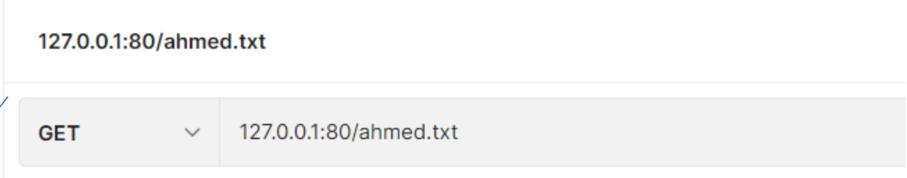
Networks Project

Team members:

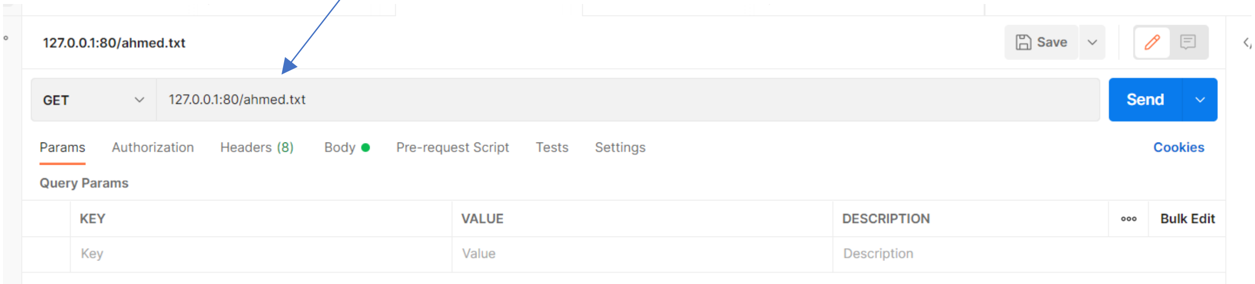
Seif Mohamed	**: 6624**
Rawan Hindawy	**: 6491**
Mennatallah Mostafa	**: 6234**

❖ Testing the server using postman:

1)The request sent (GET):

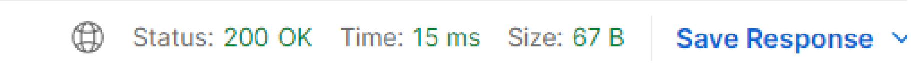


GET 127.0.0.1:80/ahmed.txt

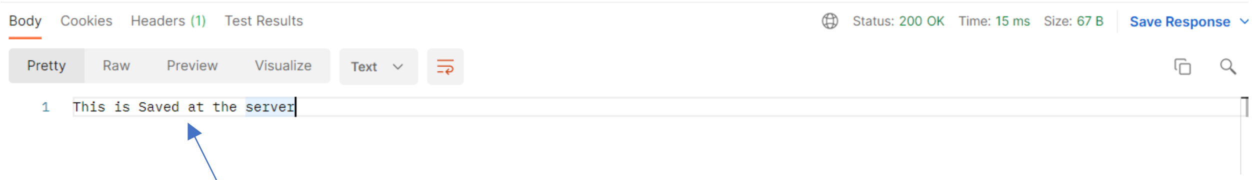


GET 127.0.0.1:80/ahmed.txt

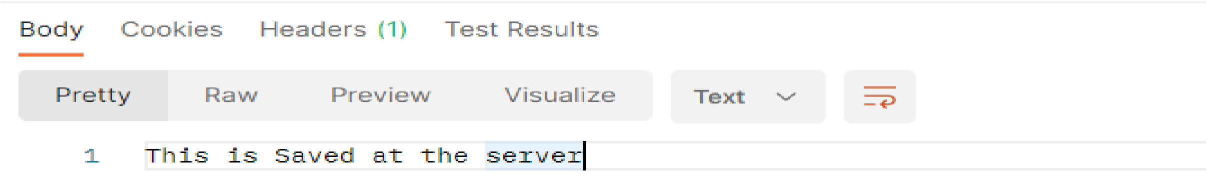
The response:



Status: 200 OK Time: 15 ms Size: 67 B

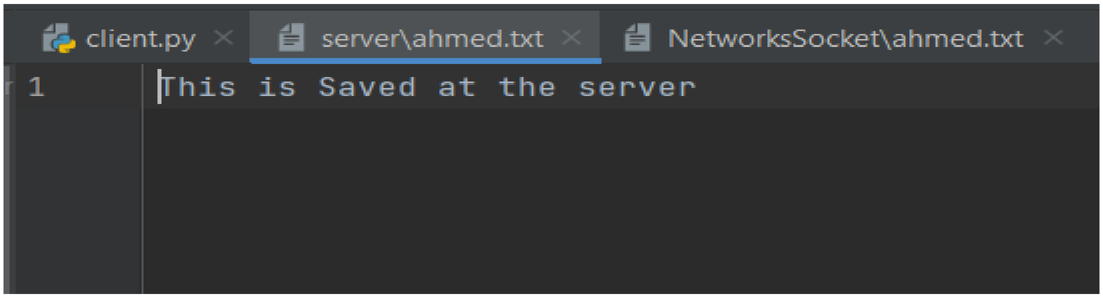


```
This is Saved at the server
```



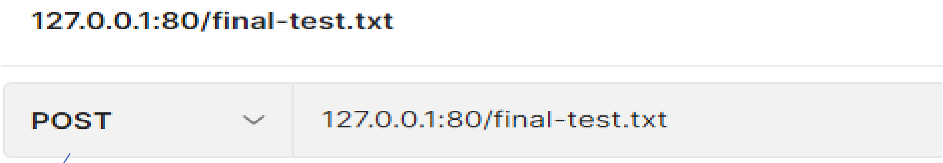
```
This is Saved at the server
```

Contents of the file:



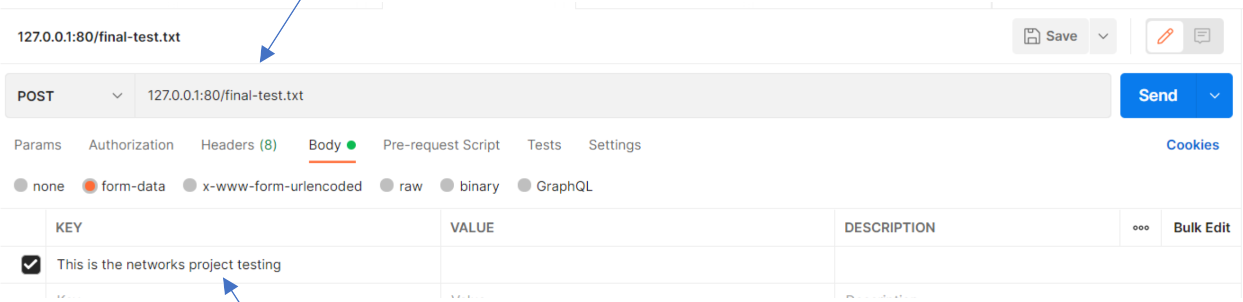
```
This is Saved at the server
```

1)The request sent (POST):



127.0.0.1:80/final-test.txt

POST 127.0.0.1:80/final-test.txt



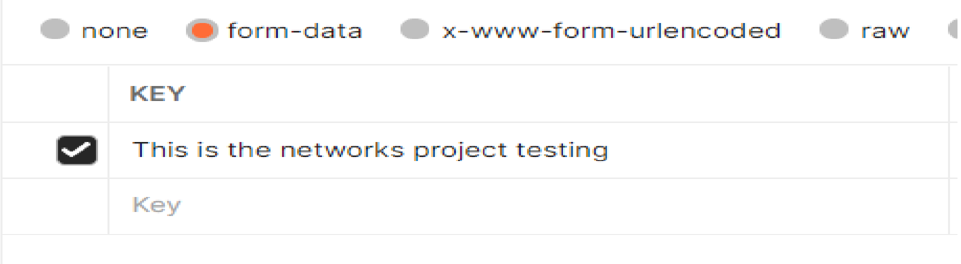
127.0.0.1:80/final-test.txt

POST 127.0.0.1:80/final-test.txt

○ none ● form-data ○ x-www-form-urlencoded ○ raw ○ binary ○ GraphQL

	KEY	VALUE	DESCRIPTION
☑	This is the networks project testing		

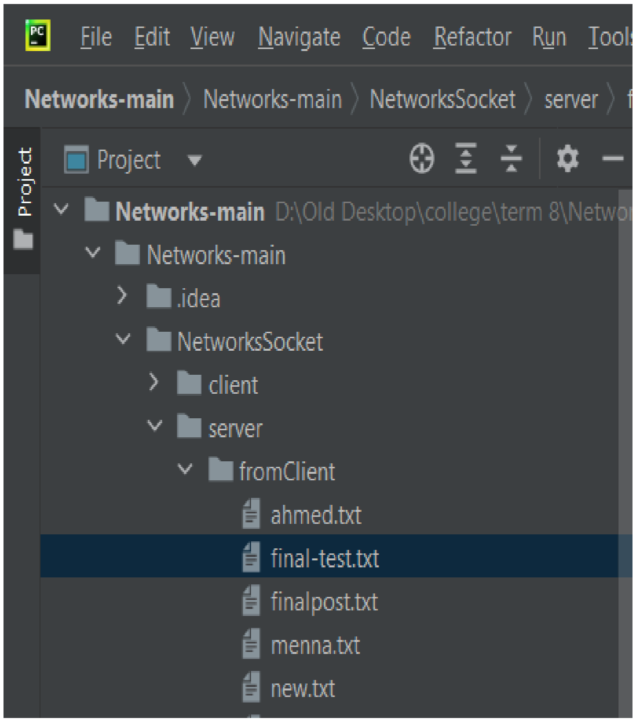
The payload:

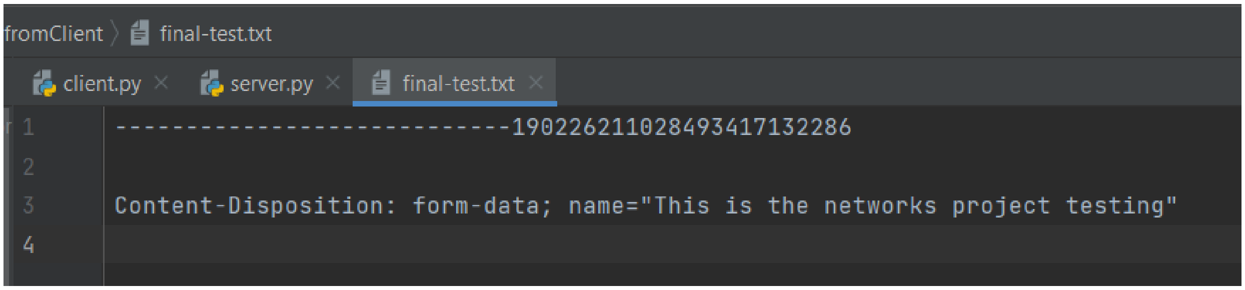


○ none ● form-data ○ x-www-form-urlencoded ○ raw

	KEY
☑	This is the networks project testing
	Key

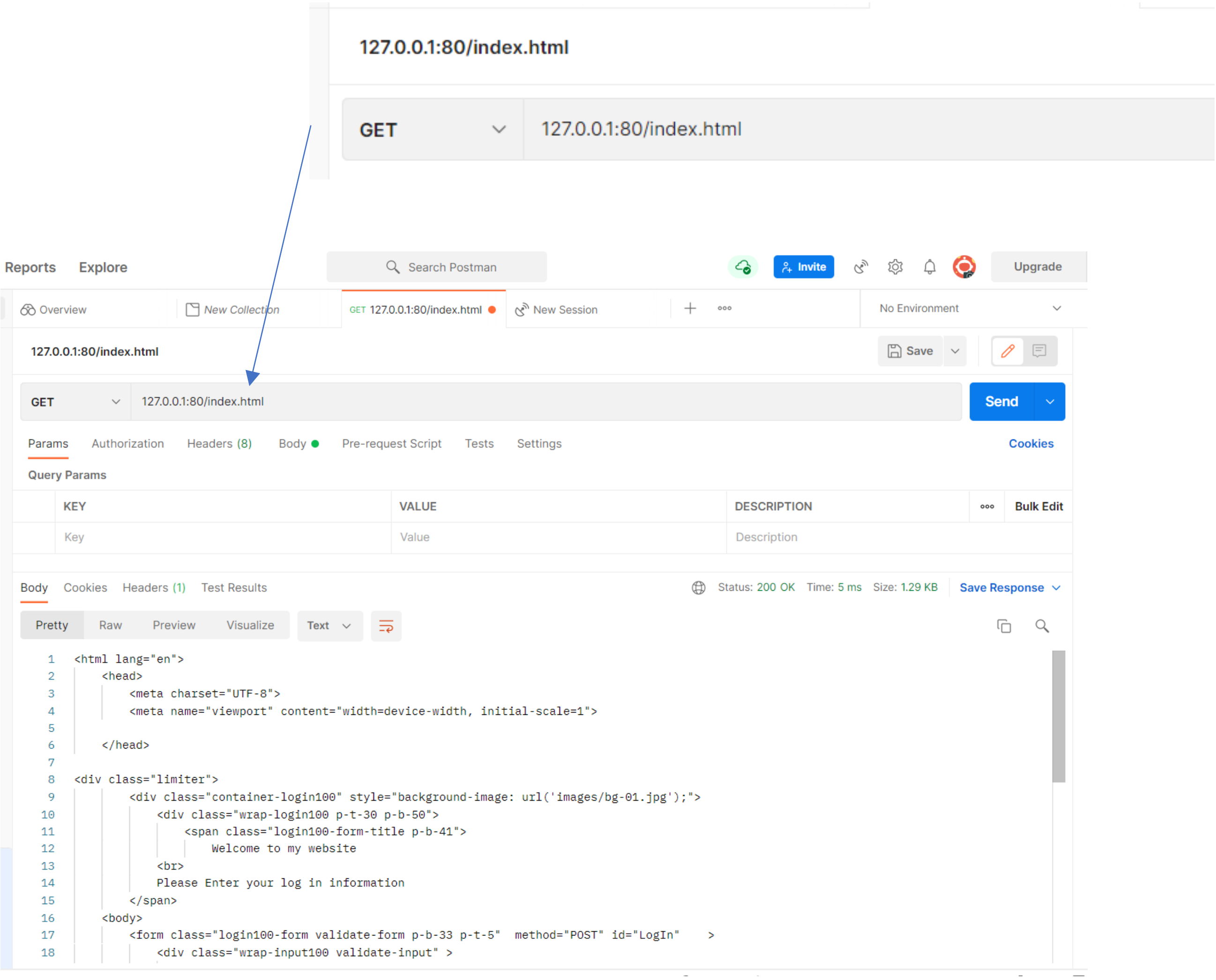
The created file:


File Edit View Navigate Code Refactor Run Tools
Networks-main 〉 Networks-main 〉 NetworksSocket 〉 server 〉 f
Project
Project
Networks-main D:\Old Desktop\college\term 8\Netwo
Networks-main
.idea
NetworksSocket
client
server
fromClient
ahmed.txt
final-test.txt
finalpost.txt
menna.txt
new.txt



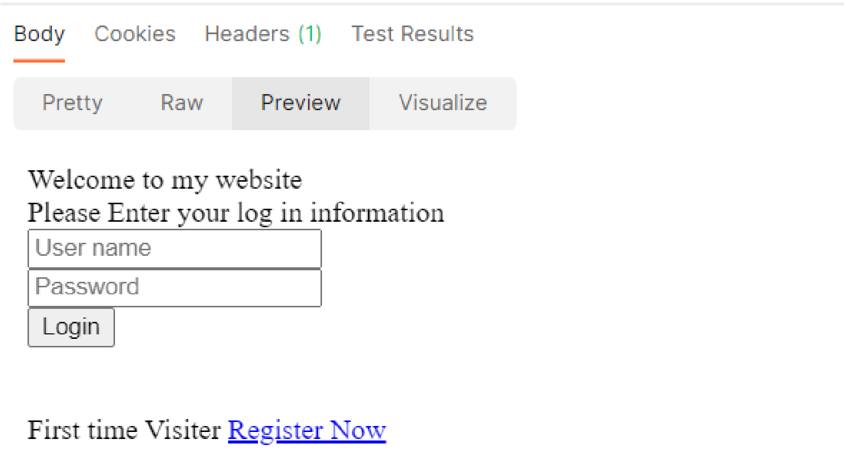
```
----------------------------190226211028493417132286

Content-Disposition: form-data; name="This is the networks project testing"

```

❖ Getting an html file



```
<html lang="en">
    <head>
        <meta charset="UTF-8">
        <meta name="viewport" content="width=device-width, initial-scale=1">

    </head>

<div class="limiter">
        <div class="container-login100" style="background-image: url('images/bg-01.jpg');">
            <div class="wrap-login100 p-t-30 p-b-50">
                <span class="login100-form-title p-b-41">
                    Welcome to my website
                <br>
                Please Enter your log in information
            </span>
    <body>
        <form class="login100-form validate-form p-b-33 p-t-5"  method="POST" id="LogIn"    >
            <div class="wrap-input100 validate-input" >
```

Preview of the file:



Welcome to my website
Please Enter your log in information

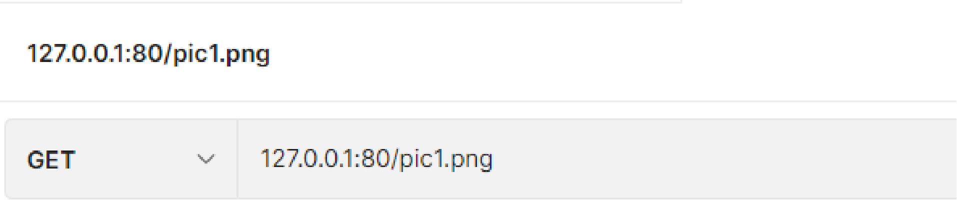
User name

Password

Login

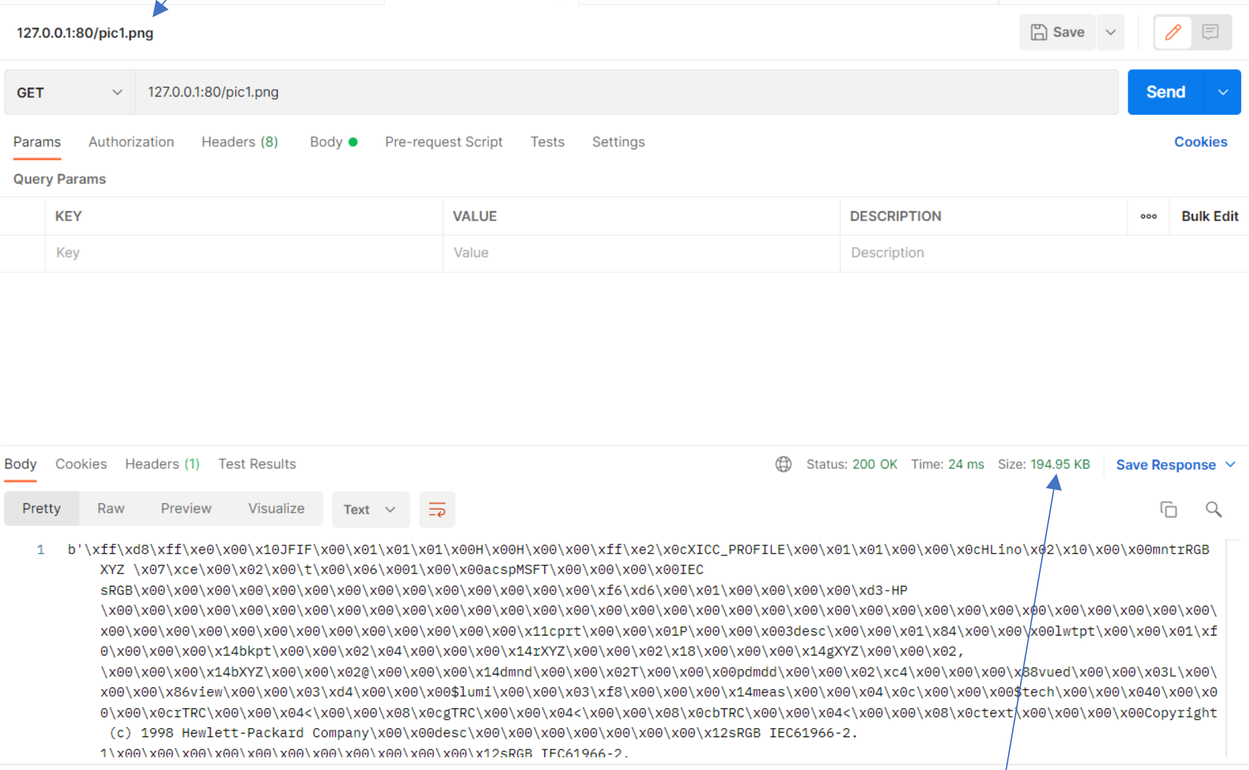
First time Visiter Register Now

❖ Getting a png file



127.0.0.1:80/pic1.png

GET 127.0.0.1:80/pic1.png



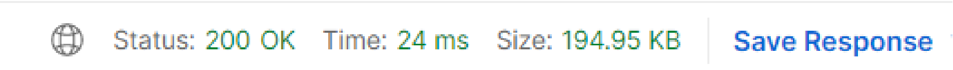
GET 127.0.0.1:80/pic1.png

KEY	VALUE	DESCRIPTION
Key	Value	Description

Status: 200 OK Time: 24 ms Size: 194.95 KB

```
b'\xff\xd8\xff\xe0\x00\x10JFIF\x00\x01\x01\x01\x00H\x00H\x00\x00\xff\xe2\x0cXICC_PROFILE\x00\x01\x01\x00\x00\x0cHLino\x02\x10\x00\x00mntrRGB
    XYZ \x07\xce\x00\x02\x00\t\x00\x06\x001\x00\x00acspMSFT\x00\x00\x00\x00IEC
    sRGB\x00\x00\x00\x00\x00\x00\x00\x00\x00\x00\x00\x00\x00\x00\xf6\xd6\x00\x01\x00\x00\x00\x00\xd3-HP
    \x00\x00\x00\x00\x00\x00\x00\x00\x00\x00\x00\x00\x00\x00\x00\x00\x00\x00\x00\x00\x00\x00\x00\x00\x00\x00\x00\x00\x00\x00\x00\x00\x00\x00\x00\
    x00\x00\x00\x00\x00\x00\x00\x00\x00\x00\x00\x00\x00\x11cprt\x00\x00\x01P\x00\x00\x003desc\x00\x00\x01\x84\x00\x00\x00lwtpt\x00\x00\x01\xf
    0\x00\x00\x00\x14bkpt\x00\x00\x02\x04\x00\x00\x00\x14rXYZ\x00\x00\x02\x18\x00\x00\x00\x14gXYZ\x00\x00\x02,
    \x00\x00\x00\x14bXYZ\x00\x00\x02@\x00\x00\x00\x14dmnd\x00\x00\x02T\x00\x00\x00pdmdd\x00\x00\x02\xc4\x00\x00\x00\x88vued\x00\x00\x03L\x00\
    x00\x00\x86view\x00\x00\x03\xd4\x00\x00\x00$lumi\x00\x00\x03\xf8\x00\x00\x00\x14meas\x00\x00\x04\x0c\x00\x00\x00$tech\x00\x00\x040\x00\x0
    0\x00\x0crTRC\x00\x00\x04<\x00\x00\x08\x0cgTRC\x00\x00\x04<\x00\x00\x08\x0cbTRC\x00\x00\x04<\x00\x00\x08\x0ctext\x00\x00\x00\x00Copyright
     (c) 1998 Hewlett-Packard Company\x00\x00desc\x00\x00\x00\x00\x00\x00\x00\x12sRGB IEC61966-2.
    1\x00\x00\x00\x00\x00\x00\x00\x00\x00\x00\x12sRGB IEC61966-2.
```

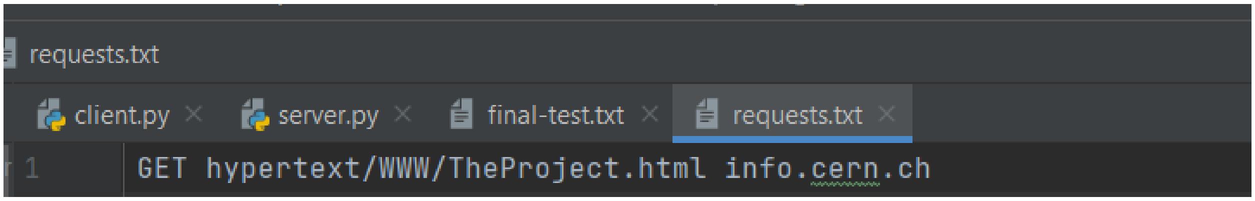
The response:



Status: 200 OK Time: 24 ms Size: 194.95 KB

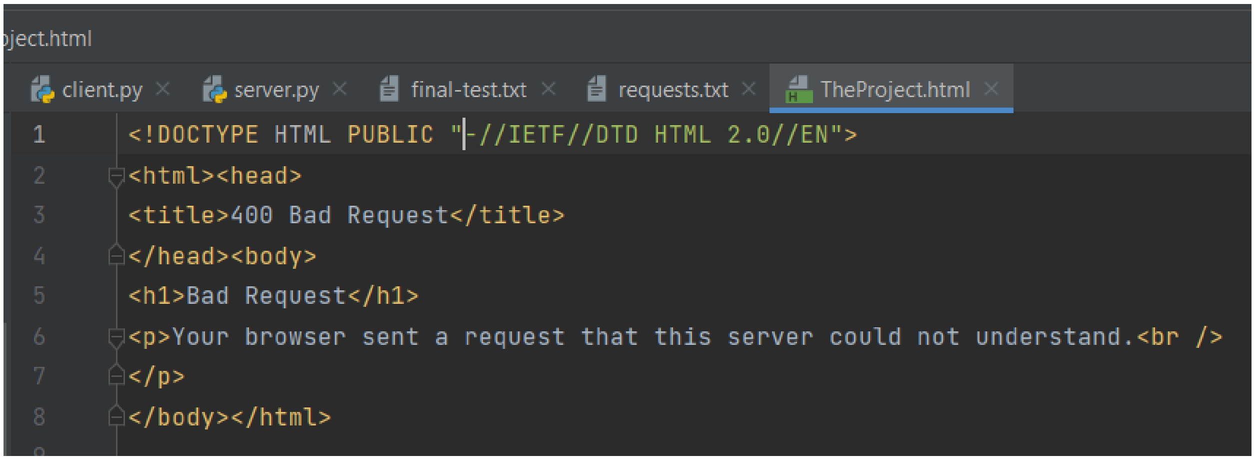
❖ Testing the client (with a general server)

The request sent:



```
GET hypertext/WWW/TheProject.html info.cern.ch
```

The file created:



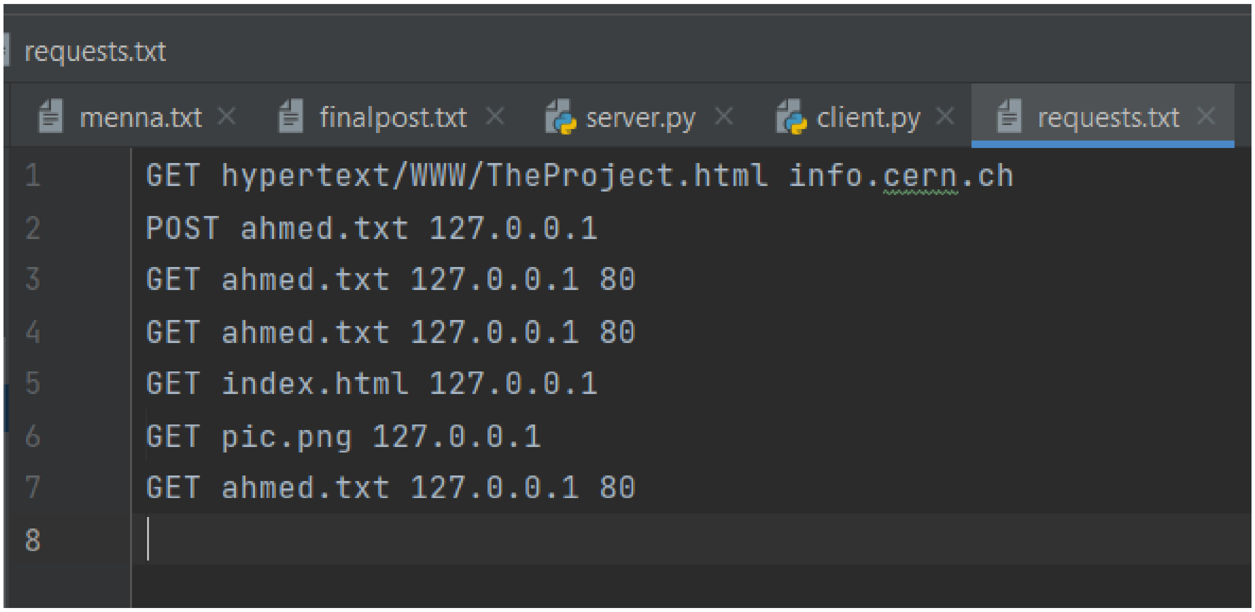
```
<!DOCTYPE HTML PUBLIC "-//IETF//DTD HTML 2.0//EN">
<html><head>
<title>400 Bad Request</title>
</head><body>
<h1>Bad Request</h1>
<p>Your browser sent a request that this server could not understand.<br />
</p>
</body></html>
```

Note:

We cannot test the post method as we can`t see the contents of any general server

❖ Testing our local server and client:

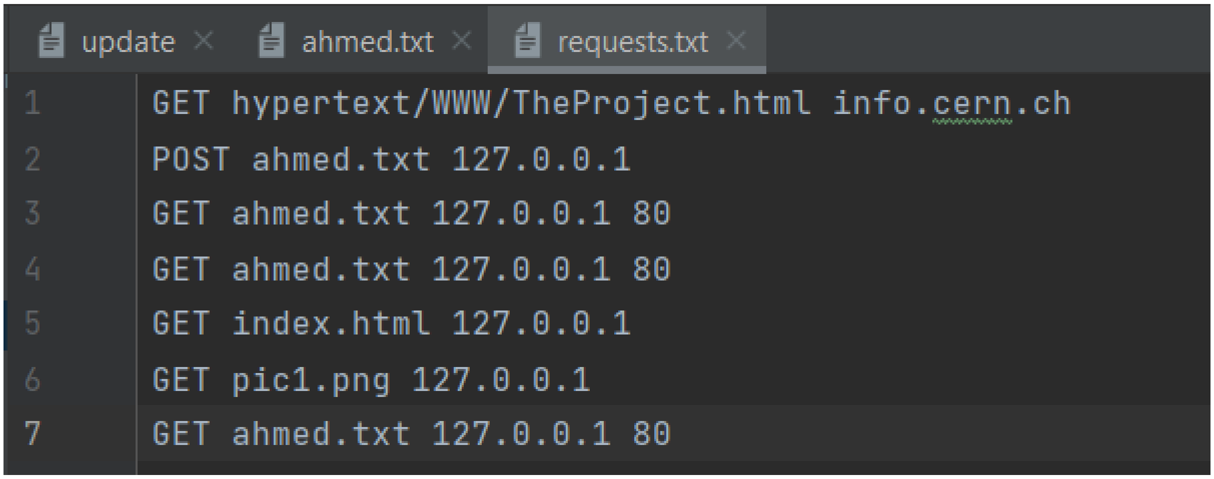
The sent requests:



```
GET hypertext/WWW/TheProject.html info.cern.ch
POST ahmed.txt 127.0.0.1
GET ahmed.txt 127.0.0.1 80
GET ahmed.txt 127.0.0.1 80
GET index.html 127.0.0.1
GET pic.png 127.0.0.1
GET ahmed.txt 127.0.0.1 80
```

The responses:

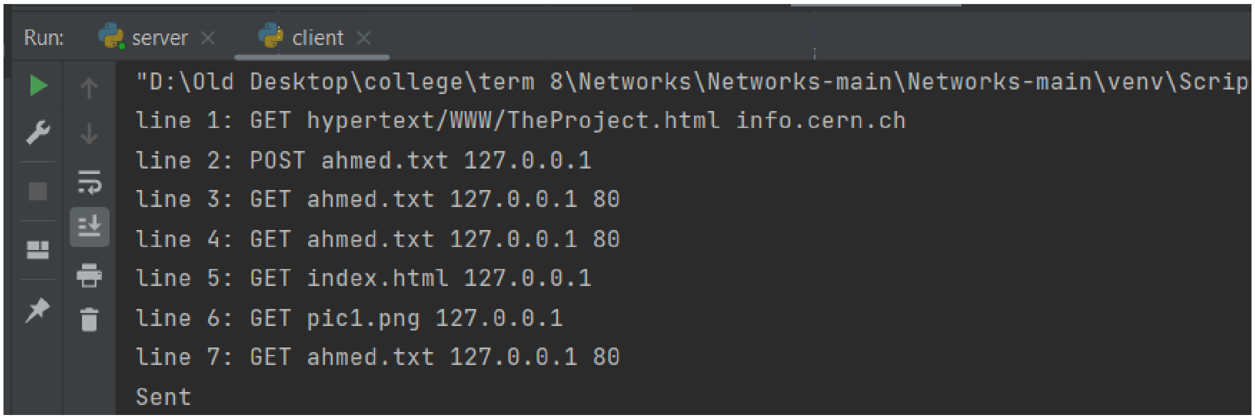
Reading the input file:



```
GET hypertext/WWW/TheProject.html info.cern.ch
POST ahmed.txt 127.0.0.1
GET ahmed.txt 127.0.0.1 80
GET ahmed.txt 127.0.0.1 80
GET index.html 127.0.0.1
GET pic1.png 127.0.0.1
GET ahmed.txt 127.0.0.1 80
```

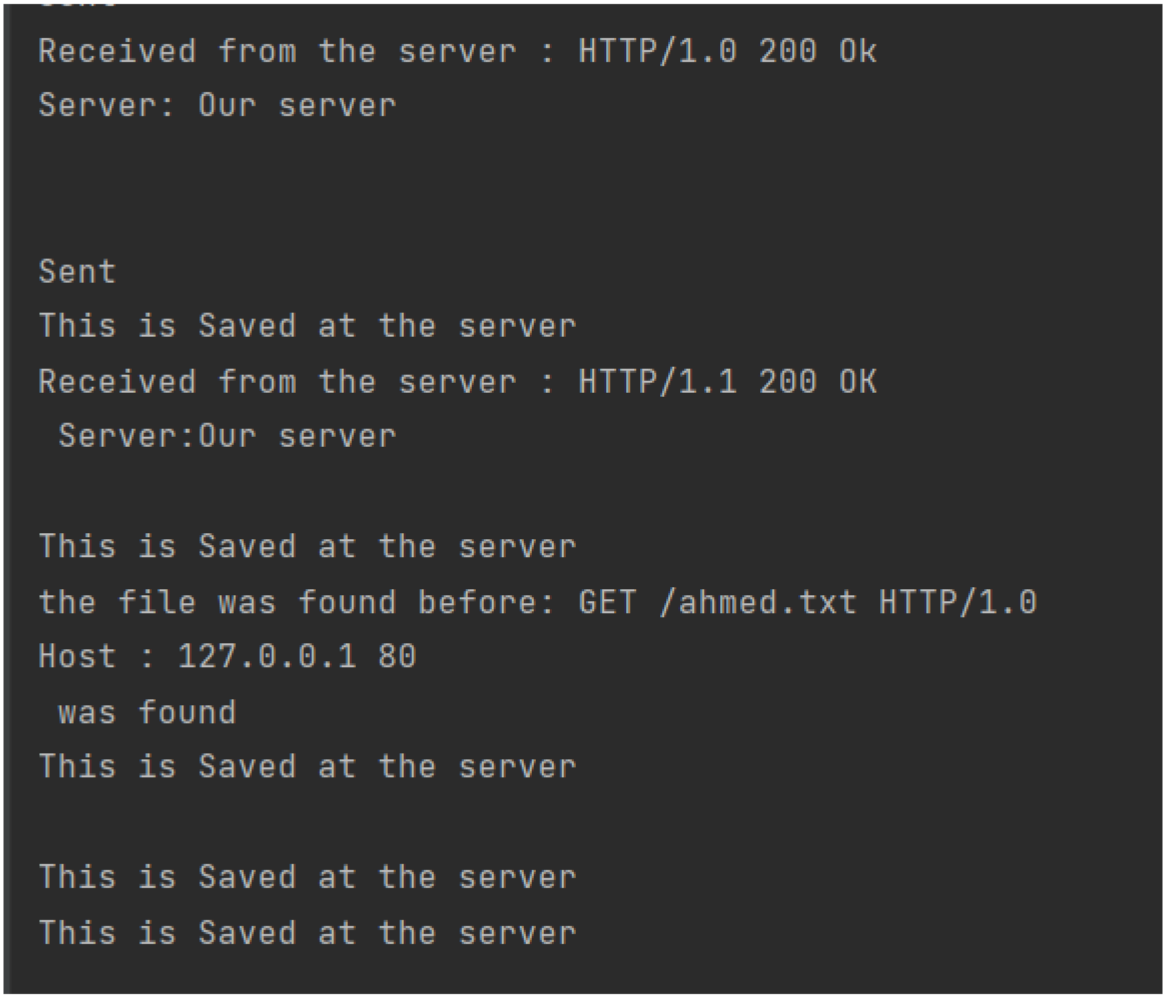
The responses of each request:

The input file:

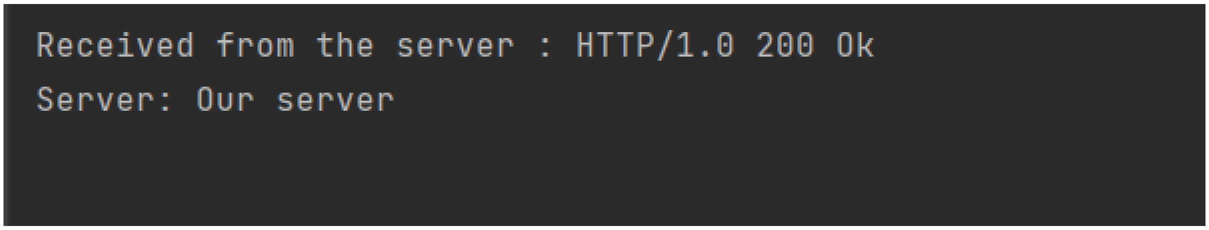


```
"D:\Old Desktop\college\term 8\Networks\Networks-main\Networks-main\venv\Scrip
line 1: GET hypertext/WWW/TheProject.html info.cern.ch
line 2: POST ahmed.txt 127.0.0.1
line 3: GET ahmed.txt 127.0.0.1 80
line 4: GET ahmed.txt 127.0.0.1 80
line 5: GET index.html 127.0.0.1
line 6: GET pic1.png 127.0.0.1
line 7: GET ahmed.txt 127.0.0.1 80
Sent
```

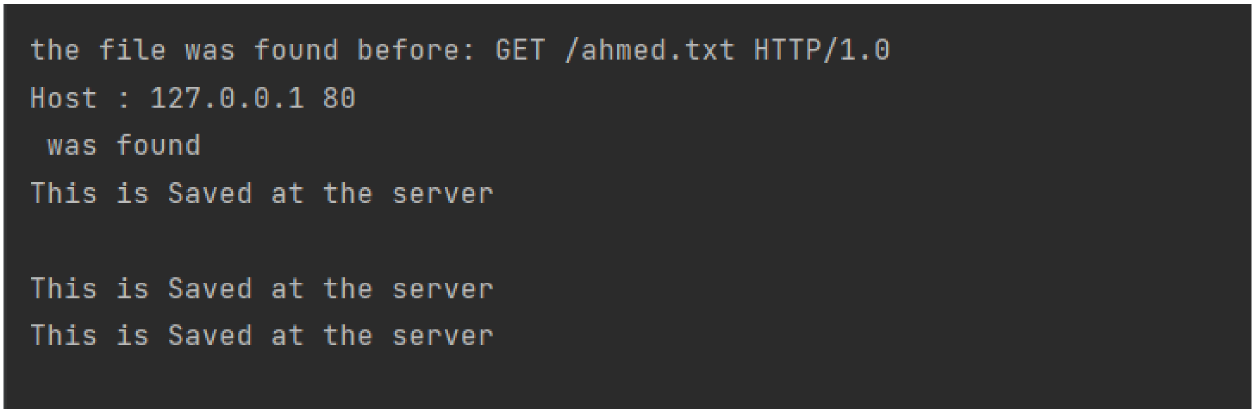
The responses:



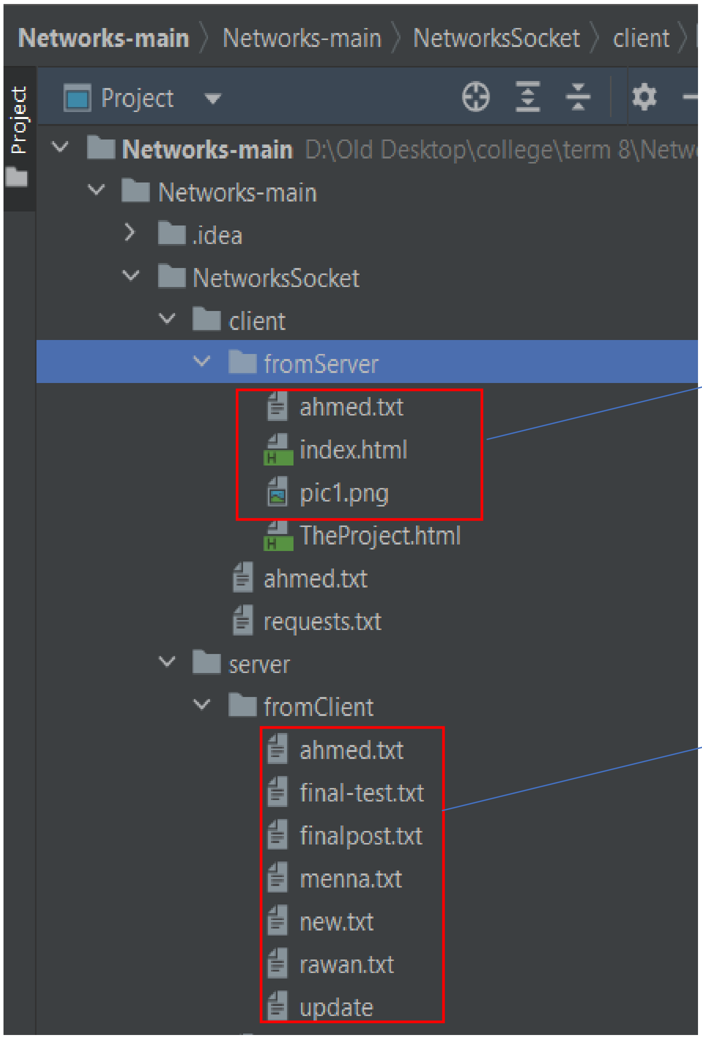
```
Received from the server : HTTP/1.0 200 Ok
Server: Our server



Sent
This is Saved at the server
Received from the server : HTTP/1.1 200 OK
 Server:Our server

This is Saved at the server
the file was found before: GET /ahmed.txt HTTP/1.0
Host : 127.0.0.1 80
 was found
This is Saved at the server

This is Saved at the server
This is Saved at the server
```



```
Received from the server : HTTP/1.0 200 Ok
Server: Our server
```



```
the file was found before: GET /ahmed.txt HTTP/1.0
Host : 127.0.0.1 80
 was found
This is Saved at the server

This is Saved at the server
This is Saved at the server
```

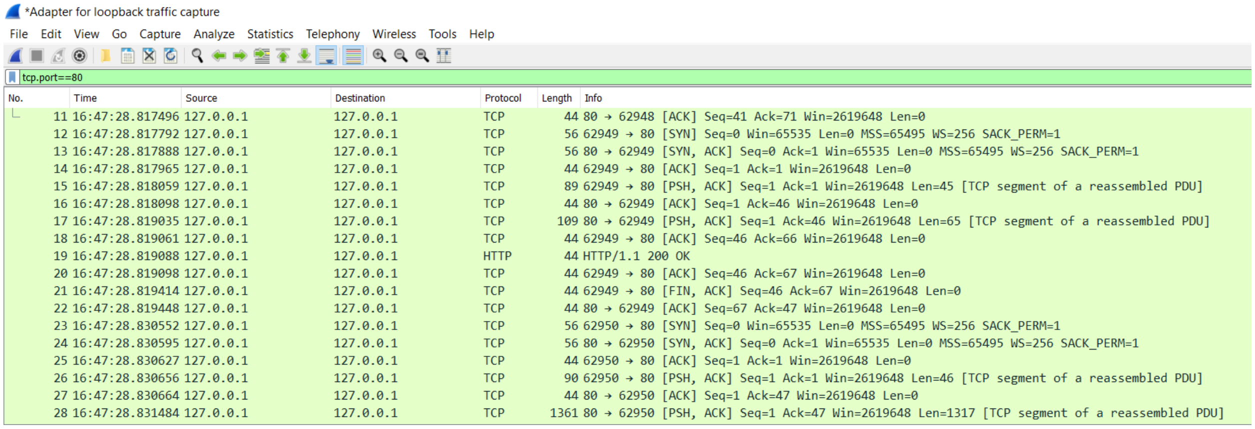


```
Networks-main 〉 Networks-main 〉 NetworksSocket 〉 client 〉
Project ▾
⌄ Networks-main  D:\Old Desktop\college\term 8\Netw
  ⌄ Networks-main
    › .idea
    ⌄ NetworksSocket
      ⌄ client
        ⌄ fromServer
            ahmed.txt
            index.html
            pic1.png
            TheProject.html
          ahmed.txt
          requests.txt
      ⌄ server
        ⌄ fromClient
            ahmed.txt
            final-test.txt
            finalpost.txt
            menna.txt
            new.txt
            rawan.txt
            update
```

The files created in client due to get requests including text, html and png files

Files created in the server due to post methods (not only from this test but also previous tests)

Capturing packets from wireshark:


*Adapter for loopback traffic capture
File Edit View Go Capture Analyze Statistics Telephony Wireless Tools Help

tcp.port==80

No.	Time	Source	Destination	Protocol	Length	Info
11	16:47:28.817496	127.0.0.1	127.0.0.1	TCP	44	80 → 62948 [ACK] Seq=41 Ack=71 Win=2619648 Len=0
12	16:47:28.817792	127.0.0.1	127.0.0.1	TCP	56	62949 → 80 [SYN] Seq=0 Win=65535 Len=0 MSS=65495 WS=256 SACK_PERM=1
13	16:47:28.817888	127.0.0.1	127.0.0.1	TCP	56	80 → 62949 [SYN, ACK] Seq=0 Ack=1 Win=65535 Len=0 MSS=65495 WS=256 SACK_PERM=1
14	16:47:28.817965	127.0.0.1	127.0.0.1	TCP	44	62949 → 80 [ACK] Seq=1 Ack=1 Win=2619648 Len=0
15	16:47:28.818059	127.0.0.1	127.0.0.1	TCP	89	62949 → 80 [PSH, ACK] Seq=1 Ack=1 Win=2619648 Len=45 [TCP segment of a reassembled PDU]
16	16:47:28.818098	127.0.0.1	127.0.0.1	TCP	44	80 → 62949 [ACK] Seq=1 Ack=46 Win=2619648 Len=0
17	16:47:28.819035	127.0.0.1	127.0.0.1	TCP	109	80 → 62949 [PSH, ACK] Seq=1 Ack=46 Win=2619648 Len=65 [TCP segment of a reassembled PDU]
18	16:47:28.819061	127.0.0.1	127.0.0.1	TCP	44	62949 → 80 [ACK] Seq=46 Ack=66 Win=2619648 Len=0
19	16:47:28.819088	127.0.0.1	127.0.0.1	HTTP	44	HTTP/1.1 200 OK
20	16:47:28.819098	127.0.0.1	127.0.0.1	TCP	44	62949 → 80 [ACK] Seq=46 Ack=67 Win=2619648 Len=0
21	16:47:28.819414	127.0.0.1	127.0.0.1	TCP	44	62949 → 80 [FIN, ACK] Seq=46 Ack=67 Win=2619648 Len=0
22	16:47:28.819448	127.0.0.1	127.0.0.1	TCP	44	80 → 62949 [ACK] Seq=67 Ack=47 Win=2619648 Len=0
23	16:47:28.830552	127.0.0.1	127.0.0.1	TCP	56	62950 → 80 [SYN] Seq=0 Win=65535 Len=0 MSS=65495 WS=256 SACK_PERM=1
24	16:47:28.830595	127.0.0.1	127.0.0.1	TCP	56	80 → 62950 [SYN, ACK] Seq=0 Ack=1 Win=65535 Len=0 MSS=65495 WS=256 SACK_PERM=1
25	16:47:28.830627	127.0.0.1	127.0.0.1	TCP	44	62950 → 80 [ACK] Seq=1 Ack=1 Win=2619648 Len=0
26	16:47:28.830656	127.0.0.1	127.0.0.1	TCP	90	62950 → 80 [PSH, ACK] Seq=1 Ack=1 Win=2619648 Len=46 [TCP segment of a reassembled PDU]
27	16:47:28.830664	127.0.0.1	127.0.0.1	TCP	44	80 → 62950 [ACK] Seq=1 Ack=47 Win=2619648 Len=0
28	16:47:28.831484	127.0.0.1	127.0.0.1	TCP	1361	80 → 62950 [PSH, ACK] Seq=1 Ack=47 Win=2619648 Len=1317 [TCP segment of a reassembled PDU]

Note!

There exists HTTP protocol although the protocol in the server is TCP while the form of the HTTP request is well known so the wireshark defines it as an HTTP protocol