

LAB 5 - Client-Server Communication

NAME - DEV GOEL

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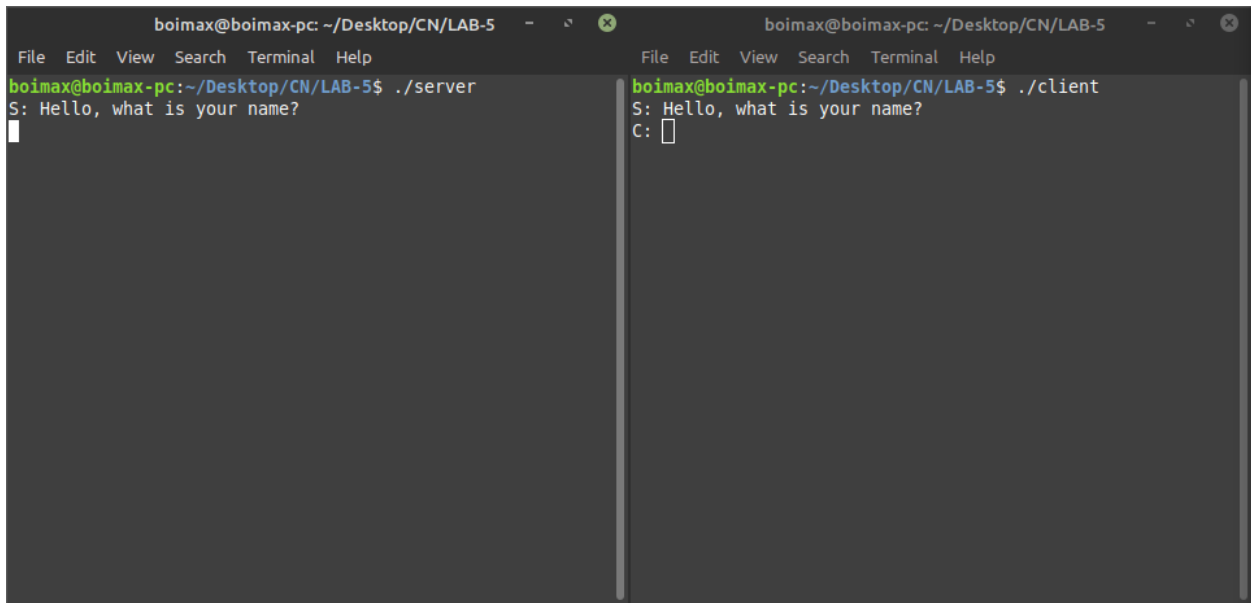
a) the client.c and server.c file. (1+1 mark for each file compiling properly and is properly commented)

Ans -

The files have been attached in the zip folder.

b) the server is able to send the "Hello, what is your name?" message to the client (2 marks)

Ans-



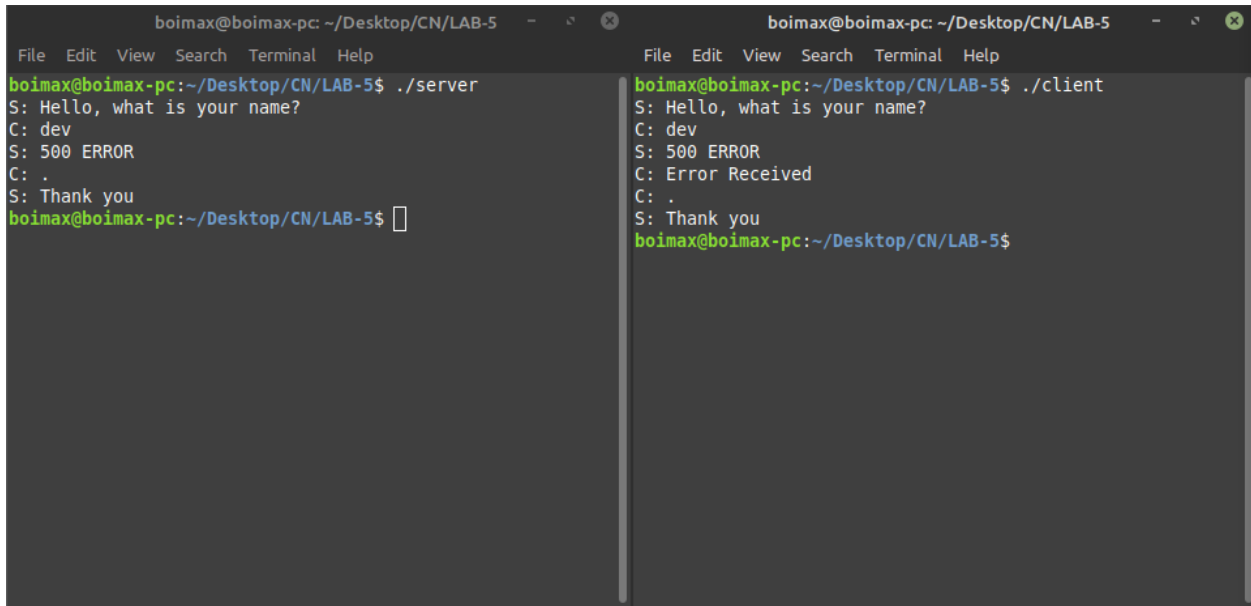
```
boimax@boimax-pc: ~/Desktop/CN/LAB-5
File Edit View Search Terminal Help
boimax@boimax-pc:~/Desktop/CN/LAB-5$ ./server
S: Hello, what is your name?
█

boimax@boimax-pc: ~/Desktop/CN/LAB-5
File Edit View Search Terminal Help
boimax@boimax-pc:~/Desktop/CN/LAB-5$ ./client
S: Hello, what is your name?
C: █
```

c) The client is able to send its name to the server and the server sends the response code. You must send your name (once in complete lower case and once in camel casing where the first alphabet is in uppercase and all others are in lower case) as the response to the server. (1.5+1.5 mark)

Ans -

1. Sending name in complete lower case

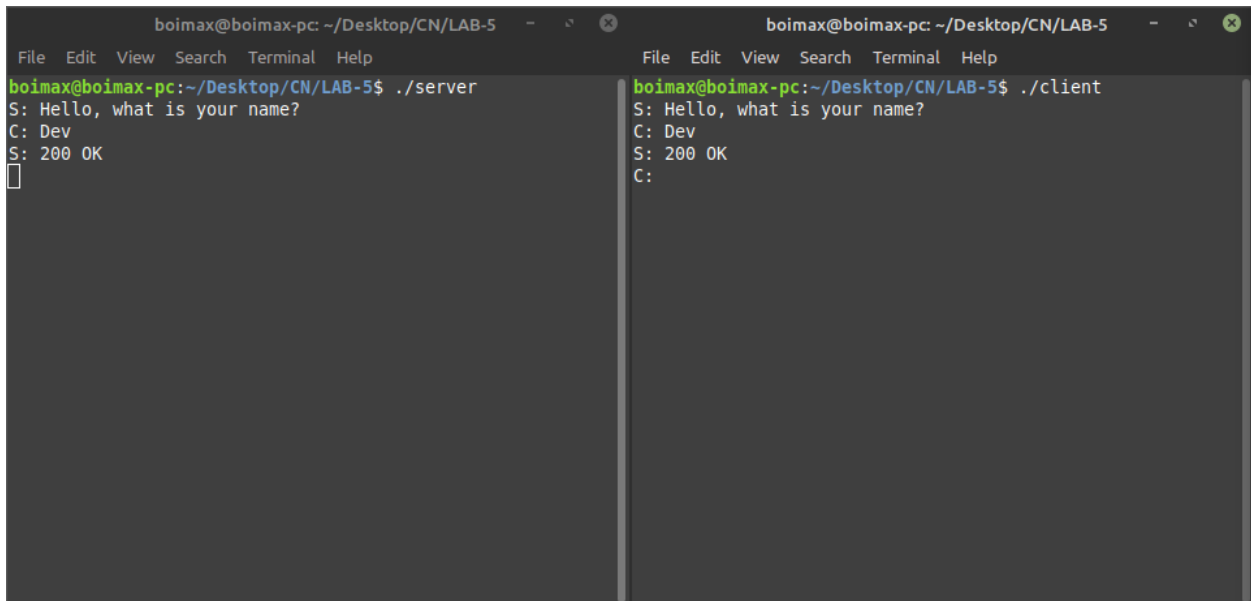


The screenshot shows two terminal windows side-by-side. The left window is the server, and the right window is the client. Both are running a program in the directory ~/Desktop/CN/LAB-5.

```
boimax@boimax-pc: ~/Desktop/CN/LAB-5
File Edit View Search Terminal Help
boimax@boimax-pc:~/Desktop/CN/LAB-5$ ./server
S: Hello, what is your name?
C: dev
S: 500 ERROR
C: .
S: Thank you
boimax@boimax-pc:~/Desktop/CN/LAB-5$
```

```
boimax@boimax-pc: ~/Desktop/CN/LAB-5
File Edit View Search Terminal Help
boimax@boimax-pc:~/Desktop/CN/LAB-5$ ./client
S: Hello, what is your name?
C: dev
S: 500 ERROR
C: Error Received
C: .
S: Thank you
boimax@boimax-pc:~/Desktop/CN/LAB-5$
```

2. Sending name in camel case



The screenshot shows two terminal windows side-by-side. The left window is the server, and the right window is the client. Both are running a program in the directory ~/Desktop/CN/LAB-5.

```
boimax@boimax-pc: ~/Desktop/CN/LAB-5
File Edit View Search Terminal Help
boimax@boimax-pc:~/Desktop/CN/LAB-5$ ./server
S: Hello, what is your name?
C: Dev
S: 200 OK

```

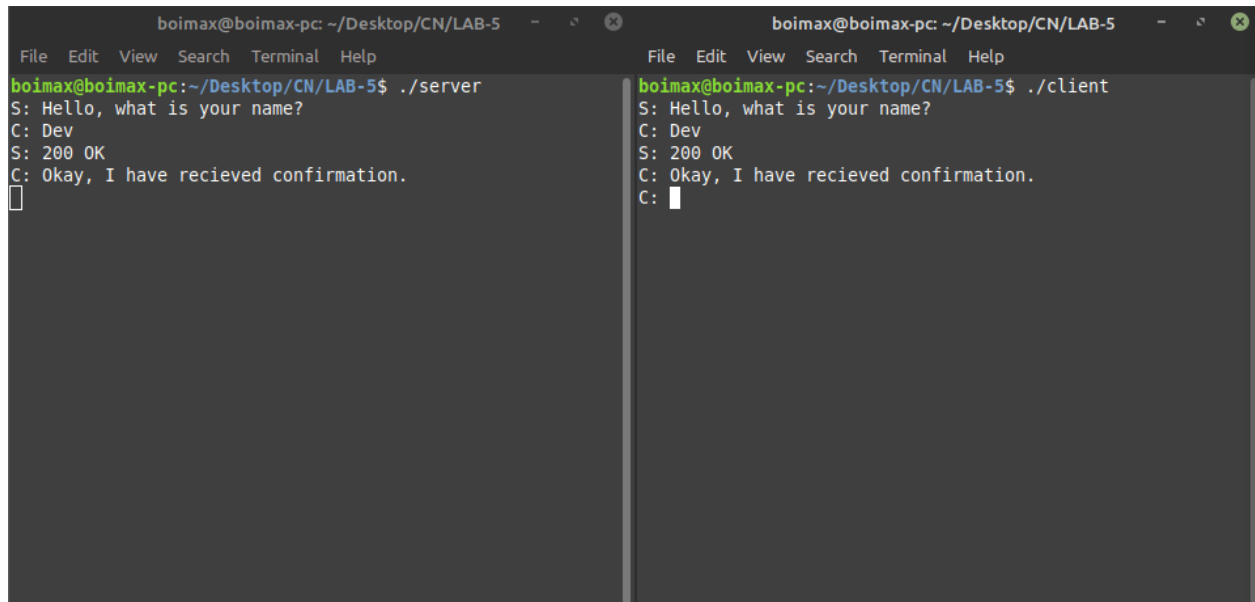
```
boimax@boimax-pc: ~/Desktop/CN/LAB-5
File Edit View Search Terminal Help
boimax@boimax-pc:~/Desktop/CN/LAB-5$ ./client
S: Hello, what is your name?
C: Dev
S: 200 OK
C:

```

d) If the client gets 200 OK from the server, then it sends the message, else it throws an error message and sends "." to the server to terminate the connection. (1.5 + 1.5 marks)

Ans -

1. Getting 200 OK from server

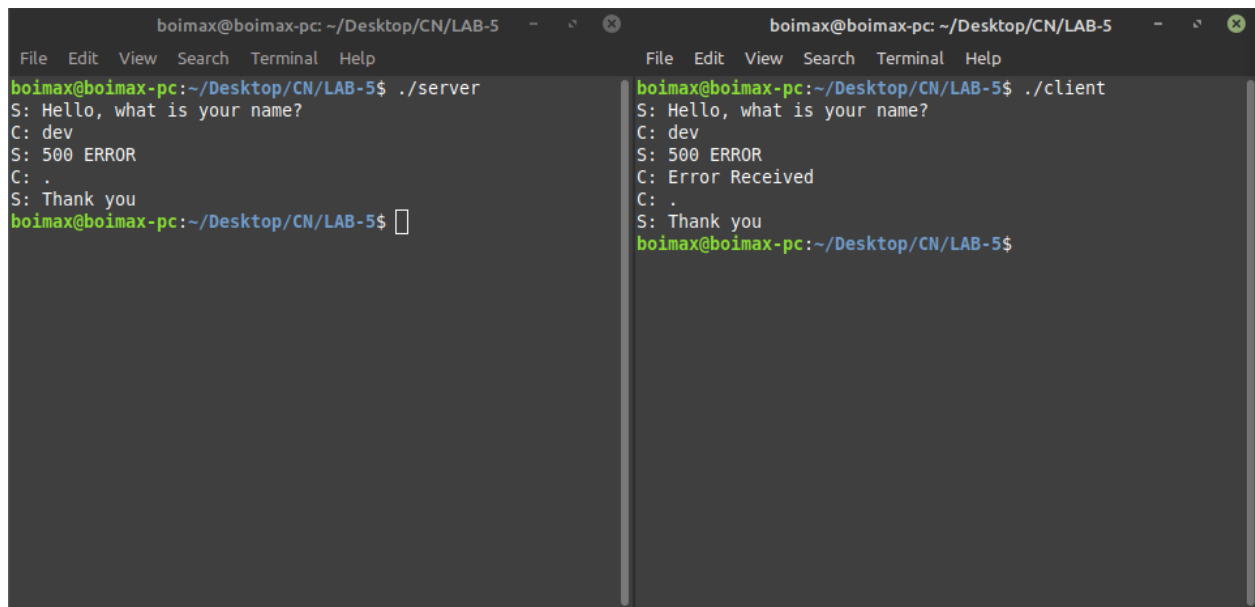


The image shows two terminal windows side-by-side. The left window is titled 'boimax@boimax-pc: ~/Desktop/CN/LAB-5' and shows the execution of './server'. The output is: 'S: Hello, what is your name?', 'C: Dev', 'S: 200 OK', and 'C: Okay, I have recieved confirmation.' followed by a cursor. The right window is titled 'boimax@boimax-pc: ~/Desktop/CN/LAB-5' and shows the execution of './client'. The output is: 'S: Hello, what is your name?', 'C: Dev', 'S: 200 OK', and 'C: Okay, I have recieved confirmation.' followed by a cursor.

```
boimax@boimax-pc: ~/Desktop/CN/LAB-5
File Edit View Search Terminal Help
boimax@boimax-pc:~/Desktop/CN/LAB-5$ ./server
S: Hello, what is your name?
C: Dev
S: 200 OK
C: Okay, I have recieved confirmation.
█

boimax@boimax-pc: ~/Desktop/CN/LAB-5
File Edit View Search Terminal Help
boimax@boimax-pc:~/Desktop/CN/LAB-5$ ./client
S: Hello, what is your name?
C: Dev
S: 200 OK
C: Okay, I have recieved confirmation.
C: █
```

2. Getting 500 ERROR from server



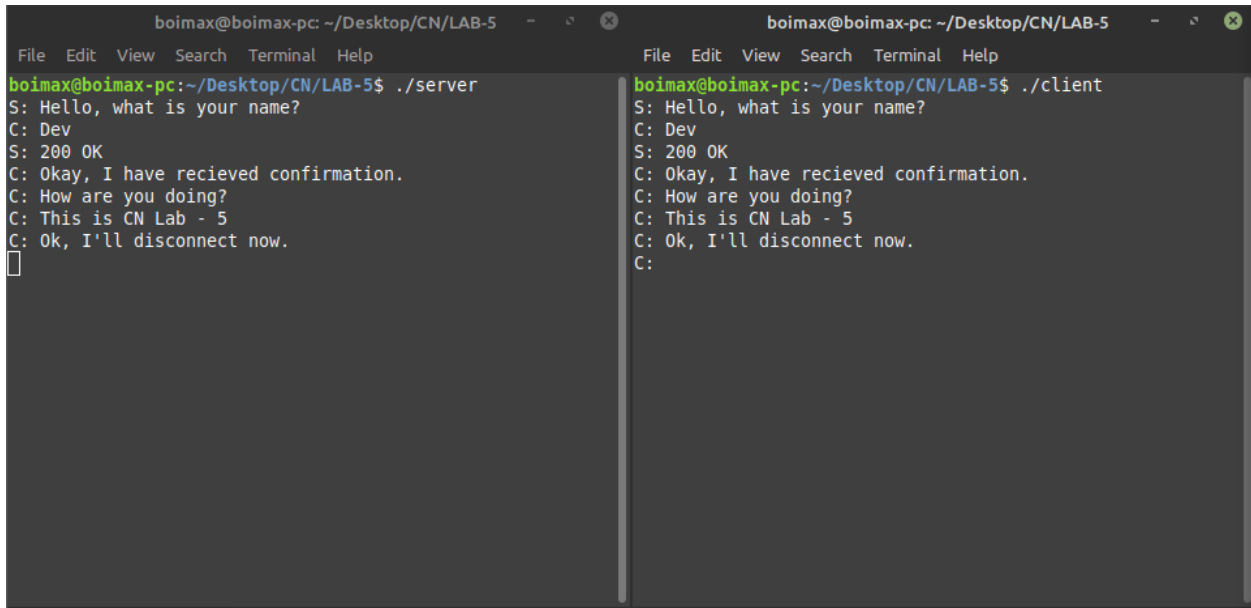
The image shows two terminal windows side-by-side. The left window is titled 'boimax@boimax-pc: ~/Desktop/CN/LAB-5' and shows the execution of './server'. The output is: 'S: Hello, what is your name?', 'C: dev', 'S: 500 ERROR', 'C: .', and 'S: Thank you'. The right window is titled 'boimax@boimax-pc: ~/Desktop/CN/LAB-5' and shows the execution of './client'. The output is: 'S: Hello, what is your name?', 'C: dev', 'S: 500 ERROR', 'C: Error Received', 'C: .', and 'S: Thank you'.

```
boimax@boimax-pc: ~/Desktop/CN/LAB-5
File Edit View Search Terminal Help
boimax@boimax-pc:~/Desktop/CN/LAB-5$ ./server
S: Hello, what is your name?
C: dev
S: 500 ERROR
C: .
S: Thank you
boimax@boimax-pc:~/Desktop/CN/LAB-5$ █

boimax@boimax-pc: ~/Desktop/CN/LAB-5
File Edit View Search Terminal Help
boimax@boimax-pc:~/Desktop/CN/LAB-5$ ./client
S: Hello, what is your name?
C: dev
S: 500 ERROR
C: Error Received
C: .
S: Thank you
boimax@boimax-pc:~/Desktop/CN/LAB-5$
```

e) The client can send continuous lines of messages to the server. (2 marks)

Ans -

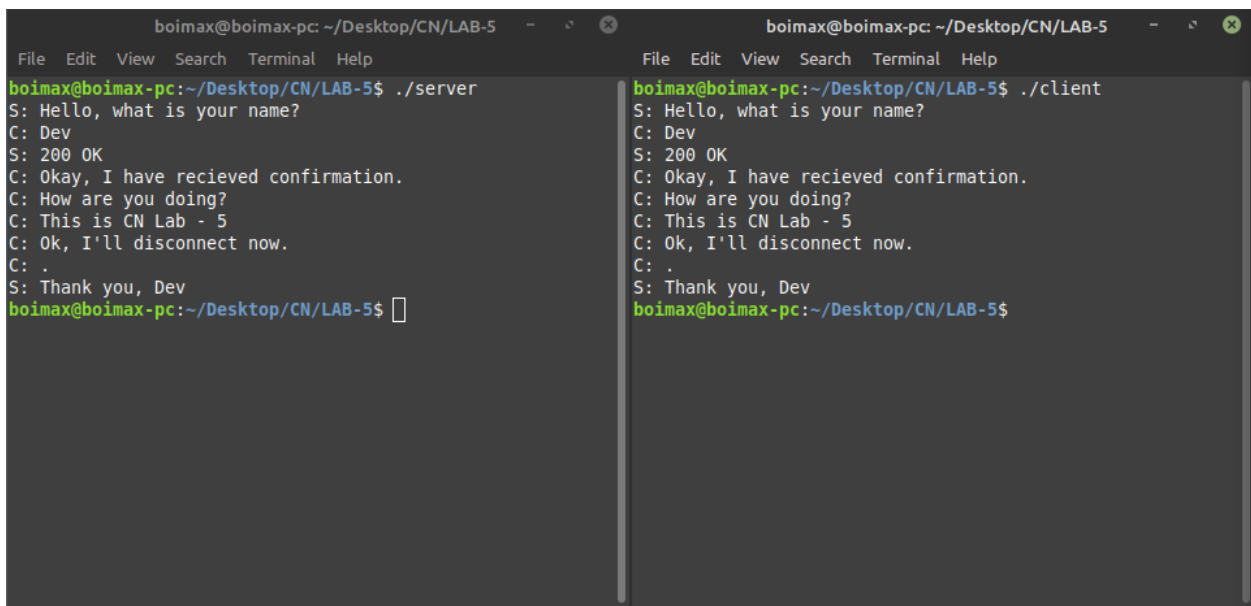


```
boimax@boimax-pc: ~/Desktop/CN/LAB-5
File Edit View Search Terminal Help
boimax@boimax-pc:~/Desktop/CN/LAB-5$ ./server
S: Hello, what is your name?
C: Dev
S: 200 OK
C: Okay, I have recieved confirmation.
C: How are you doing?
C: This is CN Lab - 5
C: Ok, I'll disconnect now.
C:

boimax@boimax-pc: ~/Desktop/CN/LAB-5
File Edit View Search Terminal Help
boimax@boimax-pc:~/Desktop/CN/LAB-5$ ./client
S: Hello, what is your name?
C: Dev
S: 200 OK
C: Okay, I have recieved confirmation.
C: How are you doing?
C: This is CN Lab - 5
C: Ok, I'll disconnect now.
C:
```

f) The server sends a "Thank you, <name>" message on receiving CRLF.CRLF line (2 marks)

Ans -



```
boimax@boimax-pc: ~/Desktop/CN/LAB-5
File Edit View Search Terminal Help
boimax@boimax-pc:~/Desktop/CN/LAB-5$ ./server
S: Hello, what is your name?
C: Dev
S: 200 OK
C: Okay, I have recieved confirmation.
C: How are you doing?
C: This is CN Lab - 5
C: Ok, I'll disconnect now.
C: .
S: Thank you, Dev
boimax@boimax-pc:~/Desktop/CN/LAB-5$

boimax@boimax-pc: ~/Desktop/CN/LAB-5
File Edit View Search Terminal Help
boimax@boimax-pc:~/Desktop/CN/LAB-5$ ./client
S: Hello, what is your name?
C: Dev
S: 200 OK
C: Okay, I have recieved confirmation.
C: How are you doing?
C: This is CN Lab - 5
C: Ok, I'll disconnect now.
C: .
S: Thank you, Dev
boimax@boimax-pc:~/Desktop/CN/LAB-5$
```