CS39006: Networks Laboratory

Assignment 2

UDP Sockets

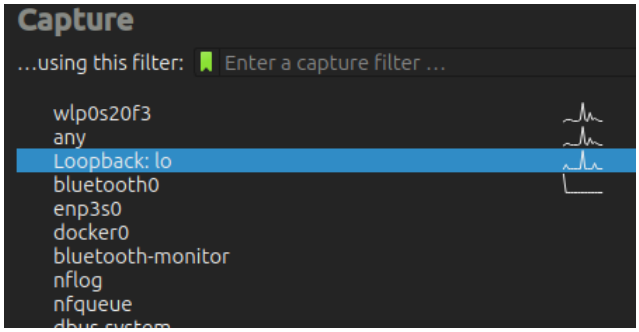
```
harshit@acer-aspire-lite-52:~/Documents/net/A2$ ./server

Server Running at port 8008

Request from Client at port 39023: 22CS10030_File3.txt
Request from Client at port 39023: WORD 1
Request from Client at port 39023: WORD 2
Request from Client at port 39023: WORD 3
Request from Client at port 39023: WORD 4
Request from Client at port 39023: WORD 5
Request from Client at port 39023: WORD 6
Request from Client at port 39023: WORD 7
Request from Client at port 39023: WORD 8
Request from Client at port 39023: WORD 9
Request from Client at port 39023: WORD 10
Request from Client at port 39023: WORD 11
Request from Client at port 39023: WORD 12
```

```
harshit@acer-aspire-lite-52:~/Documents/net/A2$ ./client 22CS10030_File3.txt
Response from Server: HELLO
Response from Server: Long
Response from Server: Words
Response from Server: Pneumonoultramicroscopicsilicovolcanoconiosis
Response from Server: Supercalifragilisticexpialidocious
Response from Server: Hippopotomonstrosesquippedaliophobia
Response from Server: Antidisestablishmentarianism
Response from Server: Floccinaucinihilipilification
Response from Server: Honorificabilitudinitatibus
Response from Server: Pseudopseudohypoparathyroidism
Response from Server: Dichlorodiphenyltrichloroethane
Response from Server: Methionylthreonylthreonylglutaminylarginyltyrosylglutaminylarginylisoleucine
Response from Server: FINISH
```

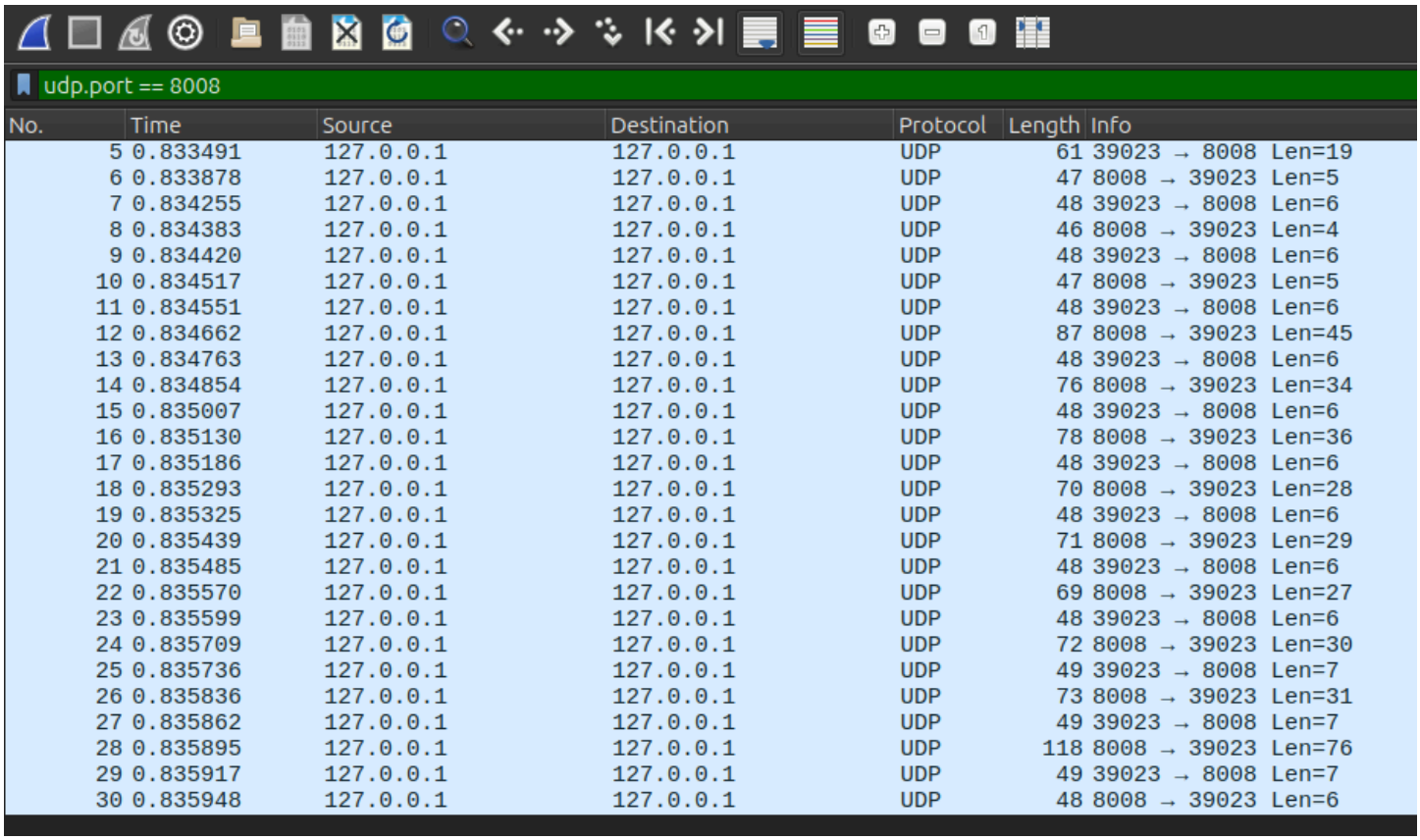
```
File  Edit  View  Search  Terminal  Help
harshit@acer-aspire-lite-52:~/Documents/net/A2$ cat 22CS10030_File3.txt
HELLO
Long
Words
Pneumonoultramicroscopicsilicovolcanoconiosis
Supercalifragilisticexpialidocious
Hippopotomonstrosesquippedaliophobia
Antidisestablishmentarianism
Floccinaucinihilipilification
Honorificabilitudinitatibus
Pseudopseudohypoparathyroidism
Dichlorodiphenyltrichloroethane
Methionylthreonylthreonylglutaminylarginyltyrosylglutaminylarginylisoleucine
FINISHharshit@acer-aspire-lite-52:~/Documents/net/A2$
```

```
File  Edit  View  Search  Terminal  Help
harshit@acer-aspire-lite-52:~/Documents/net/A2$ cat response_22CS10030_File3.txt
HELLO
Long
Words
Pneumonoultramicroscopicsilicovolcanoconiosis
Supercalifragilisticexpialidocious
Hippopotomonstrosesquippedaliophobia
Antidisestablishmentarianism
Floccinaucinihilipilification
Honorificabilitudinitatibus
Pseudopseudohypoparathyroidism
Dichlorodiphenyltrichloroethane
Methionylthreonylthreonylglutaminylarginyltyrosylglutaminylarginylisoleucine
FINISH
harshit@acer-aspire-lite-52:~/Documents/net/A2$
```

For packet analysis, only the Loopback (lo) interface was observed:



1. Packets Exchanged



udp.port == 8008

No.	Time	Source	Destination	Protocol	Length	Info
5	0.833491	127.0.0.1	127.0.0.1	UDP	61	39023 → 8008 Len=19
6	0.833878	127.0.0.1	127.0.0.1	UDP	47	8008 → 39023 Len=5
7	0.834255	127.0.0.1	127.0.0.1	UDP	48	39023 → 8008 Len=6
8	0.834383	127.0.0.1	127.0.0.1	UDP	46	8008 → 39023 Len=4
9	0.834420	127.0.0.1	127.0.0.1	UDP	48	39023 → 8008 Len=6
10	0.834517	127.0.0.1	127.0.0.1	UDP	47	8008 → 39023 Len=5
11	0.834551	127.0.0.1	127.0.0.1	UDP	48	39023 → 8008 Len=6
12	0.834662	127.0.0.1	127.0.0.1	UDP	87	8008 → 39023 Len=45
13	0.834763	127.0.0.1	127.0.0.1	UDP	48	39023 → 8008 Len=6
14	0.834854	127.0.0.1	127.0.0.1	UDP	76	8008 → 39023 Len=34
15	0.835007	127.0.0.1	127.0.0.1	UDP	48	39023 → 8008 Len=6
16	0.835130	127.0.0.1	127.0.0.1	UDP	78	8008 → 39023 Len=36
17	0.835186	127.0.0.1	127.0.0.1	UDP	48	39023 → 8008 Len=6
18	0.835293	127.0.0.1	127.0.0.1	UDP	70	8008 → 39023 Len=28
19	0.835325	127.0.0.1	127.0.0.1	UDP	48	39023 → 8008 Len=6
20	0.835439	127.0.0.1	127.0.0.1	UDP	71	8008 → 39023 Len=29
21	0.835485	127.0.0.1	127.0.0.1	UDP	48	39023 → 8008 Len=6
22	0.835570	127.0.0.1	127.0.0.1	UDP	69	8008 → 39023 Len=27
23	0.835599	127.0.0.1	127.0.0.1	UDP	48	39023 → 8008 Len=6
24	0.835709	127.0.0.1	127.0.0.1	UDP	72	8008 → 39023 Len=30
25	0.835736	127.0.0.1	127.0.0.1	UDP	49	39023 → 8008 Len=7
26	0.835836	127.0.0.1	127.0.0.1	UDP	73	8008 → 39023 Len=31
27	0.835862	127.0.0.1	127.0.0.1	UDP	49	39023 → 8008 Len=7
28	0.835895	127.0.0.1	127.0.0.1	UDP	118	8008 → 39023 Len=76
29	0.835917	127.0.0.1	127.0.0.1	UDP	49	39023 → 8008 Len=7
30	0.835948	127.0.0.1	127.0.0.1	UDP	48	8008 → 39023 Len=6

2. Protocol Used

   User Datagram Protocol (**UDP**)

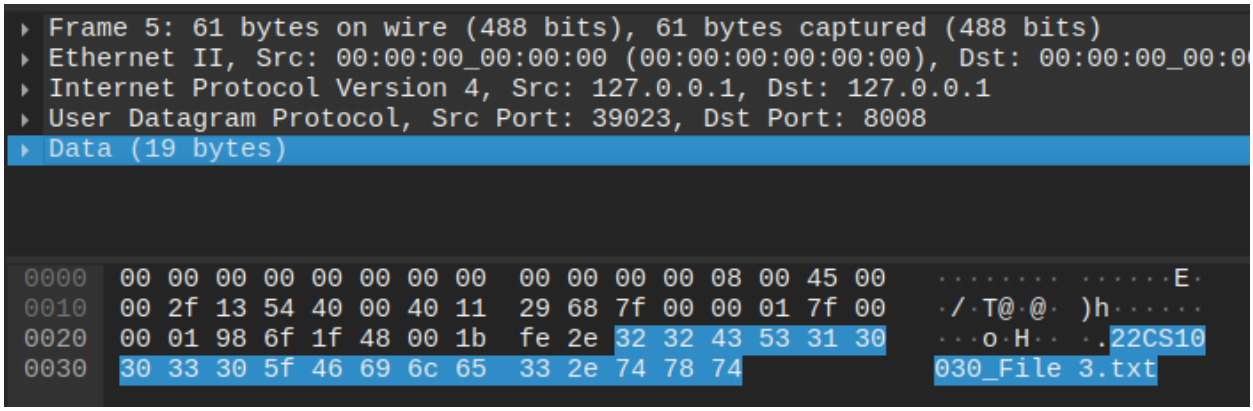
3. Source & Destination

IP Address	
Server	127.0.0.1 (loopback address)
Client	
Port	
Server	8008 (set by user)
Client	39023 (allocated)

4. *FILENAME* request sent by the client

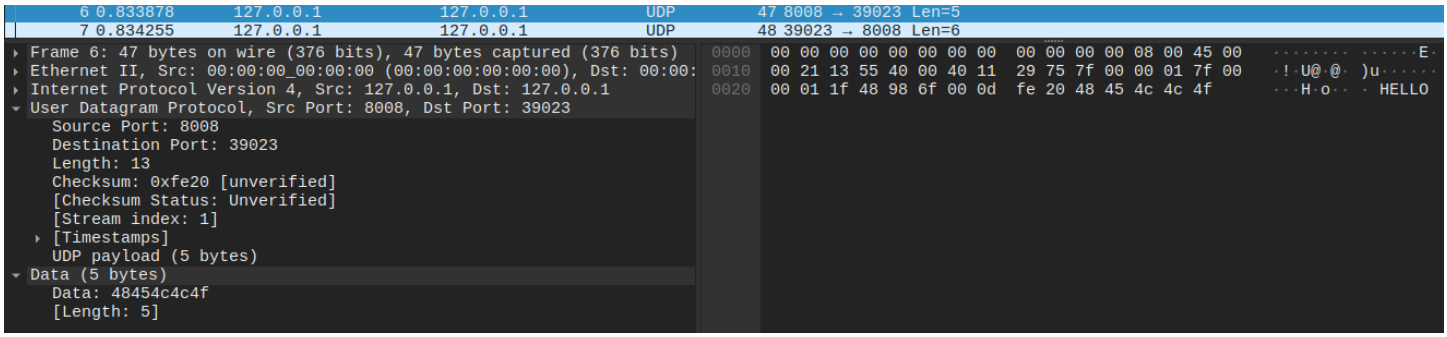
Packet Size: **61 bytes**

Data Length: 19 bytes



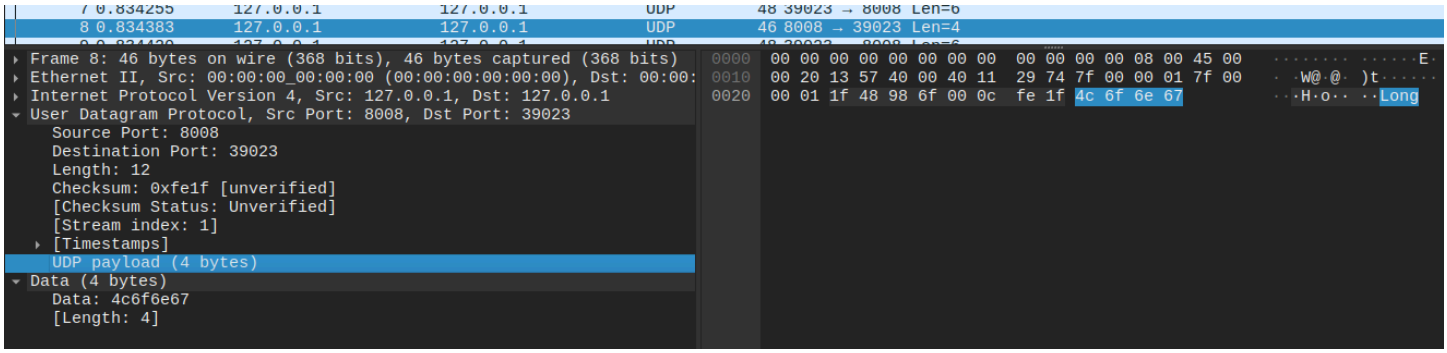
5. Server's first responses:

Server's response for *HELLO*



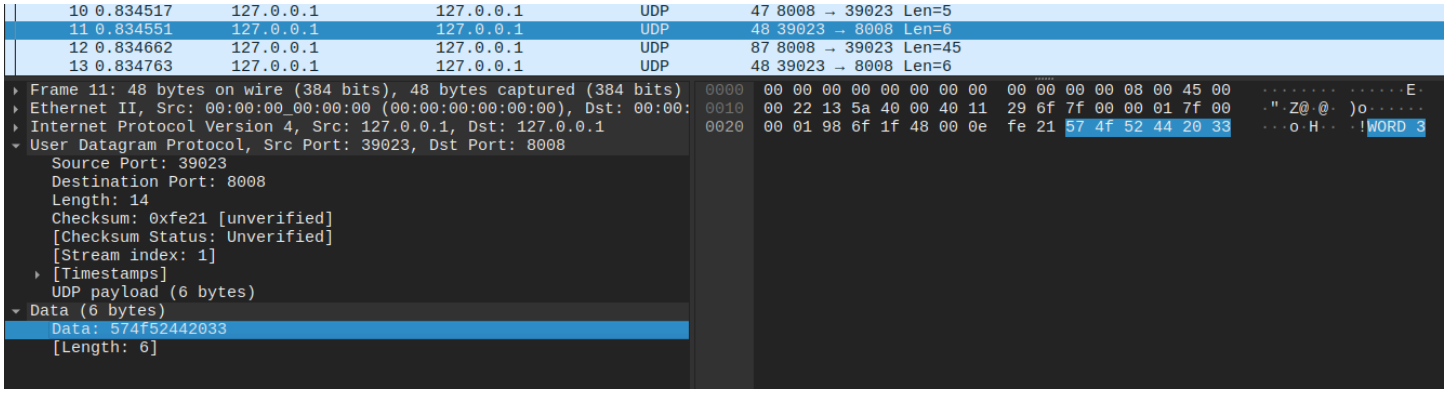
Packet size: **47 bytes**

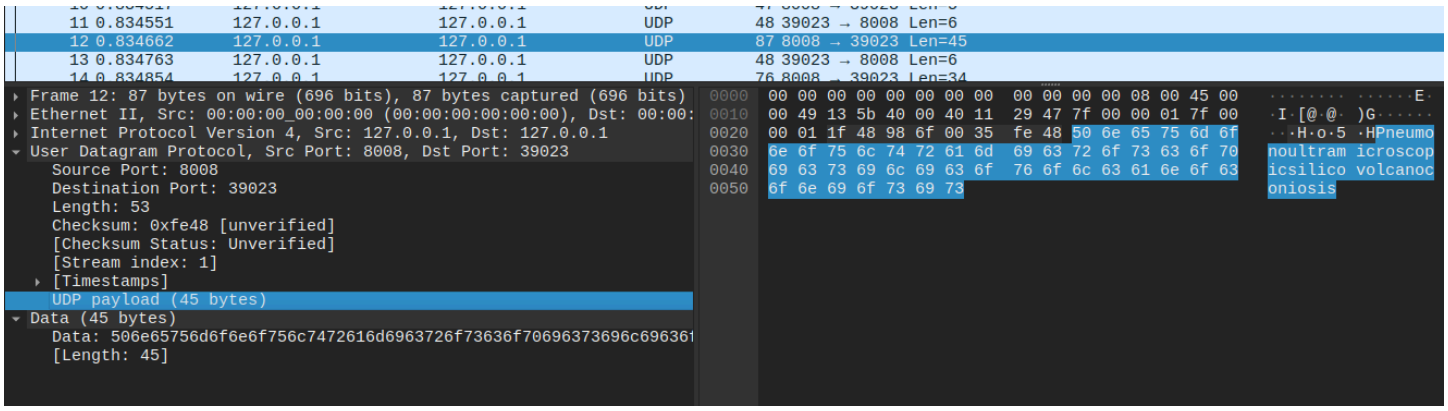
Server's response for *WORD*$_1$

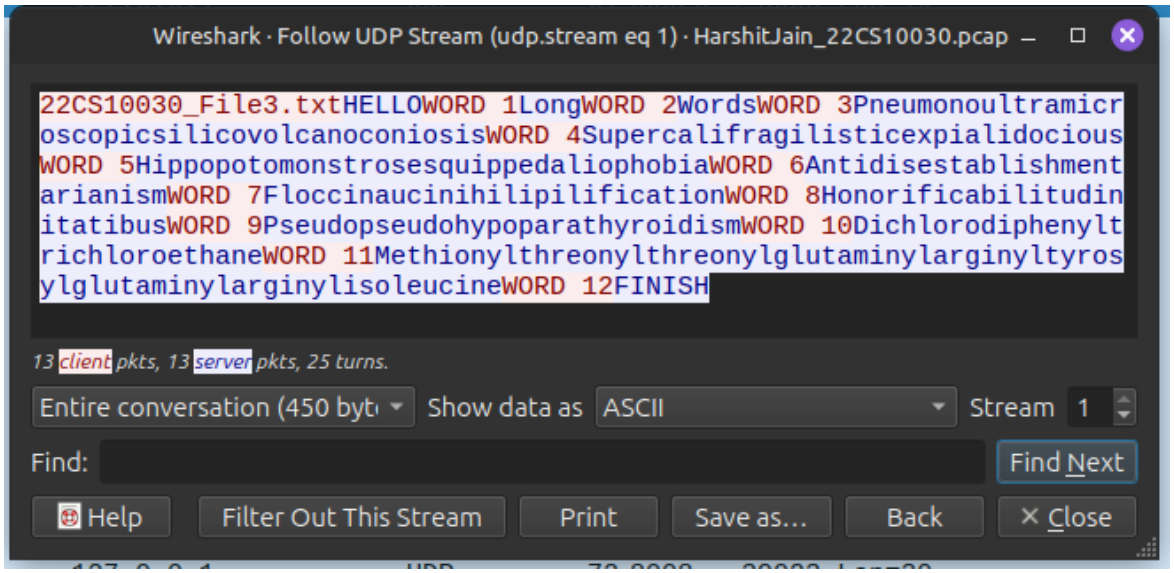


Packet size: **46 bytes**

6. Payload of word packets:







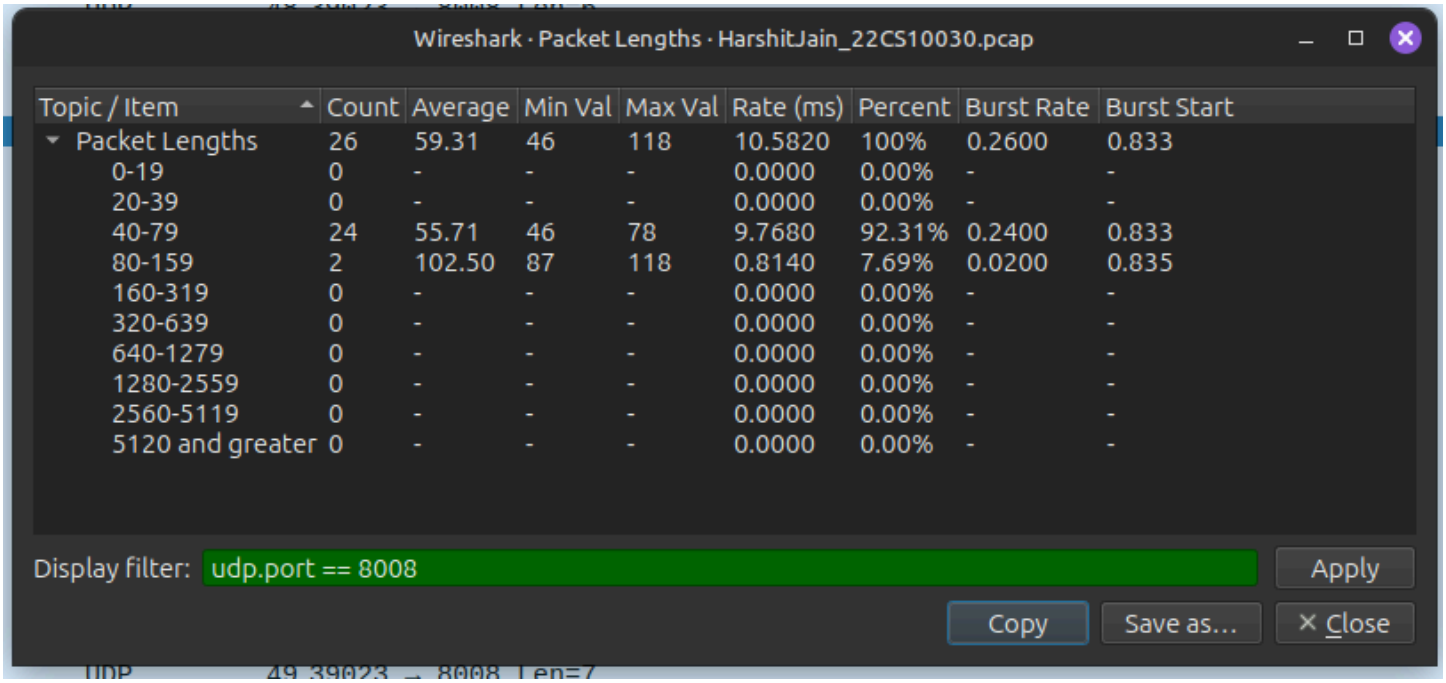
7. Time Taken

UDP · 1

Address A	Port A	Address B	Port B	Packets	Bytes	Stream ID	Total Packets	Percent Filtered	Packets A → B	Bytes A → B	Packets B → A	Bytes B → A	Rel Start	Duration
127.0.0.1	39023	127.0.0.1	8008	26	2 kB	1	26	100.00%	13	640 bytes	13	902 bytes	0.833491	0.0025

Total time taken for the file transfer from start to finish: **0.002457 sec**

8. Packet size statistics



Avg size of packets: **59.31 bytes**