Pranjali Bajpai - 2018EEB1243

CSL303 Assignment 1

Screenshots

SERVER SIDE

```
pranjali@DESKTOP-PE8R3SN:~/os/a1/src$ gcc server.c function.c -o server -pthread -ldl -ljson-c
pranjali@DESKTOP-PE8R3SN:~/os/a1/src$ ./server 5500 6 10 10000
[+]Success: Server program starting
[+]Success: Server Socket created successfully with file descriptor 3
[+]Success: Binding to the address done
[+]Success: Listening for clients on port: 5500
[+]Success: Client connected new socket created with fd 4
[*]Info: Current Files: 6
[*]Info: Current Memory: 908
[+]Success: Thread Created
[+]Success: Thread running client_fd 4
[+]Success: Message received: { "DLL Name": "\/lib\/x86_64-linux-gnu\/libm.so.6", "Function Name": "cos", "Arguments": [ "1.2" ] }
[+]Success: Acknowledgement send
[+]Success: Result of cos(1.200000) = 0.362358
[+]Success: DLL function invoking completed
[+]Success: Thread execution complete client_fd 4
[+]Success: Closed 4

[+]Success: Client connected new socket created with fd 5
[*]Info: Current Files: 6
[*]Info: Current Memory: 1164
[+]Success: Thread Created
[+]Success: Thread running client_fd 5
[+]Success: Message received: { "DLL Name": "\/lib\/x86_64-linux-gnu\/libm.so.6", "Function Name": "pow", "Arguments": [ "3", "4" ]
}
[+]Success: Acknowledgement send
[+]Success: Result of pow(3.000000, 4.000000) = 81.000000
[+]Success: DLL function invoking completed
[+]Success: Thread execution complete client_fd 5
[+]Success: Closed 5
```

CLIENT SIDE

```
pranjali@DESKTOP-PE8R3SN:~/os/a1/src$ gcc client.c function.c -o client -ljson-c -ldl
pranjali@DESKTOP-PE8R3SN:~/os/a1/src$ ./client 5500 /lib/x86_64-linux-gnu/libm.so.6 cos 1.2
[+]Success: Client program starting
[+]Success: Client Socket created successfully with file descriptor 3
[+]Success: Connection established successfully between client and server
[+]Success: Message send to server
[+]Success: Acknowledgement from server: Message Received
[+]Success: Closed Client Socket fd
pranjali@DESKTOP-PE8R3SN:~/os/a1/src$ ./client 5500 /lib/x86_64-linux-gnu/libm.so.6 pow 3 4
[+]Success: Client program starting
[+]Success: Client Socket created successfully with file descriptor 3
[+]Success: Connection established successfully between client and server
[+]Success: Message send to server
[+]Success: Acknowledgement from server: Message Received
[+]Success: Closed Client Socket fd
```

Test Program

```
pranjali@DESKTOP-PE8R3SN:~/os/a1/src$ gcc test.c function.c -o test -pthread -ljson-c -ldl
pranjali@DESKTOP-PE8R3SN:~/os/a1/src$ ./test
*********************Testing dll_func_invoker*********************

[+]Success: Result of cos(1.200000) = 0.362358
[+]Test Case 1: Passed

[+]Success: Result of floor(4.900000) = 4.000000
[+]Test Case 2: Passed

[+]Success: Result of abs(-16) = 16
[+]Test Case 3: Passed

[+]Success: Result of pow(3.000000, 2.000000) = 9.000000
[+]Test Case 4: Passed

[-]Error: Cannot open DLL
[+]Test Case 5: Passed

[*]Info: Supported functions are: floor, cos, pow, abs
[+]Test Case 6: Passed

*********************Testing run_dll_func*********************

[+]Success: Result of cos(1.200000) = 0.362358
[+]Test Case 1: Passed

[+]Success: Result of floor(4.700000) = 4.000000
[+]Test Case 2: Passed

[+]Success: Result of abs(-12) = 12
[+]Test Case 3: Passed

[+]Success: Result of pow(3.000000, 4.000000) = 81.000000
[+]Test Case 4: Passed

[-]Error: Cannot open DLL
[+]Test Case 5: Passed

[*]Info: Supported functions are: floor, cos, pow, abs
[+]Test Case 6: Passed

*********************Testing get_available_thread_index*********************

[*]Info: Current Files: 4
[*]Info: Current Memory: 900
[+]Test Case 1: Passed

[*]Info: Current Files: 4
[*]Info: Current Memory: 900
[+]Test Case 2: Passed

[*]Info: Current Files: 4
[*]Info: Current Memory: 1100
[*]Info: Memory Limit Exceeded. Waiting for a thread to free memory
[+]Test Case 3: Passed

[*]Info: Current Files: 8
[*]Info: Current Memory: 900
[*]Info: File Limit Exceeded. Waiting for a thread to free files
[+]Test Case 4: Passed

[*]Info: Current Files: 8
[*]Info: Current Memory: 1000
[*]Info: File Limit Exceeded. Waiting for a thread to free files
[*]Info: Memory Limit Exceeded. Waiting for a thread to free memory
[+]Test Case 5: Passed

pranjali@DESKTOP-PE8R3SN:~/os/a1/src$
```