

Visual Studio Code interface showing a C++ program (Assignment_A07) and its output in the terminal. The program filters ICMPv6 packets from a capture file (data.csv).

```
Assignment_A07 > C++ A.cpp > filterByProtocol(string)
8      int count=0,i=0;
```

Terminal Output:

Line	Source	Destination	Protocol	Length	Info
12	0.973236000	fe80::ad92:4946:c11e:bff0	ICMPv6	86	Neighbor Solicitation for fe80::1 from f4:
13	1.001717000	fe80::f68e:38ff:fe87:a57e	ICMPv6	86	Neighbor Solicitation for fe80::726d:ecff:
14	1.158015000	fe80::175:6553:3c34:d4f0	ICMPv6	86	Neighbor Solicitation for fe80::726d:ecff:
15	1.164756000	fe80::90c7:9c8e:4162:743a	ICMPv6	110	Multicast Listener Report Message v2
16	1.247232000	fe80::208:a1ff:fe43:c3c2	ICMPv6	86	Neighbor Solicitation for fe80::726d:ecff:
17	1.299874000	fe80::4046:d001:d60a:e934	ICMPv6	86	Neighbor Solicitation for fe80::1 from 00:
18	1.334884000	fe80::80a7:7d55:7ecf:5582	ICMPv6	86	Neighbor Solicitation for fe80::726d:ecff:
19	1.381157000	fe80::104b:adee:75e6:c425	ICMPv6	86	Neighbor Solicitation for fe80::a490:6a6c:
20	1.410771000	fe80::adb7:4c35:7a64:621e	ICMPv6	86	Neighbor Solicitation for fe80::5058:2741:
21	1.422139000	fe80::ec3b:be3b:a1cf:b8dc	ICMPv6	86	Neighbor Solicitation for fe80::adb7:4c35:
22	1.464011000	fe80::c2c9:76ff:fe50:72f9	ICMPv6	70	Router Solicitation from c0:c9:76:50:72:f9
23	1.472534000	fe80::adb7:4c35:7a64:621e	ICMPv6	86	Neighbor Solicitation for fe80::d107:c499:
24	1.502391000	fe80::4a4d:7eff:feca:8004	ICMPv6	86	Neighbor Solicitation for fe80::726d:ecff:
25	1.614264000	fe80::4a4d:7eff:fec6:ff33	ICMPv6	86	Neighbor Solicitation for fe80::726d:ecff:
26	1.639345000	fe80::221:9bff:fe6e:4b01	ICMPv6	86	Neighbor Solicitation for fe80::726d:ecff:
27	1.880789000	fe80::6600:6aff:fe37:40d9	ICMPv6	86	Neighbor Solicitation for fe80::726d:ecff:
28	1.998620000	fe80::adb7:4c35:7a64:621e	ICMPv6	86	Neighbor Solicitation for fe80::a1fb:332b:
29	2.003773000	fe80::f68e:38ff:fe87:a57e	ICMPv6	86	Neighbor Solicitation for fe80::726d:ecff:
30	2.028027000	fe80::e298:61ff:fe35:9a26	ICMPv6	86	Neighbor Solicitation for fe80::adb7:4c35:

Visual Studio Code interface showing the same C++ program (Assignment_A07) and its output in the terminal. The program filters ICMPv6 packets from a capture file (data.csv).

```
Assignment_A07 > C++ A.cpp > filterByProtocol(string)
8      int count=0,i=0;
```

Terminal Output:

Total Packet Count: 34

1. ICMPv6
2. UDP
3. TCP
4. Ethernet
0. Exit

Enter Protocol: 2

SrNo.	Time	Source	Destination	Protocol	Length	Info
1	0.243260000	216.58.197.68	10.10.14.151	TCP	66	https > 51709 [FIN, ACK] Seq=1 Ack=1 Win=1
2	0.438095000	108.168.177.14	10.10.13.238	TCP	103	[TCP segment of a reassembled PDU]
3	0.746828000	192.168.16.254	10.10.10.28	TCP	60	57777 > etftp [RST] Seq=1 Win=5840 Len=0
4	0.855756000	64.233.188.188	10.10.15.48	TCP	97	hpvroom > 39687 [PSH, ACK] Seq=1 Ack=1 Win=
5	1.839024000	118.214.135.85	10.10.12.0	TCP	60	https > 50976 [FIN, ACK] Seq=32 Ack=1 Win=
6	1.839028000	118.214.135.85	10.10.12.0	TCP	60	https > 50977 [FIN, ACK] Seq=32 Ack=1 Win=
7	1.886438000	192.168.3.254	192.168.3.211	TCP	62	nd1-aas > fnet-remote-ui [SYN, ACK] Seq=0
8	1.888346000	192.168.3.254	192.168.3.211	TCP	60	nd1-aas > fnet-remote-ui [ACK] Seq=1 Ack=2
9	1.888346000	192.168.3.254	192.168.3.211	TCP	60	nd1-aas > fnet-remote-ui [ACK] Seq=1 Ack=2
10	1.888346000	192.168.3.254	192.168.3.211	TCP	60	nd1-aas > fnet-remote-ui [ACK] Seq=1 Ack=2
11	1.888346000	192.168.3.254	192.168.3.211	TCP	60	nd1-aas > fnet-remote-ui [ACK] Seq=1 Ack=2
12	1.888346000	192.168.3.254	192.168.3.211	TCP	60	nd1-aas > fnet-remote-ui [ACK] Seq=1 Ack=2
13	1.888346000	192.168.3.254	192.168.3.211	TCP	60	nd1-aas > fnet-remote-ui [ACK] Seq=1 Ack=2
14	1.888346000	192.168.3.254	192.168.3.211	TCP	60	nd1-aas > fnet-remote-ui [ACK] Seq=1 Ack=2
15	1.888346000	192.168.3.254	192.168.3.211	TCP	60	nd1-aas > fnet-remote-ui [ACK] Seq=1 Ack=2
16	1.888346000	192.168.3.254	192.168.3.211	TCP	60	nd1-aas > fnet-remote-ui [ACK] Seq=1 Ack=2
17	1.888346000	192.168.3.254	192.168.3.211	TCP	60	nd1-aas > fnet-remote-ui [ACK] Seq=1 Ack=2
18	1.888346000	192.168.3.254	192.168.3.211	TCP	60	nd1-aas > fnet-remote-ui [ACK] Seq=1 Ack=2
19	1.888346000	192.168.3.254	192.168.3.211	TCP	60	nd1-aas > fnet-remote-ui [ACK] Seq=1 Ack=2
20	1.888346000	192.168.3.254	192.168.3.211	TCP	60	nd1-aas > fnet-remote-ui [ACK] Seq=1 Ack=2
21	1.888346000	192.168.3.254	192.168.3.211	TCP	60	nd1-aas > fnet-remote-ui [ACK] Seq=1 Ack=2
22	1.888346000	192.168.3.254	192.168.3.211	TCP	60	nd1-aas > fnet-remote-ui [ACK] Seq=1 Ack=2
23	1.888346000	192.168.3.254	192.168.3.211	TCP	60	nd1-aas > fnet-remote-ui [ACK] Seq=1 Ack=2
24	1.888346000	192.168.3.254	192.168.3.211	TCP	60	nd1-aas > fnet-remote-ui [ACK] Seq=1 Ack=2
25	1.888346000	192.168.3.254	192.168.3.211	TCP	60	nd1-aas > fnet-remote-ui [ACK] Seq=1 Ack=2
26	1.888346000	192.168.3.254	192.168.3.211	TCP	60	nd1-aas > fnet-remote-ui [ACK] Seq=1 Ack=2
27	1.888346000	192.168.3.254	192.168.3.211	TCP	60	nd1-aas > fnet-remote-ui [ACK] Seq=1 Ack=2
28	1.888346000	192.168.3.254	192.168.3.211	TCP	60	nd1-aas > fnet-remote-ui [ACK] Seq=1 Ack=2
29	1.888346000	192.168.3.254	192.168.3.211	TCP	60	nd1-aas > fnet-remote-ui [ACK] Seq=1 Ack=2
30	1.888346000	192.168.3.254	192.168.3.211	TCP	60	nd1-aas > fnet-remote-ui [ACK] Seq=1 Ack=2
31	1.888346000	192.168.3.254	192.168.3.211	TCP	60	nd1-aas > fnet-remote-ui [ACK] Seq=1 Ack=2
32	1.888346000	192.168.3.254	192.168.3.211	TCP	60	nd1-aas > fnet-remote-ui [ACK] Seq=1 Ack=2
33	1.888346000	192.168.3.254	192.168.3.211	TCP	60	nd1-aas > fnet-remote-ui [ACK] Seq=1 Ack=2
34	1.888346000	192.168.3.254	192.168.3.211	TCP	60	nd1-aas > fnet-remote-ui [ACK] Seq=1 Ack=2

Total Packet Count: 8

1. ICMPv6

[illegible][illegible]

Activities Visual Studio Code Fri Dec 4 10:33 AM Acpp - CNL - Visual Studio Code

File Edit Selection View Go Run Terminal Help

EXPLORER Server.java A.cpp data.csv Client.java CNL_A03.pdf

OPEN EDITORS Assignment_A07 > A.cpp > filterByProtocol(string)

CNL

- Assignment_A01
- Assignment_A02
- Assignment_A03
- Assignment_A04
- Assignment_A05
- Assignment_A06
- Assignment_A07
 - A.cpp
 - a.out
 - data.csv
- Assignment_PDFs
 - CNL_A01.pdf
 - CNL_A02.pdf
 - CNL_A03.pdf
 - CNL_A04.pdf
 - CNL_A05.pdf
 - CNL_A06.pdf

TERMINAL SQL CONSOLE PROBLEMS OUTPUT

```
8      int count=0,i=0;
75     1.777631000  Dell_27:88:85      Broadcast      ARP      60      Who has 192.168.7.253? Tell 192.168.9.159
76     1.838890000  D-link_95:3e:60      Broadcast      ARP      60      Who has 192.168.16.77 Tell 192.168.16.254
77     1.880913000  Dell_27:82:de        Broadcast      ARP      60      Who has 192.168.7.142? Tell 192.168.3.149
78     1.933253000  Giga-Byt_0e:7d:ed    Broadcast      ARP      60      Who has 192.168.14.250? Tell 192.168.15.1
77
79     1.939529000  D-link_95:3e:60      Broadcast      ARP      60      Who has 192.168.16.8? Tell 192.168.16.254
80     1.943185000  D-link_9f:8a:cf      Broadcast      ARP      60      Who has 10.10.15.50? Tell 10.10.15.165
81     1.948844000  Dell_93:c3:3a        Broadcast      ARP      60      Who has 192.168.25.250? Tell 192.168.3.14
8      1.970467000  Dell_27:48:0a        Broadcast      ARP      60      Who has 192.168.25.250? Tell 192.168.9.20
83     1.973409000  Ibm_36:9e:5e         Broadcast      ARP      60      Who has 192.168.3.4? Tell 192.168.3.254
84     2.039023000  D-link_95:3e:60      Broadcast      ARP      60      Who has 192.168.16.9? Tell 192.168.16.254
85     2.098314000  Ibm_36:9e:5e         Broadcast      ARP      60      Who has 192.168.16.214? Tell 192.168.16.2
53
86     2.119389000  Dell_fd:b3:b3        Broadcast      ARP      60      Who has 192.168.25.250? Tell 192.168.3.20
3
87     2.139576000  D-link_95:3e:60      Broadcast      ARP      60      Who has 192.168.16.10? Tell 192.168.16.25
4
88     2.173438000  Dell_92:4d:81        Broadcast      ARP      60      Who has 192.168.25.250? Tell 192.168.14.1
50
89     2.216754000  Giga-Byt_0f:37:26    Broadcast      ARP      60      Who has 10.10.8.216? Tell 10.10.12.50
90     2.231058000  Dell_27:49:60        Broadcast      ARP      60      Who has 192.168.25.250? Tell 192.168.9.87
91     2.238888000  D-link_95:3e:60      Broadcast      ARP      60      Who has 192.168.16.11? Tell 192.168.16.25
4
92     2.239555000  D-link_95:3e:60      Broadcast      ARP      60      Who has 192.168.16.1? Tell 192.168.16.254
Total Packet Count: 92

1. ICMPv6
2. UDP
3. TCP
4. Ethernet
0. Exit
Enter Protocol: 0
(base) pratt3000@pratts-laptop ~/Documents/College/PICT_TE-Labs/CNL/Assignment_A07 master
```

OUTLINE

TIMELINE

NPM SCRIPTS

JAVA PROJECTS

Ln 18, Col 34 Spaces: 4 UTF-8 LF C++ Linux