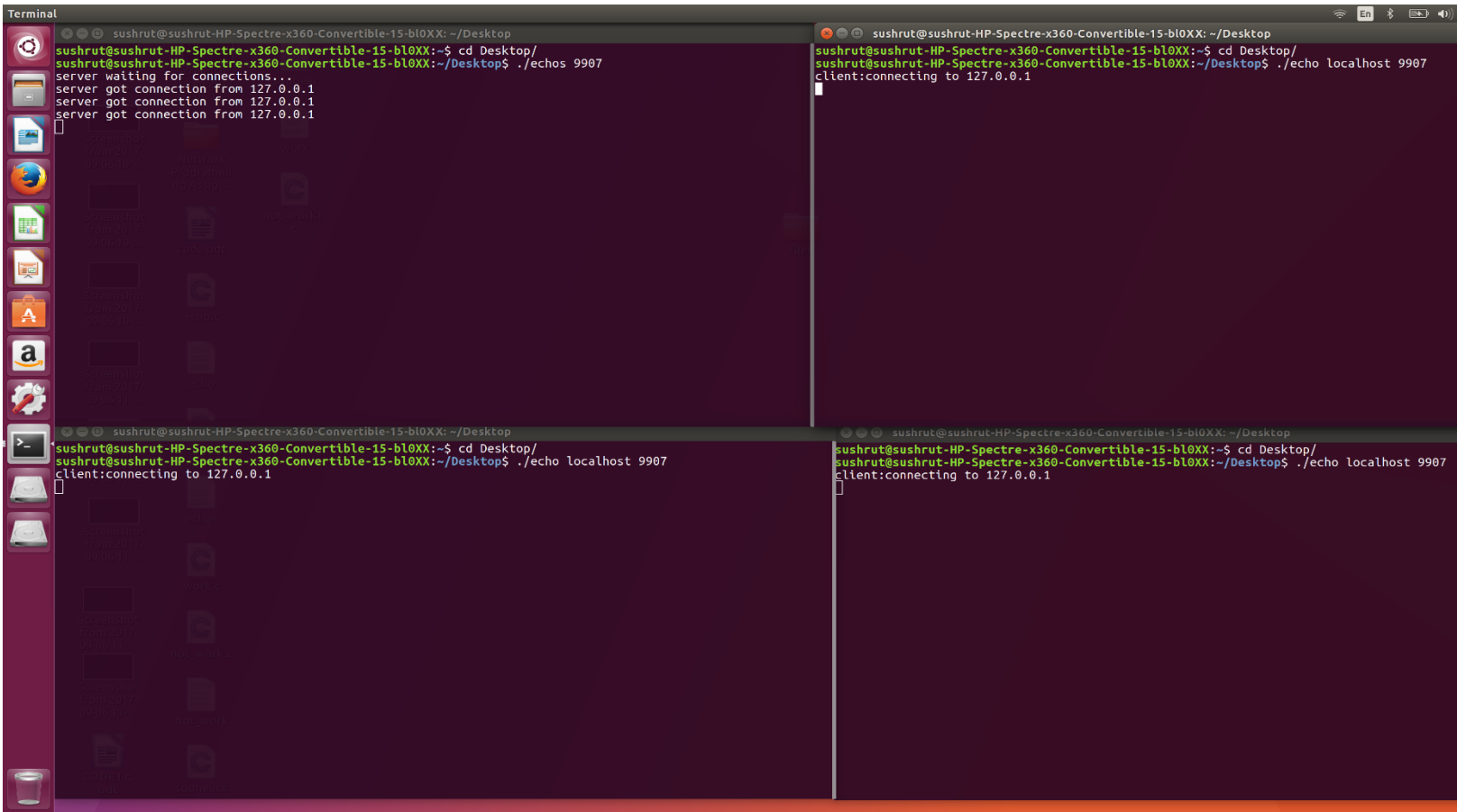
D). Client terminated after entering text.



In this test, we enter the EOF (CTRL+D) command right after entering the characters to be echoed. In this case, we do not receive the echo back from the server, client termination could be seen in server terminal output.

TEST CASE-5

E). Three clients connected to the server.



We can see that in the above screenshot that server has three clients connected to it. We ran the server in one terminal and we ran three clients from three separate terminals. The server listened to and accepted the connections from each client without any fail.