Midsem Lab

2019A7PS0136G (31120190136)

7 March 2022

Q1

README

11 Digit Campus ID: `31120190136`

Compilation

```
gcc server.c -o server.out
gcc client.c -o client.out
```

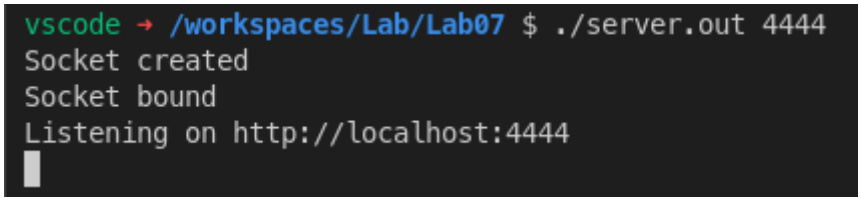
Running

```
./server.out 4444
```

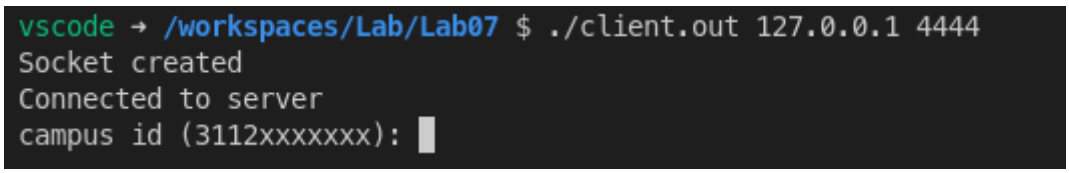
```
./client.out 127.0.0.1 4444
```

Screenshots

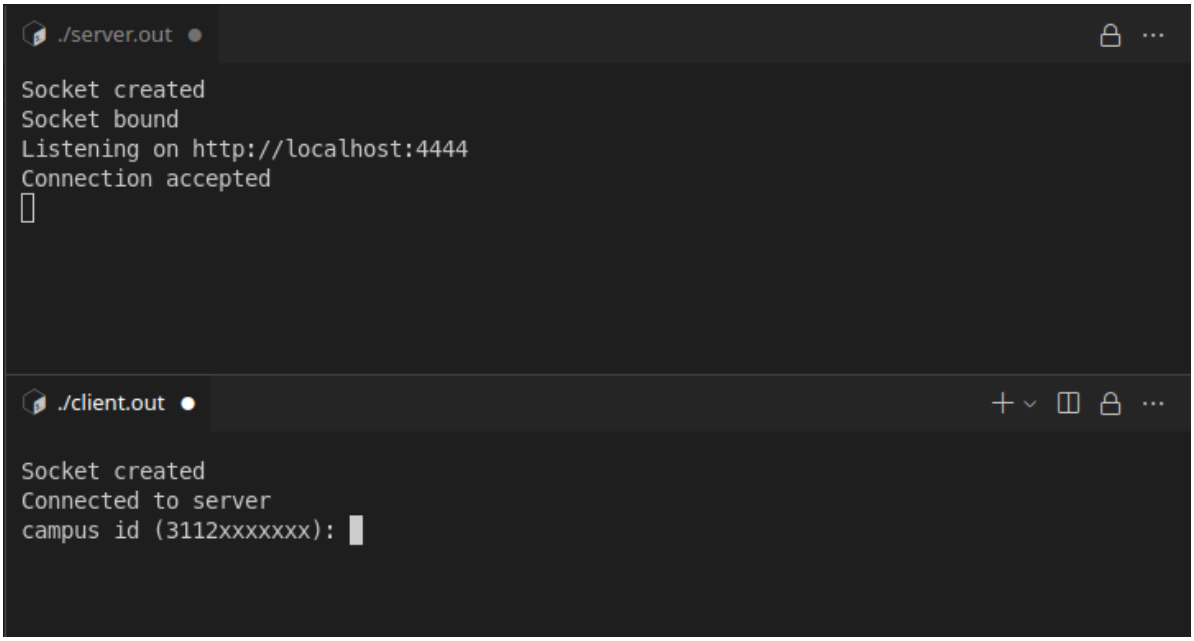
1.



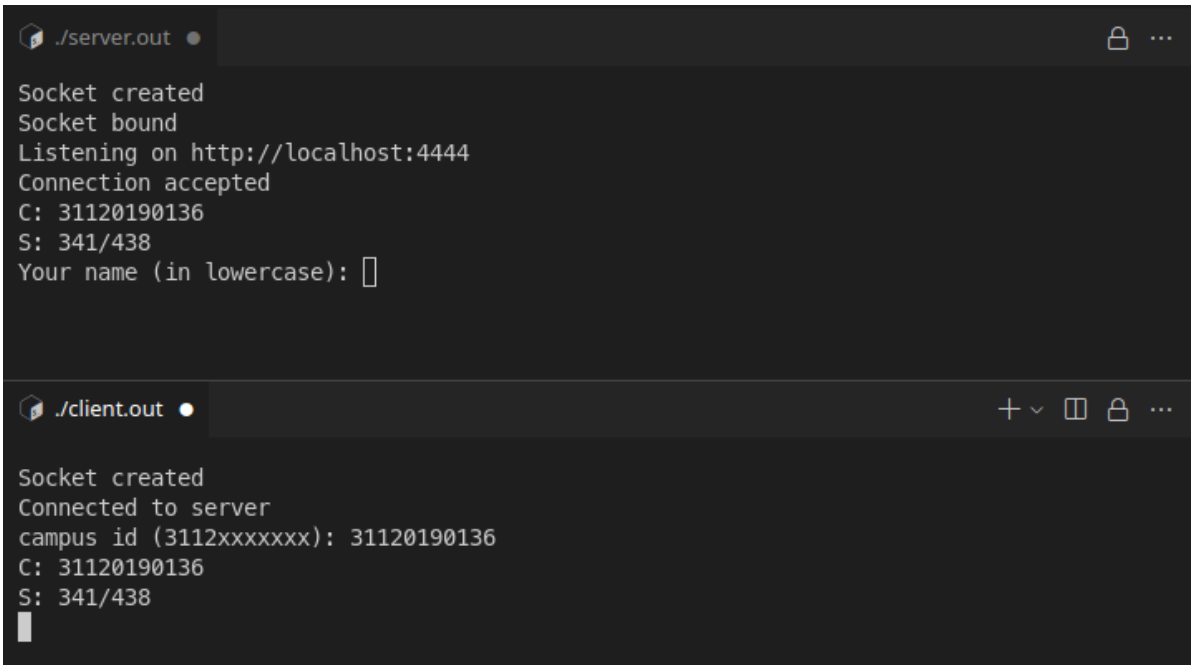
2.



3. After connecting to the server, the client reads your campus id (3112xxxxxxx)

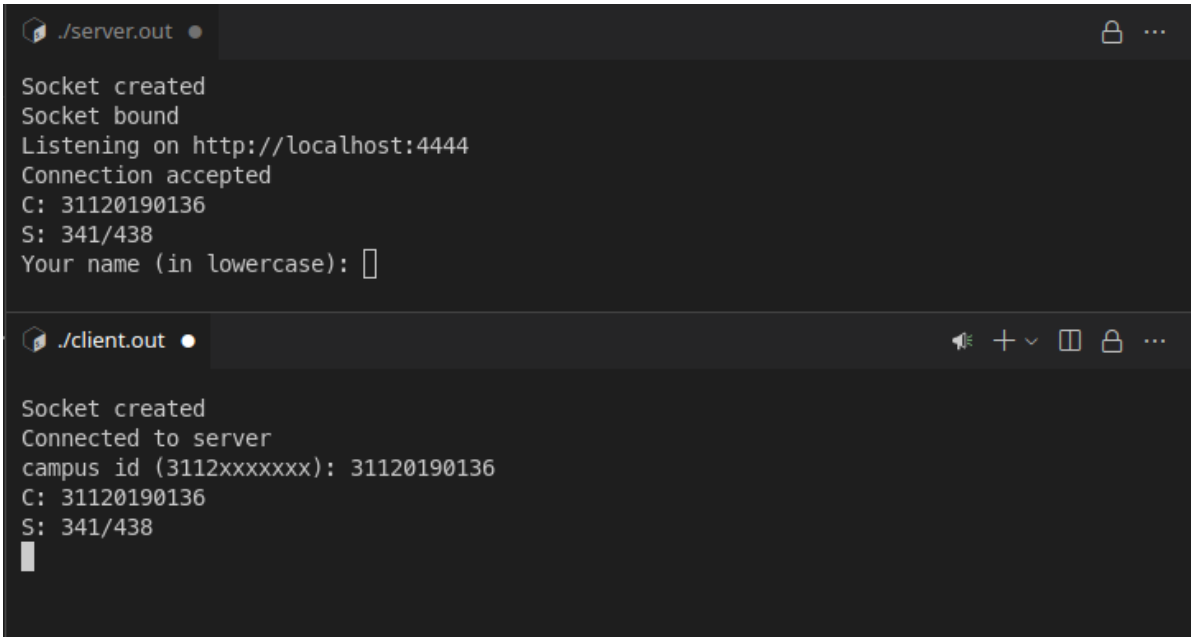


4. The server prints the received campus id and then calculates the value of y

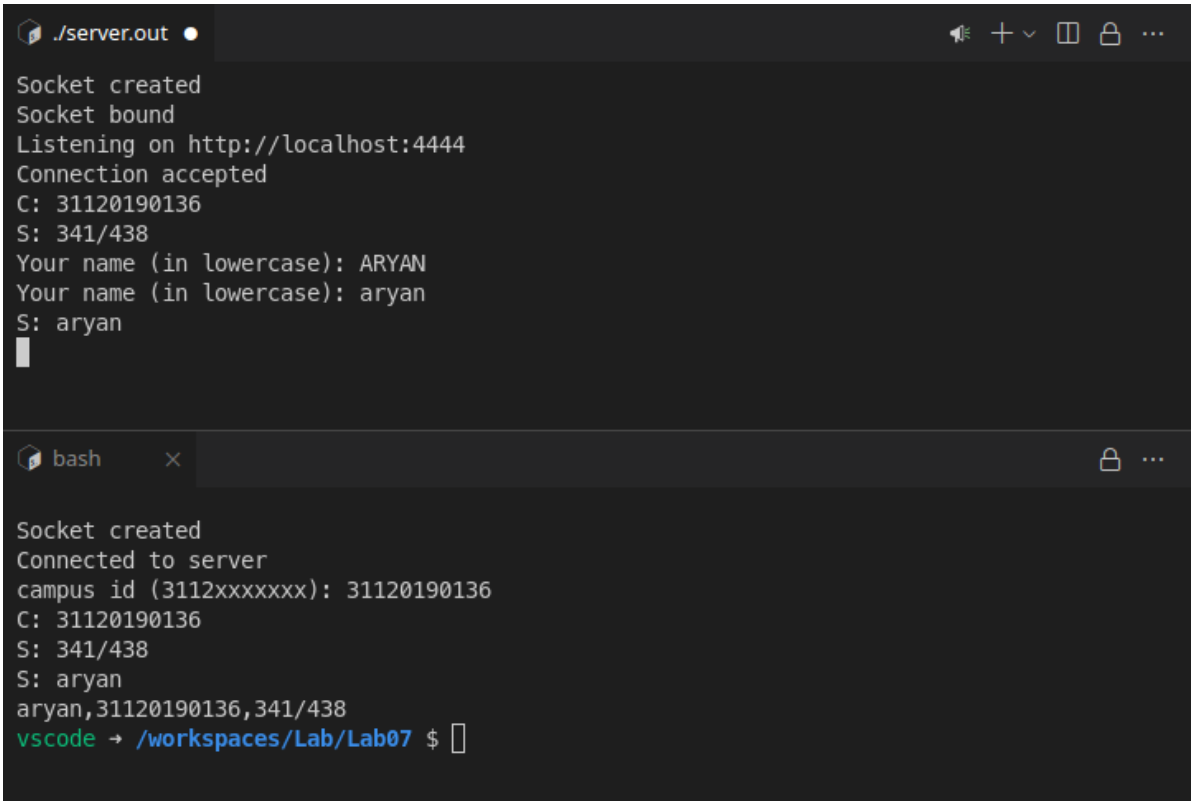


5. extract the equation whose index is y obtained in step 4. SEE CODE

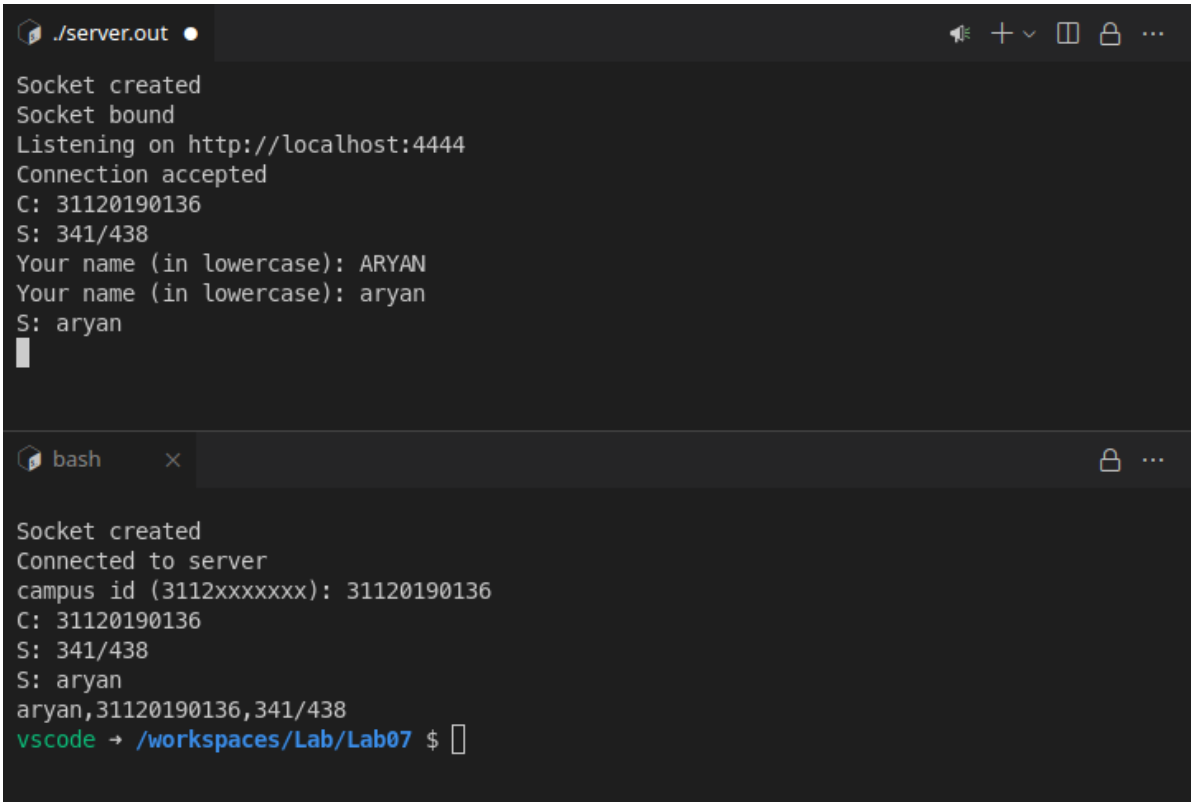
6. The server solves the equation and sends the answer to the client.



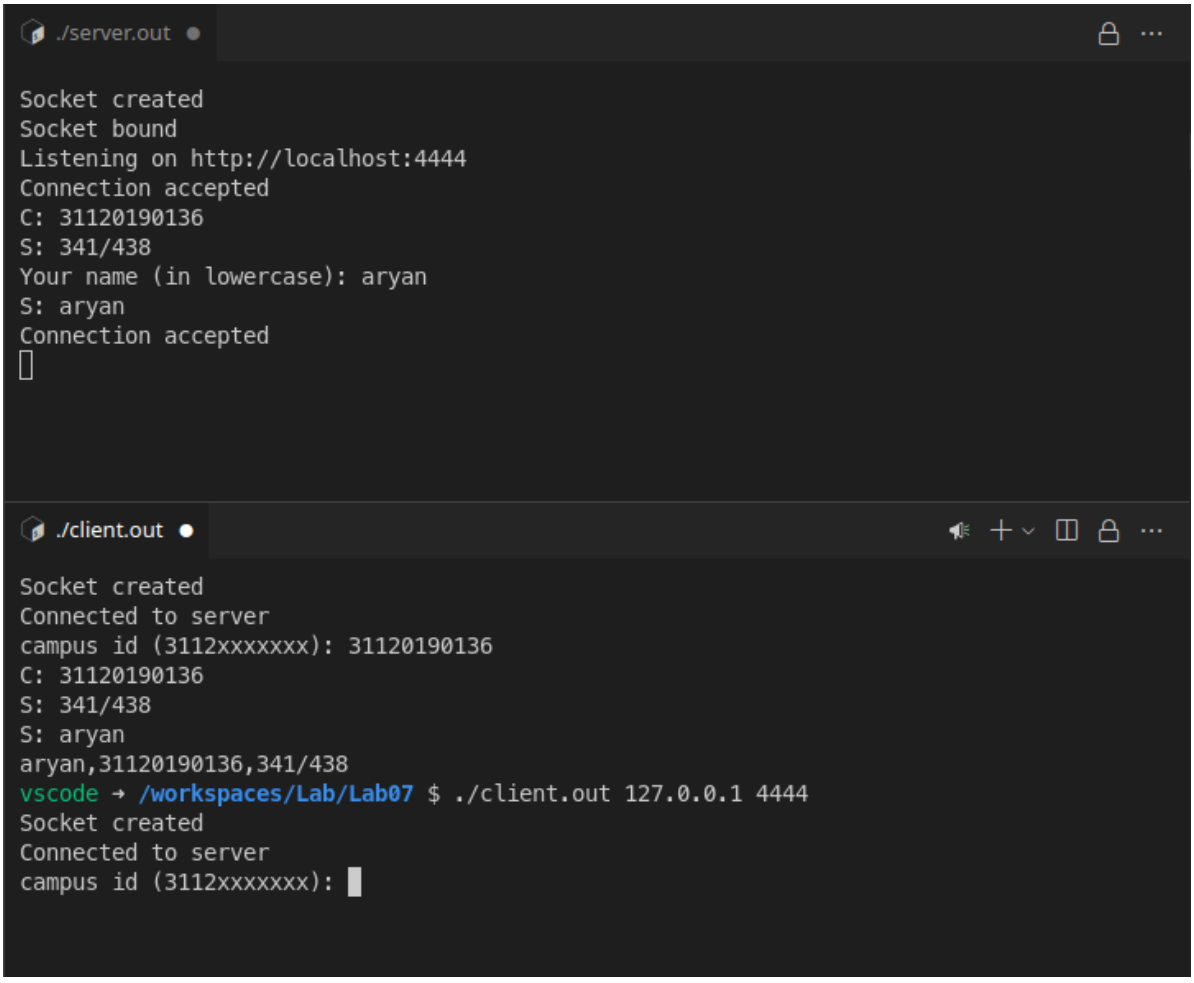
7. The server takes the student's first name as input. If all alphabets are in lower case, the server sends the name to the client.



8. The client displays the <name>,<campus id>,<y> on its screen and exits.



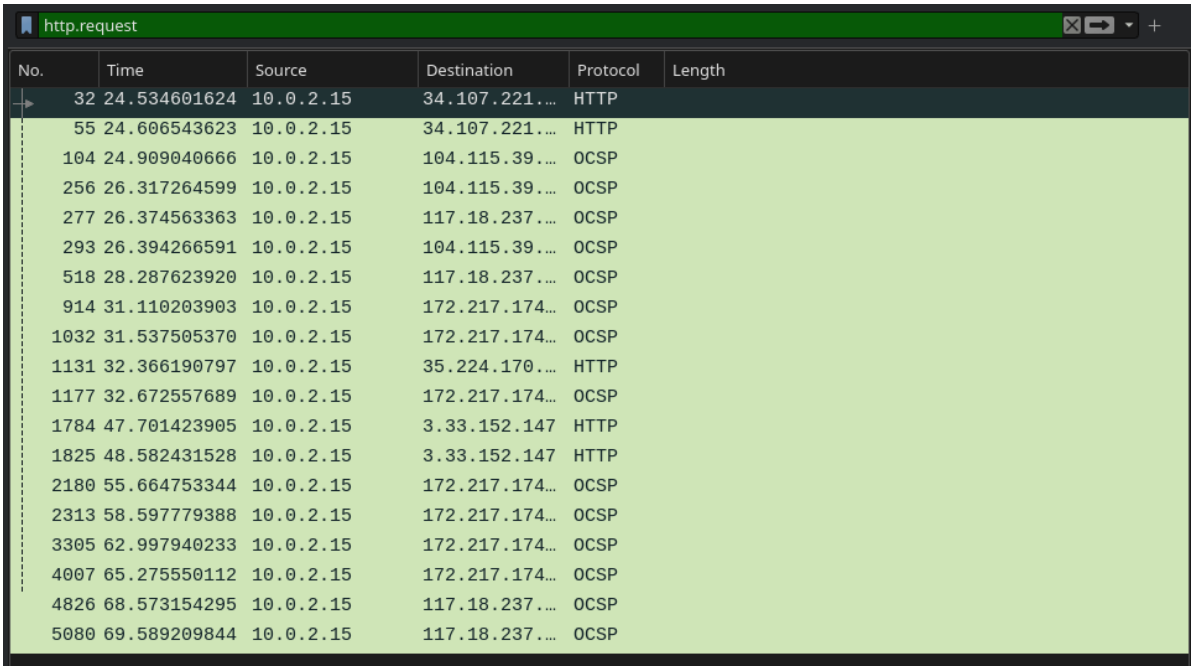
9. The server is ready to accept a new client



Q2

1.

IP address of local machine (the client) is `10.0.2.15`
The client sends `5` http requests (http.request filter used excluding OCSP)

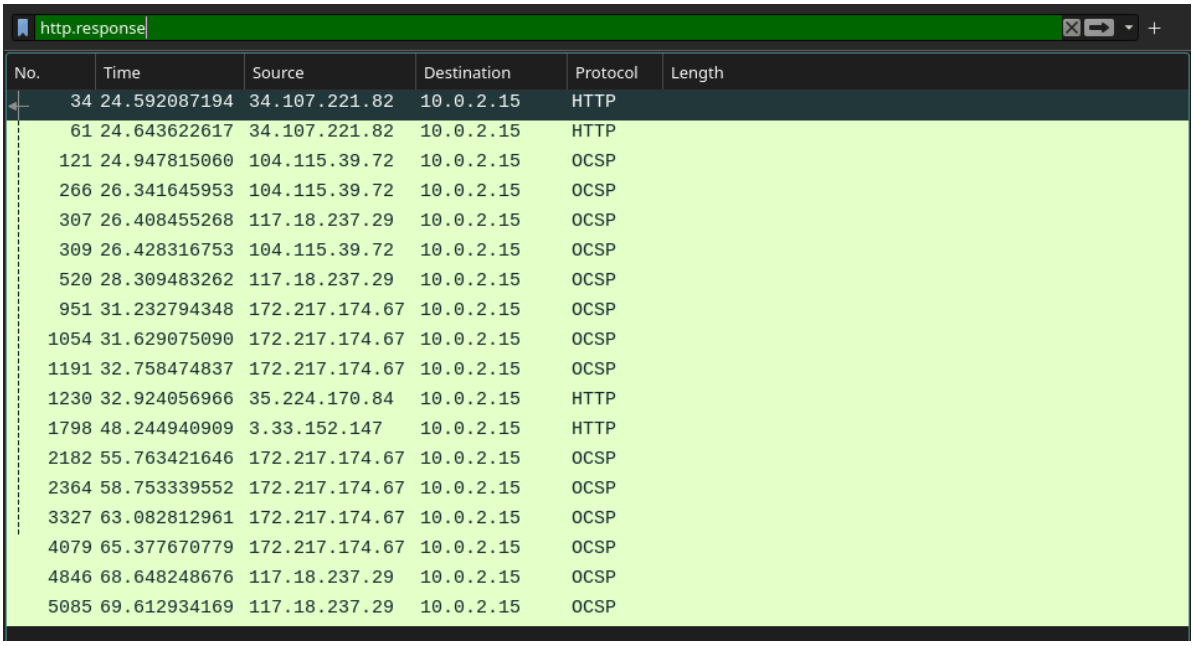


http.request

No.	Time	Source	Destination	Protocol	Length
32	24.534601624	10.0.2.15	34.107.221.…	HTTP	
55	24.606543623	10.0.2.15	34.107.221.…	HTTP	
104	24.909040666	10.0.2.15	104.115.39.…	OCSP	
256	26.317264599	10.0.2.15	104.115.39.…	OCSP	
277	26.374563363	10.0.2.15	117.18.237.…	OCSP	
293	26.394266591	10.0.2.15	104.115.39.…	OCSP	
518	28.287623920	10.0.2.15	117.18.237.…	OCSP	
914	31.110203903	10.0.2.15	172.217.174…	OCSP	
1032	31.537505370	10.0.2.15	172.217.174…	OCSP	
1131	32.366190797	10.0.2.15	35.224.170.…	HTTP	
1177	32.672557689	10.0.2.15	172.217.174…	OCSP	
1784	47.701423905	10.0.2.15	3.33.152.147	HTTP	
1825	48.582431528	10.0.2.15	3.33.152.147	HTTP	
2180	55.664753344	10.0.2.15	172.217.174…	OCSP	
2313	58.597779388	10.0.2.15	172.217.174…	OCSP	
3305	62.997940233	10.0.2.15	172.217.174…	OCSP	
4007	65.275550112	10.0.2.15	172.217.174…	OCSP	
4826	68.573154295	10.0.2.15	117.18.237.…	OCSP	
5080	69.589209844	10.0.2.15	117.18.237.…	OCSP	

2.

The client receives `4` http responses.

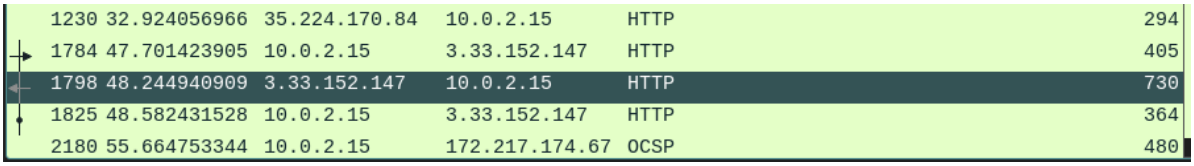


http.response

No.	Time	Source	Destination	Protocol	Length
34	24.592087194	34.107.221.82	10.0.2.15	HTTP	
61	24.643622617	34.107.221.82	10.0.2.15	HTTP	
121	24.947815060	104.115.39.72	10.0.2.15	OCSP	
266	26.341645953	104.115.39.72	10.0.2.15	OCSP	
307	26.408455268	117.18.237.29	10.0.2.15	OCSP	
309	26.428316753	104.115.39.72	10.0.2.15	OCSP	
520	28.309483262	117.18.237.29	10.0.2.15	OCSP	
951	31.232794348	172.217.174.67	10.0.2.15	OCSP	
1054	31.629075090	172.217.174.67	10.0.2.15	OCSP	
1191	32.758474837	172.217.174.67	10.0.2.15	OCSP	
1230	32.924056966	35.224.170.84	10.0.2.15	HTTP	
1798	48.244940909	3.33.152.147	10.0.2.15	HTTP	
2182	55.763421646	172.217.174.67	10.0.2.15	OCSP	
2364	58.753339552	172.217.174.67	10.0.2.15	OCSP	
3327	63.082812961	172.217.174.67	10.0.2.15	OCSP	
4079	65.377670779	172.217.174.67	10.0.2.15	OCSP	
4846	68.648248676	117.18.237.29	10.0.2.15	OCSP	
5085	69.612934169	117.18.237.29	10.0.2.15	OCSP	

3.

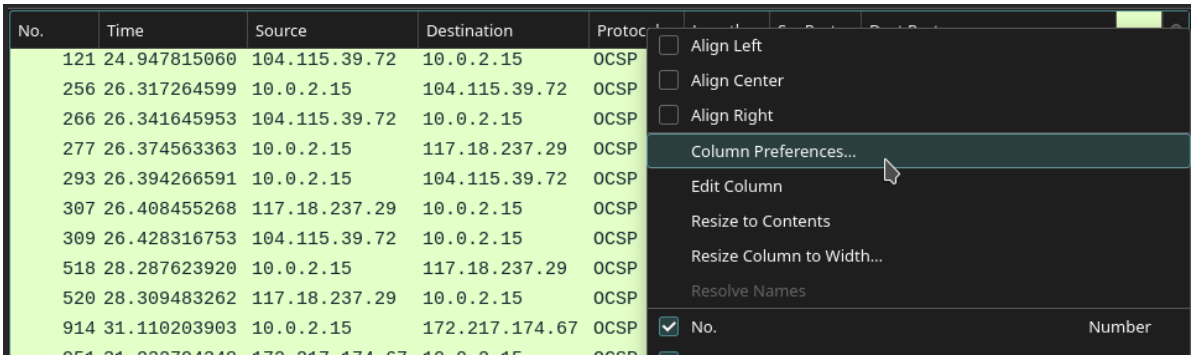
`730 bytes`



1230	32.924056966	35.224.170.84	10.0.2.15	HTTP	294
1784	47.701423905	10.0.2.15	3.33.152.147	HTTP	405
1798	48.244940909	3.33.152.147	10.0.2.15	HTTP	730
1825	48.582431528	10.0.2.15	3.33.152.147	HTTP	364
2180	55.664753344	10.0.2.15	172.217.174.67	OCSP	480

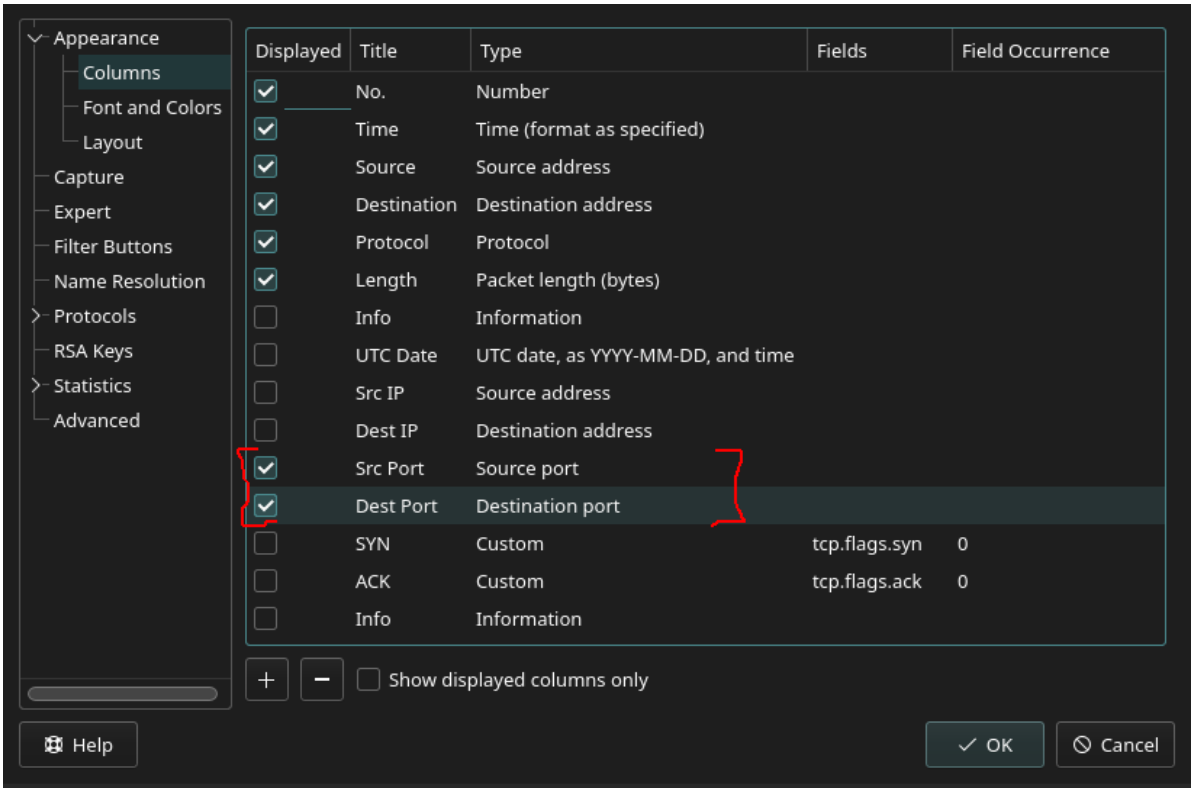
4.

Right click column headers and choose `Column Preferences`



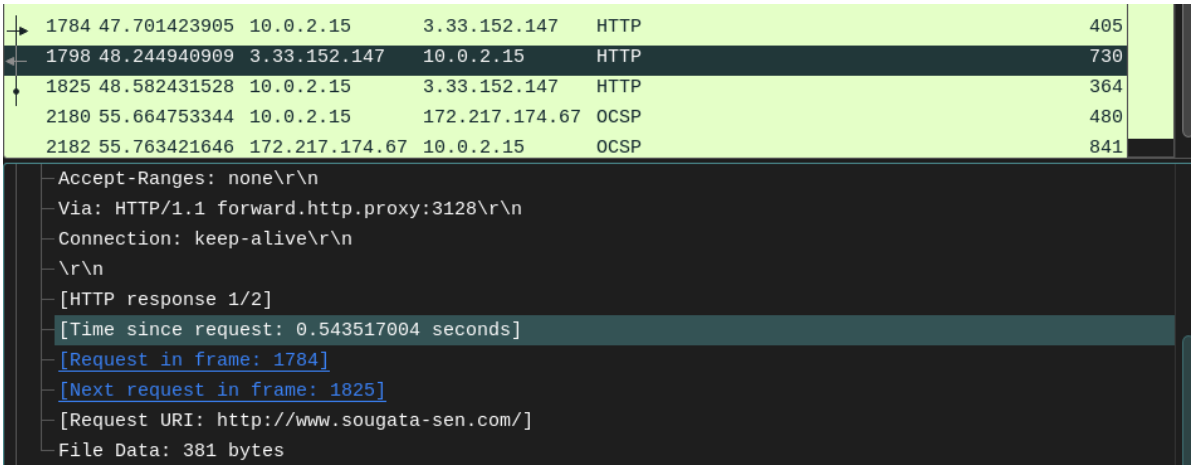
Under `Appearance > Column` click `+`

Give appropriate `Title` and `Type` to the columns as shown below and click `OK`

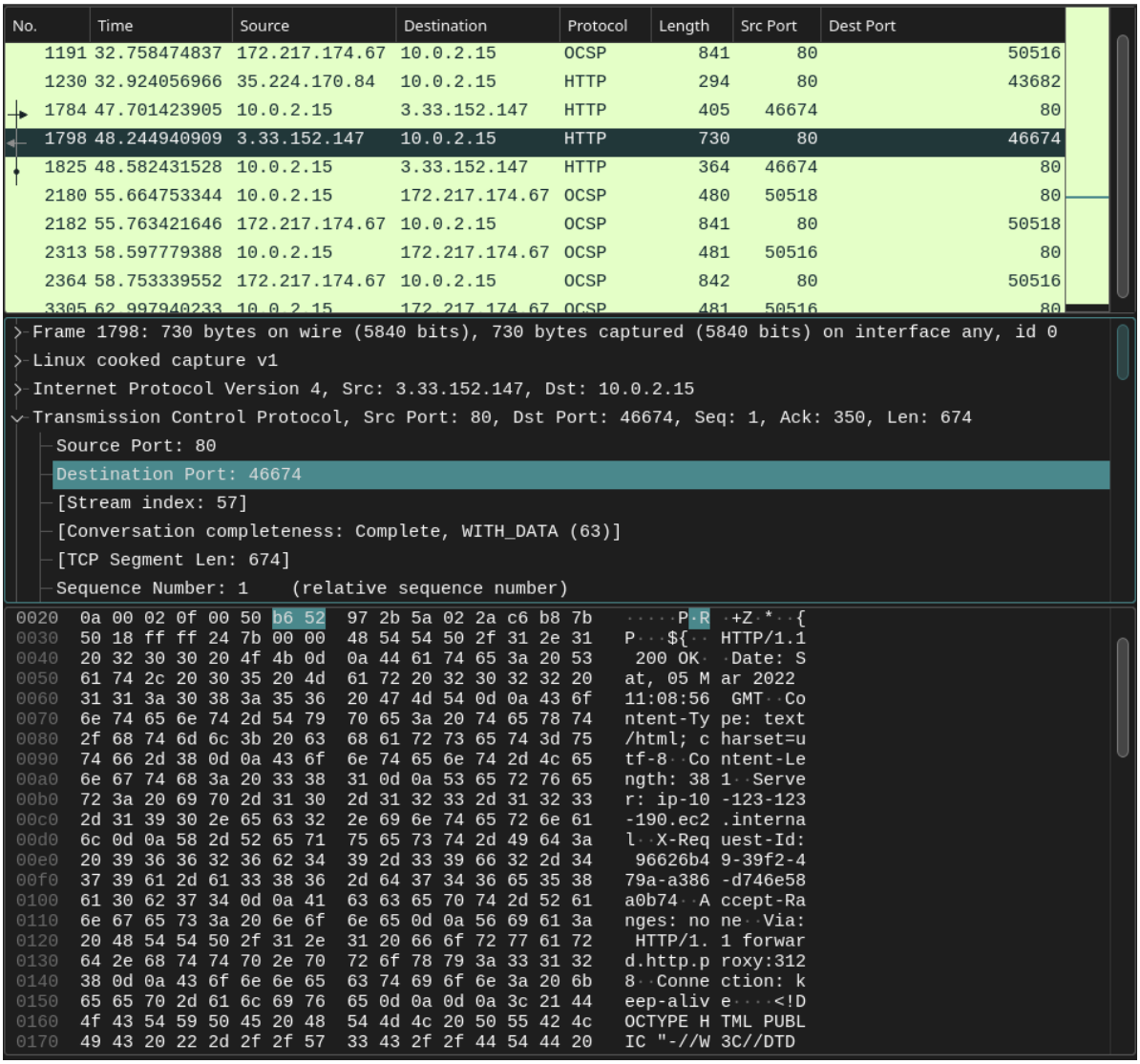


5.

RTT for the request sent to www.sougata-sen.com is `543.5 ms`



6.



Hex value of the destination port in the TCP header of the response is `b6 52`