

Computer Networks Laboratory

CSN-361

Assignment 1 (L2)

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Class: B.Tech CSE 3rd Year

Problem Statements

1. Write a program that in C to connect two nodes on a network to communicate with each other, where one socket listens on a particular port at an IP, while other socket reaches out to the other to form a connection.

Algorithms and Data Structures Used

Server Code:

Create socket file descriptor

Get IPv4 and IPv6 addresses and convert them to binary

Connect to the port the described IP

Read message when it arrives from client

Client Code:

Create socket file descriptor

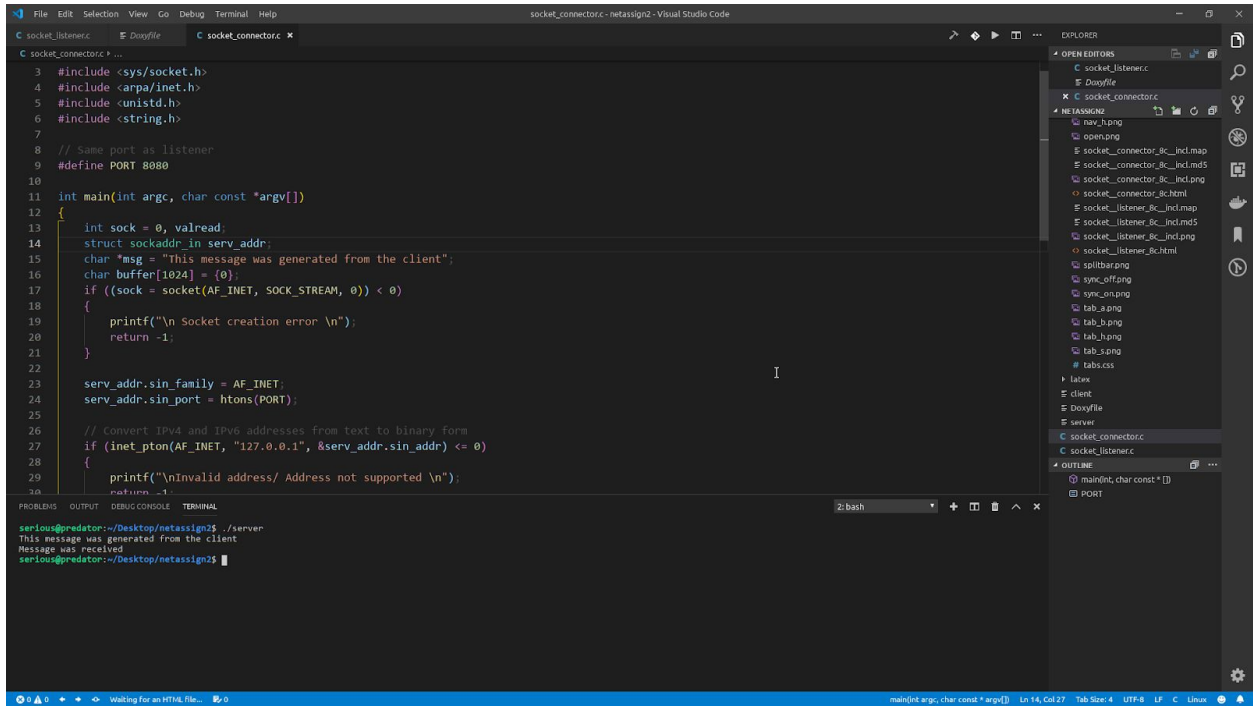
Attach socket to port 8080

Forcefully attach socket to port 8080

Send message through socket

Snapshots

Server logs from the server on message transfer



```
1 #include <sys/socket.h>
2 #include <arpa/inet.h>
3 #include <unistd.h>
4 #include <string.h>
5
6 // Same port as listener
7 #define PORT 8080
8
9 int main(int argc, char const *argv[])
10 {
11     int sock = 0, valread;
12     struct sockaddr_in serv_addr;
13     char *msg = "This message was generated from the client";
14     char buffer[1024] = {0};
15     if ((sock = socket(AF_INET, SOCK_STREAM, 0)) < 0)
16     {
17         printf("\n Socket creation error \n");
18         return -1;
19     }
20     serv_addr.sin_family = AF_INET;
21     serv_addr.sin_port = htons(PORT);
22
23     // Convert IPv4 and IPv6 addresses from text to binary form
24     if (inet_pton(AF_INET, "127.0.0.1", &serv_addr.sin_addr) <= 0)
25     {
26         printf("\nInvalid address/ Address not supported \n");
27         return -1;
28     }
29     listen(sock, 5);
30 }
```

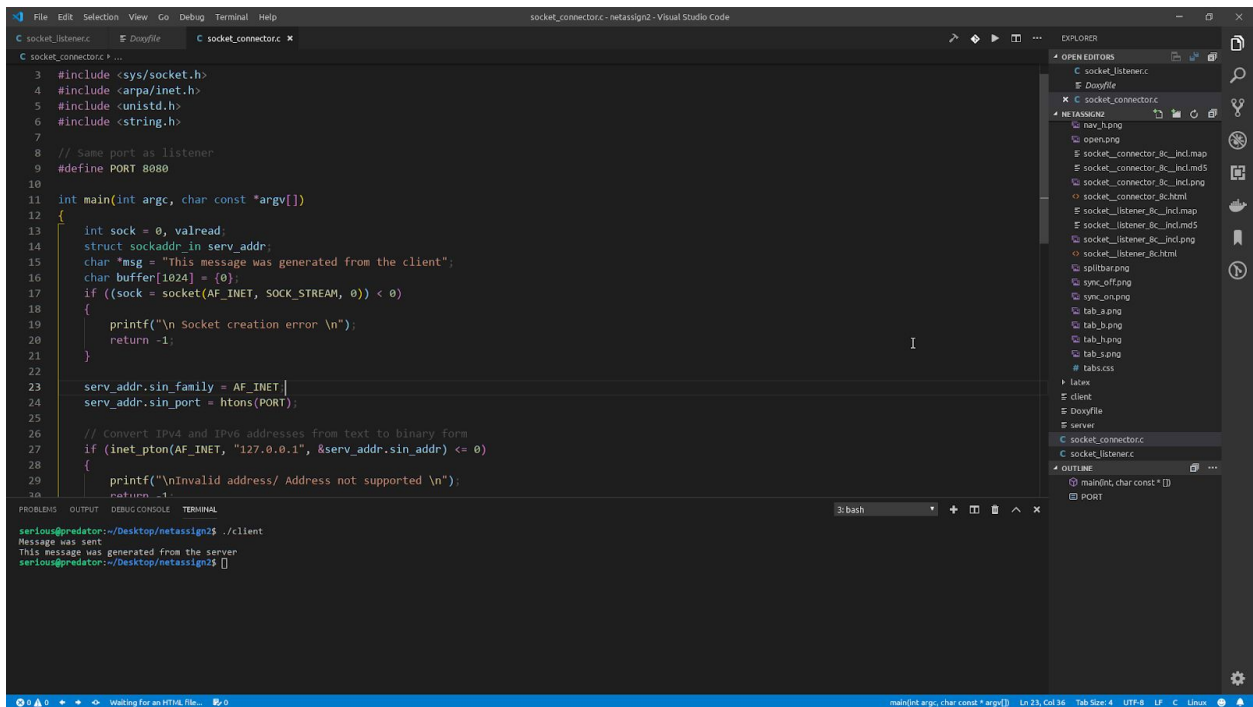
serious@predator:~/Desktop/netassign2\$./server

This message was generated from the client

Message was received

serious@predator:~/Desktop/netassign2\$

Client message sent



```
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4 #include <string.h>
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28     }
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30 }
```

serious@predator:~/Desktop/netassign2\$./client

Message was sent

This message was generated from the server

serious@predator:~/Desktop/netassign2\$