

computer network homework

step 1

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zhang@DESKTOP-5LRS0K1:/mnt/d/VScodeWorkspace/college/computer_network_class/computer_network/B073040025$ python3 client1.py
Input the job you want to do:
calc
Input math expression:
5+2
is there any job you want to do?(y/n)y
Input the job you want to do:
dns
Input which IP of domain name you want get:
google.com
-----3 way handshake start-----
SYN send to (IP,port): DESKTOP-5LRS0K1 , 12345 with seq: 7286
SYN/ACK receive from (IP,port): ('127.0.1.1', 12346) with ack seq: 7287 seq: 7407
request send to (IP,port): ('127.0.1.1', 12346)
-----3 way handshake done-----
=====
receive packet from ('127.0.1.1', 12346) with seq 7408
client 0 accept packet from server ('127.0.1.1', 12346) :
result of 5+2 is 7
ACK send to (IP,port): ('127.0.1.1', 12346) with ack seq: 7409 and seq: 7288
=====
receive packet from ('127.0.1.1', 12346) with seq 7409
client 0 accept packet from server ('127.0.1.1', 12346) :
IP of google.com is 172.217.27.142
ACK send to (IP,port): ('127.0.1.1', 12346) with ack seq: 7410 and seq: 7289
zhang@DESKTOP-5LRS0K1:/mnt/d/VScodeWorkspace/college/computer_network_class/computer_network/B073040025$ █

dealing with math claculation
zhang@DESKTOP-5LRS0K1:/mnt/d/VScodeWorkspace/college/computer_network_class/computer_network/B073040025$ python3 udpserverMulticlient.py
[2021-06-15 18:38:37] Creating socket...
[2021-06-15 18:38:37] Socket created
[2021-06-15 18:38:37] Binding server to DESKTOP-5LRS0K1:12345...
[2021-06-15 18:38:37] Server binded to DESKTOP-5LRS0K1:12345
<socket.socket fd=3, family=AddressFamily.AF_INET, type=SocketKind.SOCK_DGRAM, proto=0, laddr=('127.0.1.1', 12345)>
Waiting for client...
Received!
Waiting for client...
SYN accept form (IP,port): ('127.0.0.1', 33726) with client seq 7286
SYN/ACK send to (IP,port): ('127.0.0.1', 33726) with seq: 7407
['calc', '5+2', 'dns', 'google.com']
=====
dealing with math claculation
send a packet to ('127.0.0.1', 33726) with server seq : 7408
recive ACK from : ('127.0.0.1', 33726) with ack seq: 7409 and client seq: 7288
=====
dealing with dns request
send a packet to ('127.0.0.1', 33726) with server seq : 7409
recive ACK from : ('127.0.0.1', 33726) with ack seq: 7410 and client seq: 7289
█

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step 1-video

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zhang@DESKTOP-5LRS0K1: /mnt/d/VScodeWorkspace/college/computer_network_class/computer_network/B073040025$ python3 client1.py
Input the job you want to do:
video
Input which video you want:
1
is there any job you want to do?(y/n)n

zhang@DESKTOP-5LRS0K1: /mnt/d/VScodeWorkspace/college/computer_network_class/computer_network/B073040025$ python3 udpserverMulticlient.py
[2021-06-15 18:41:30] Creating socket...
[2021-06-15 18:41:30] Socket created
[2021-06-15 18:41:30] Binding server to DESKTOP-5LRS0K1:12345...
[2021-06-15 18:41:30] Server binded to DESKTOP-5LRS0K1:12345
<socket.socket fd=3, family=AddressFamily.AF_INET, type=SocketKind.SOCK_DGRAM, proto=0, laddr=('127.0.1.1', 12345)>
Waiting for client...

ACK send to (IP,port): ('127.0.1.1', 12346) with ack seq: 10859 and seq: 5574
receive packet from ('127.0.1.1', 12346) with seq 10859
receive packet from ('127.0.1.1', 12346) with seq 10860
receive packet from ('127.0.1.1', 12346) with seq 10861
ACK send to (IP,port): ('127.0.1.1', 12346) with ack seq: 10862 and seq: 5575
receive packet from ('127.0.1.1', 12346) with seq 10862
receive packet from ('127.0.1.1', 12346) with seq 10863
receive packet from ('127.0.1.1', 12346) with seq 10864
ACK send to (IP,port): ('127.0.1.1', 12346) with ack seq: 10865 and seq: 5576
receive packet from ('127.0.1.1', 12346) with seq 10865
receive packet from ('127.0.1.1', 12346) with seq 10866
receive packet from ('127.0.1.1', 12346) with seq 10867
ACK send to (IP,port): ('127.0.1.1', 12346) with ack seq: 10868 and seq: 5577
receive packet from ('127.0.1.1', 12346) with seq 10868
receive packet from ('127.0.1.1', 12346) with seq 10869
receive packet from ('127.0.1.1', 12346) with seq 10870
ACK send to (IP,port): ('127.0.1.1', 12346) with ack seq: 10871 and seq: 5578
receive packet from ('127.0.1.1', 12346) with seq 10871
receive packet from ('127.0.1.1', 12346) with seq 10872
receive packet from ('127.0.1.1', 12346) with seq 10873
ACK send to (IP,port): ('127.0.1.1', 12346) with ack seq: 10874 and seq: 5579
receive packet from ('127.0.1.1', 12346) with seq 10874
receive packet from ('127.0.1.1', 12346) with seq 10875
ACK send to (IP,port): ('127.0.1.1', 12346) with ack seq: 10876 and seq: 5580
zhang@DESKTOP-5LRS0K1: /mnt/d/VScodeWorkspace/college/computer_network_class/computer_network/B073040025$

recive ACK from : ('127.0.0.1', 56369) with ack seq: 10862 and client seq: 5575
send a packet to ('127.0.0.1', 56369) with server seq : 10862
send a packet to ('127.0.0.1', 56369) with server seq : 10863
send a packet to ('127.0.0.1', 56369) with server seq : 10864
recive ACK from : ('127.0.0.1', 56369) with ack seq: 10865 and client seq: 5576
send a packet to ('127.0.0.1', 56369) with server seq : 10865
send a packet to ('127.0.0.1', 56369) with server seq : 10866
send a packet to ('127.0.0.1', 56369) with server seq : 10867
recive ACK from : ('127.0.0.1', 56369) with ack seq: 10868 and client seq: 5577
send a packet to ('127.0.0.1', 56369) with server seq : 10868
send a packet to ('127.0.0.1', 56369) with server seq : 10869
send a packet to ('127.0.0.1', 56369) with server seq : 10870
recive ACK from : ('127.0.0.1', 56369) with ack seq: 10871 and client seq: 5578
send a packet to ('127.0.0.1', 56369) with server seq : 10871
send a packet to ('127.0.0.1', 56369) with server seq : 10872
send a packet to ('127.0.0.1', 56369) with server seq : 10873
recive ACK from : ('127.0.0.1', 56369) with ack seq: 10874 and client seq: 5579
send a packet to ('127.0.0.1', 56369) with server seq : 10874
send a packet to ('127.0.0.1', 56369) with server seq : 10875
recive ACK from : ('127.0.0.1', 56369) with ack seq: 10876 and client seq: 5580

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step 2

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zhang@DESKTOP-5LRS0K1:/mnt/d/VScodeWorkSpace/college/computer_network_class/computer_network/B073040025$ python3 client1.py
Input the job you want to do:
calc
Input math expression:
5+2
is there any job you want to do?(y/n)n
-----3 way handshake start-----
SYN send to (IP,port):  DESKTOP-5LRS0K1  , 12345  with seq: 9309
SYN/ACK receive from (IP,port):  ('127.0.1.1', 12346)  with ack seq: 9310  seq: 4444
request send to (IP,port):  ('127.0.1.1', 12346)
-----3 way handshake done-----
=====
Input the job you want to do:
receive packet from  ('127.0.1.1', 12346) with seq 4445
client 0  accept packet from server ('127.0.1.1', 12346) :
    result of 5+2 is 7
ACK send to (IP,port):  ('127.0.1.1', 12346) with ack seq: 4446  and seq: 9311
calc
Input math expression:
52+1
is there any job you want to do?(y/n)n
-----3 way handshake start-----
SYN send to (IP,port):  DESKTOP-5LRS0K1  , 12345  with seq: 8767
SYN/ACK receive from (IP,port):  ('127.0.1.1', 12346)  with ack seq: 8768  seq: 2462
request send to (IP,port):  ('127.0.1.1', 12346)
-----3 way handshake done-----
=====
receive packet from  ('127.0.1.1', 12346) with seq 2463
client 1  accept packet from server ('127.0.1.1', 12346) :
    result of 52+1 is 53
ACK send to (IP,port):  ('127.0.1.1', 12346) with ack seq: 2464  and seq: 8769
zhang@DESKTOP-5LRS0K1:/mnt/d/VScodeWorkSpace/college/computer_network_class/computer_network/B073040025$ python3 udpserverMulticlient.py
[2021-06-15 18:44:07] Creating socket...
[2021-06-15 18:44:07] Socket created
[2021-06-15 18:44:07] Binding server to DESKTOP-5LRS0K1:12345...
[2021-06-15 18:44:07] Server binded to DESKTOP-5LRS0K1:12345
<socket.socket fd=3, family=AddressFamily.AF_INET, type=SocketKind.SOCK_DGRAM, proto=0, laddr=('127.0.1.1', 12345)>
Waiting for client...
Received!
Waiting for client...
SYN accept form (IP,port):  ('127.0.0.1', 44381)  with client seq 9309
SYN/ACK send to (IP,port):  ('127.0.0.1', 44381)  with seq: 4444
['calc', '5+2']
=====
dealing with math claculation
send a packet to  ('127.0.0.1', 44381) with server seq : 4445
recive ACK from :  ('127.0.0.1', 44381) with ack seq: 4446  and client seq: 9311
Received!
Waiting for client...
SYN accept form (IP,port):  ('127.0.0.1', 47872)  with client seq 8767
SYN/ACK send to (IP,port):  ('127.0.0.1', 47872)  with seq: 2462
['calc', '52+1']
=====
dealing with math claculation
send a packet to  ('127.0.0.1', 47872) with server seq : 2463
recive ACK from :  ('127.0.0.1', 47872) with ack seq: 2464  and client seq: 8769

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step 3

please see picture in step 1

step 4

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is there any job you want to do?(y/n)y
Input the job you want to do:
calc
Input math expression:
5+2
is there any job you want to do?(y/n)y
Input the job you want to do:
dns
Input which IP of domain name you want get:
google.com
is there any job you want to do?(y/n)y
Input the job you want to do:
calc
Input math expression:
1+1
is there any job you want to do?(y/n)n
-----3 way handshake start-----
SYN send to (IP,port): DESKTOP-5LRS0K1 , 12345 with seq: 471
SYN/ACK receive from (IP,port): ('127.0.1.1', 12346) with ack seq: 472 seq: 4606
request send to (IP,port): ('127.0.1.1', 12346)
-----3 way handshake done-----
=====
receive packet from ('127.0.1.1', 12346) with seq 4607
client 0 accept packet from server ('127.0.1.1', 12346) :
  result of 5*2+2+1+100/20+100**0.5 is 43.0
ACK send to (IP,port): ('127.0.1.1', 12346) with ack seq: 4608 and seq: 473
=====
receive packet from ('127.0.1.1', 12346) with seq 4608
but the packet from ('127.0.1.1', 12346) with WRONG checksum ack seq: 474 and seq: 4608
client 0 accept packet from server ('127.0.1.1', 12346) :
  result of 5+2 is 7
ACK send to (IP,port): ('127.0.1.1', 12346) with ack seq: 4609 and seq: 474
=====
receive packet from ('127.0.1.1', 12346) with seq 4609
but the packet from ('127.0.1.1', 12346) with WRONG checksum ack seq: 475 and seq: 4609
client 0 accept packet from server ('127.0.1.1', 12346) :
  IP of google.com is 172.217.160.78
ACK send to (IP,port): ('127.0.1.1', 12346) with ack seq: 4610 and seq: 475
=====
receive packet from ('127.0.1.1', 12346) with seq 4610
client 0 accept packet from server ('127.0.1.1', 12346) :
  result of 1+1 is 2
ACK send to (IP,port): ('127.0.1.1', 12346) with ack seq: 4611 and seq: 476
-----DESKTOP-5LRS0K1: /mnt/d/VScodeWorkspace/college/computer_network_class/computer_network/B073040025$ python3 udpserverMulticlient.py
[2021-06-15 18:49:38] Creating socket...
[2021-06-15 18:49:38] Socket created
[2021-06-15 18:49:38] Binding server to DESKTOP-5LRS0K1:12345...
[2021-06-15 18:49:38] Server binded to DESKTOP-5LRS0K1:12345
<socket.socket fd=3, family=AddressFamily.AF_INET, type=SocketKind.SOCK_DGRAM, proto=0, laddr=('127.0.1.1', 12345)>
Waiting for client...
Received!
Waiting for client...
SYN accept form (IP,port): ('127.0.0.1', 60074) with client seq 471
SYN/ACK send to (IP,port): ('127.0.0.1', 60074) with seq: 4606
['calc', '5*2+2+1+100/20+100**0.5', 'calc', '5+2', 'dns', 'google.com', 'calc', '1+1']
=====
dealing with math claculation
send a packet to ('127.0.0.1', 60074) with server seq : 4607
recive ACK from : ('127.0.0.1', 60074) with ack seq: 4608 and client seq: 473
=====
dealing with math claculation
send a packet to ('127.0.0.1', 60074) with server seq : 4608
recive ACK from : ('127.0.0.1', 60074) with ack seq: 4609 and client seq: 474
=====
dealing with dns request
send a packet to ('127.0.0.1', 60074) with server seq : 4609
recive ACK from : ('127.0.0.1', 60074) with ack seq: 4610 and client seq: 475
but the packet from ('127.0.0.1', 60074) with WRONG checksum ack seq: 4610 and seq: 475
=====
dealing with math claculation
send a packet to ('127.0.0.1', 60074) with server seq : 4610
recive ACK from : ('127.0.0.1', 60074) with ack seq: 4611 and client seq: 476
but the packet from ('127.0.0.1', 60074) with WRONG checksum ack seq: 4611 and seq: 476
[]


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step 5


please see picture in step 1-video

step 9


```
zhang@DESKTOP-5LRS0K1: /mnt/d/VScodeWorkspace/college/computer_network_class/computer_network/B073040025$ sha256sum *.mp4 ../1.mp4 | awk '{print $1}' | uniq
2d84bc64b2e81b257eea50841b715f00e6f8d2e5b0f1af4e5b4a6738aff9800d
zhang@DESKTOP-5LRS0K1: /mnt/d/VScodeWorkspace/college/computer_network_class/computer_network/B073040025$ sha256sum *.mp4 ../1.mp4 | awk '{print $1}' | wc -l
101
zhang@DESKTOP-5LRS0K1: /mnt/d/VScodeWorkspace/college/computer_network_class/computer_network/B073040025$
```




__pycache__




0received




1received




2received




3received




4received




5received




6received




7received




8received




9received




10received




11received




12received




13received




14received




15received




16received




17received




18received




19received




20received




21received




22received




23received




24received




25received




26received




27received




28received




29received




30received




31received




32received




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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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96received




97received




98received




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client1




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