

Activities Visual Studio Code Wed 12:52 PM

7315_sender.cpp - 7315 - Visual Studio Code

File Edit Selection View Go Run Terminal Help

EXPLORER

- 7315
 - .vscode
 - asgn3
 - .vscode
 - 7315_asgn3.pcapng
 - 7315_asgn3.png
 - 7315_reciever.cpp
 - 7315_sender.cpp
 - a.out

7315_sender.cpp

```
asgn3 > 7315_sender.cpp > ...
1 #include <iostream>
2 #include <bitset>
3 #include <cstring>
4 #include <netinet/in.h>
5 #include <sys/socket.h>
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

bash - asgn3

```
cs13-16@cs1316-HP-406-G1-MT:~/Desktop/7315/asgn3$ g++ 7315_sender.cpp
cs13-16@cs1316-HP-406-G1-MT:~/Desktop/7315/asgn3$ ./a.out

--- Sender Menu ---
1. Send without error
2. Send with 1-bit error
3. Exit
Enter choice: 1
Enter a character: A
Sending Hamming code: 100010010001

--- Sender Menu ---
1. Send without error
2. Send with 1-bit error
3. Exit
Enter choice: 2
Enter a character: A
Error introduced at position: 1
Sending Hamming code: 000010010001

--- Sender Menu ---
1. Send without error
2. Send with 1-bit error
3. Exit
Enter choice: 3
cs13-16@cs1316-HP-406-G1-MT:~/Desktop/7315/asgn3$
```

Ln 8, Col 19 Spaces: 4 UTF-8 LF {} C++ Linux

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7315_sender.cpp

```
1 #include <iostream>
2 #include <bitset>
3 #include <cstring>
4 #include <netinet/in.h>
5 #include <sys/socket.h>
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

bash - asgn3

```
cs13-16@cs1316-HP-406-G1-MT:~/Desktop/7315/asgn3$ g++ 7315_reciever.cpp
cs13-16@cs1316-HP-406-G1-MT:~/Desktop/7315/asgn3$ ./a.out
Receiver is listening on 127.0.0.15:5000

Received Hamming code: 100010010001
No error detected.
Decoded character: A

Received Hamming code: 000010010001
Error detected at position: 1
Decoded character: A
cs13-16@cs1316-HP-406-G1-MT:~/Desktop/7315/asgn3$
```

Ln 8, Col 19 Spaces: 4 UTF-8 LF {} C++ Linux

Activities Wireshark (GTK+) Wed 12:36 PM *Loopback: lo

File Edit View Go Capture Analyze Statistics Telephony Tools Internals Help

Filter: `tcp.port == 5000` Expression... Clear Apply Save

No.	Time	Source	Destination	Protocol	Length	Info
1	0.000000000	127.0.0.1	127.0.0.15	TCP	74	49002 → 5000 [SYN] Seq=0 Win=65495 Len=0 MSS=65495 SACK_PERM=1 TSval=274094689 TSsec=0
2	0.000010750	127.0.0.15	127.0.0.1	TCP	54	5000 → 49002 [RST, ACK] Seq=1 Ack=1 Win=0 Len=0
3	14.911601932	127.0.0.1	127.0.0.15	TCP	74	42450 → 5000 [SYN] Seq=0 Win=65495 Len=0 MSS=65495 SACK_PERM=1 TSval=274109601 TSsec=0
4	14.911621877	127.0.0.15	127.0.0.1	TCP	74	5000 → 42450 [SYN, ACK] Seq=0 Ack=1 Win=65483 Len=0 MSS=65495 SACK_PERM=1 TSval=274109601 TSsec=0
5	14.911637932	127.0.0.1	127.0.0.15	TCP	66	42450 → 5000 [ACK] Seq=1 Ack=1 Win=65536 Len=0 TSval=274109601 TSsec=181994812
6	17.068091323	127.0.0.1	127.0.0.15	IPA	78	unknown 0x30
7	17.068122279	127.0.0.15	127.0.0.1	TCP	66	5000 → 42450 [ACK] Seq=1 Ack=13 Win=65536 Len=0 TSval=181996968 TSsec=274111757
8	17.068153331	127.0.0.1	127.0.0.15	TCP	66	42450 → 5000 [FIN, ACK] Seq=13 Ack=1 Win=65536 Len=0 TSval=274111757 TSsec=181996968
9	17.068206439	127.0.0.15	127.0.0.1	TCP	66	5000 → 42450 [FIN, ACK] Seq=1 Ack=14 Win=65536 Len=0 TSval=181996968 TSsec=274111757
10	17.068228014	127.0.0.1	127.0.0.15	TCP	66	42450 → 5000 [ACK] Seq=14 Ack=2 Win=65536 Len=0 TSval=274111757 TSsec=181996968
128	637.15344015	127.0.0.1	127.0.0.15	TCP	74	46464 → 5000 [SYN] Seq=0 Win=65495 Len=0 MSS=65495 SACK_PERM=1 TSval=274731843 TSsec=0
129	637.15345296	127.0.0.15	127.0.0.1	TCP	74	5000 → 46464 [SYN, ACK] Seq=0 Ack=1 Win=65483 Len=0 MSS=65495 SACK_PERM=1 TSval=274731843 TSsec=0
130	637.15346353	127.0.0.1	127.0.0.15	TCP	66	46464 → 5000 [ACK] Seq=1 Ack=1 Win=65536 Len=0 TSval=274731843 TSsec=182617054
131	644.18062753	127.0.0.1	127.0.0.15	IPA	78	unknown 0x30
132	644.18064795	127.0.0.15	127.0.0.1	TCP	66	5000 → 46464 [ACK] Seq=1 Ack=13 Win=65536 Len=0 TSval=182624081 TSsec=274738870
133	662.77144218	127.0.0.1	127.0.0.15	IPA	78	unknown 0x30
134	662.77145576	127.0.0.15	127.0.0.1	TCP	66	5000 → 46464 [ACK] Seq=1 Ack=25 Win=65536 Len=0 TSval=182642672 TSsec=274757461
135	677.29159675	127.0.0.1	127.0.0.15	TCP	66	46464 → 5000 [FIN, ACK] Seq=25 Ack=1 Win=65536 Len=0 TSval=274771981 TSsec=182657192
136	677.29168455	127.0.0.15	127.0.0.1	TCP	66	5000 → 46464 [FIN, ACK] Seq=1 Ack=26 Win=65536 Len=0 TSval=182657192 TSsec=274771981
137	677.29170442	127.0.0.1	127.0.0.15	TCP	66	46464 → 5000 [ACK] Seq=26 Ack=2 Win=65536 Len=0 TSval=274771981 TSsec=182657192

0000 00 00 00 00 00 00 00 00 00 00 00 08 00 45 00E.
0010 00 3c f8 56 40 00 40 06 44 55 7f 00 00 01 7f 00 .<.V@.@. DU.....
0020 00 0f bf 6a 13 88 e0 9e 8c 10 00 00 00 00 a0 02 ...j.....
0030 ff d7 fe 3e 00 00 02 04 ff d7 04 02 08 0a 10 56 ...>.....V

File: "/tmp/wireshark_lo_2025... Packets: 143 · Displayed: 20 (14.0%) Profile: Default