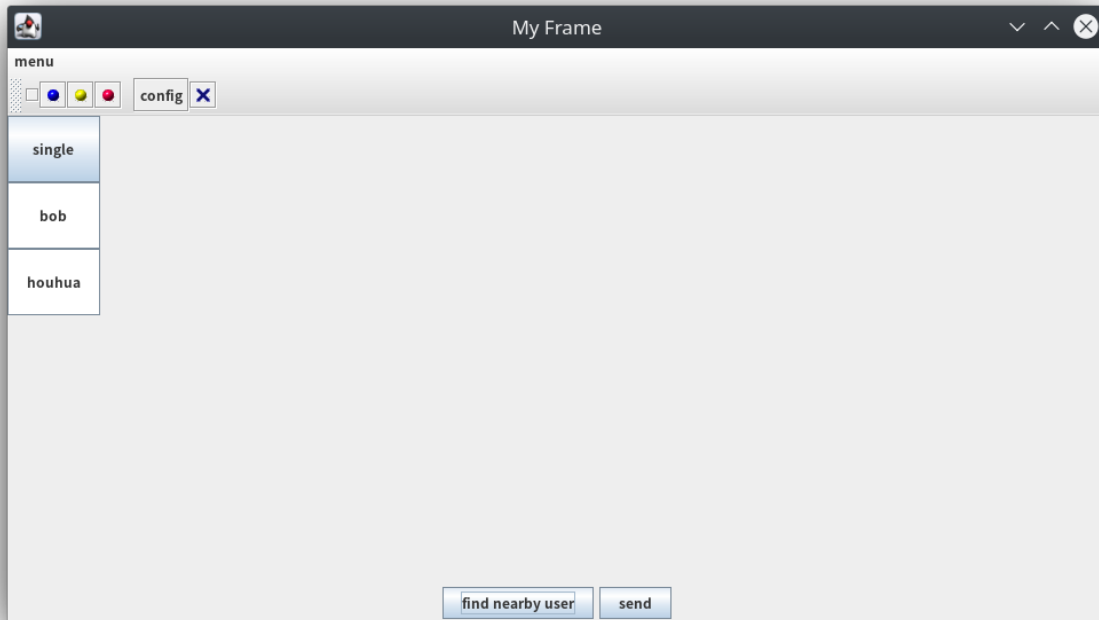


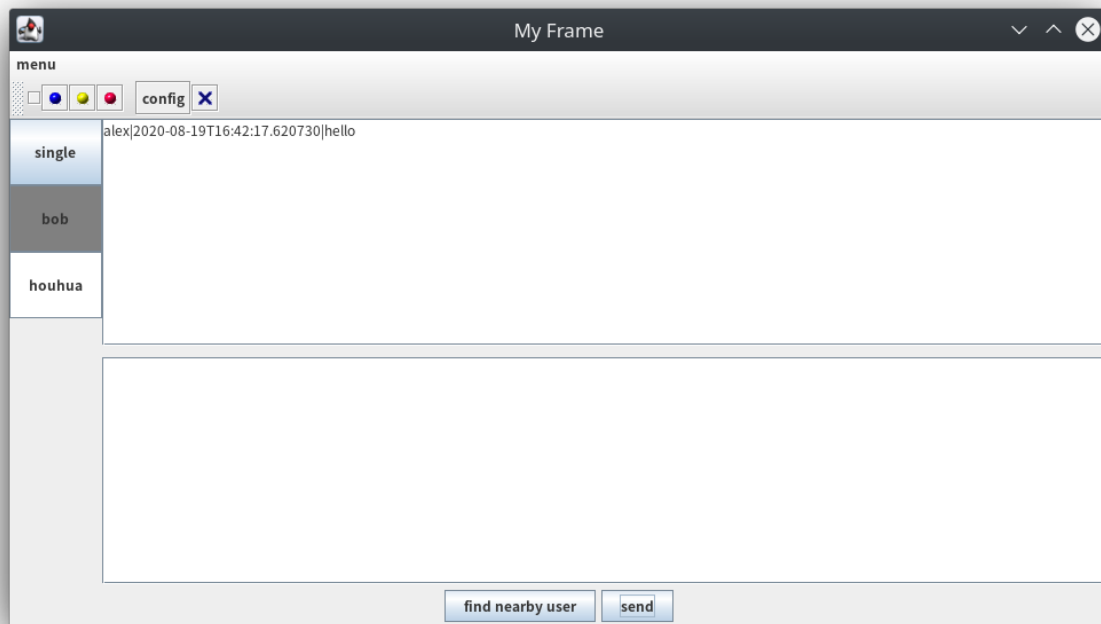
Final Project test

click "find nearby user"

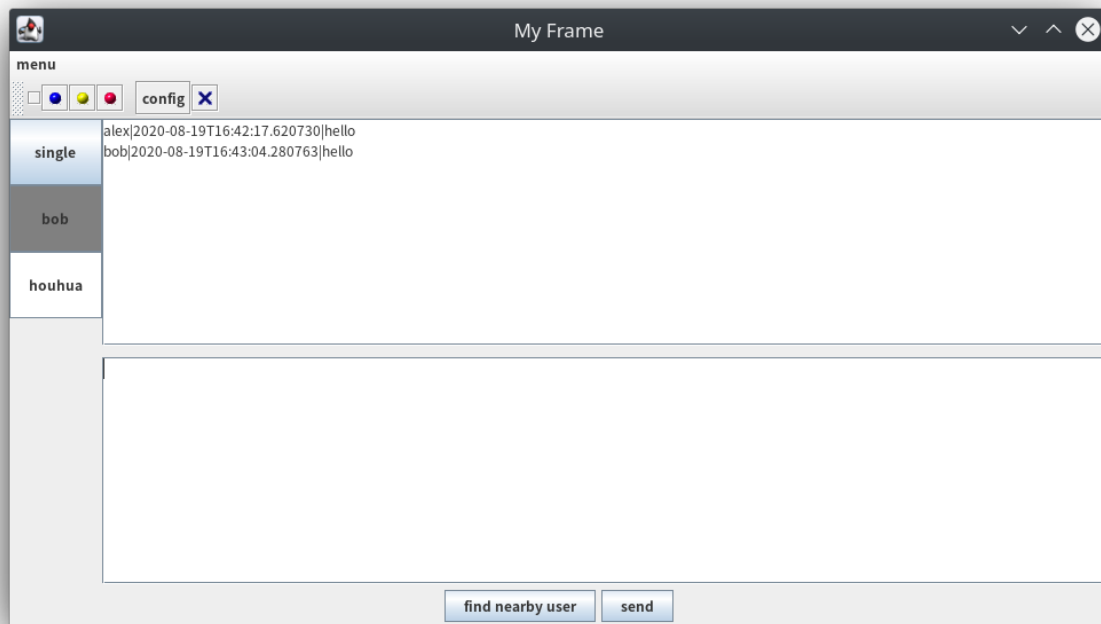


two users are using UDP chat.

click one of the user and send message.



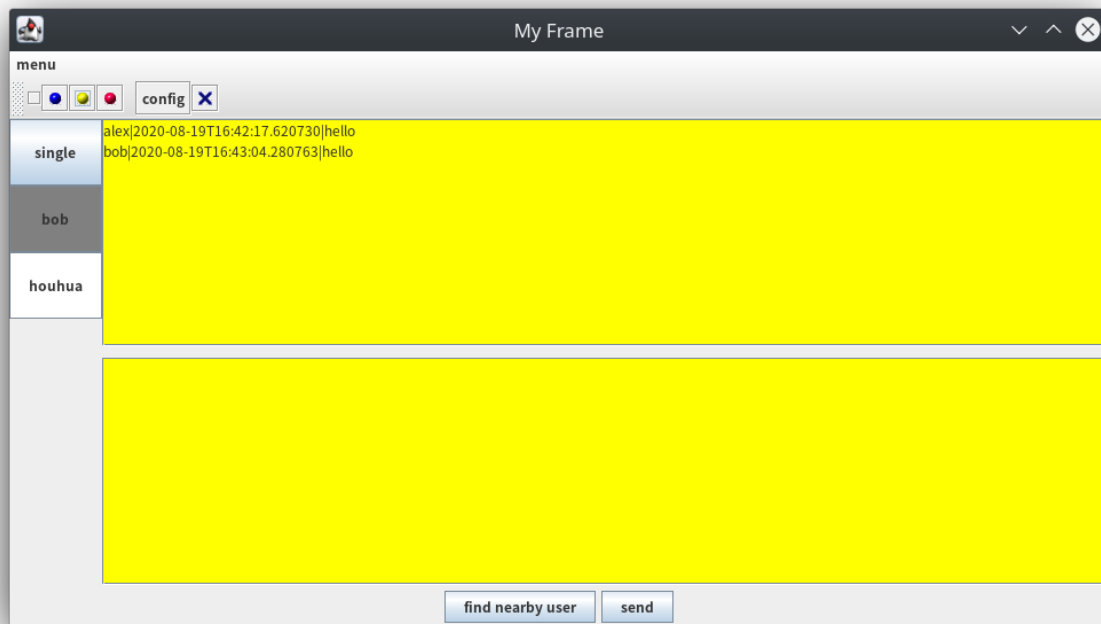
"send" button is functional.



we can also receive message from bob.

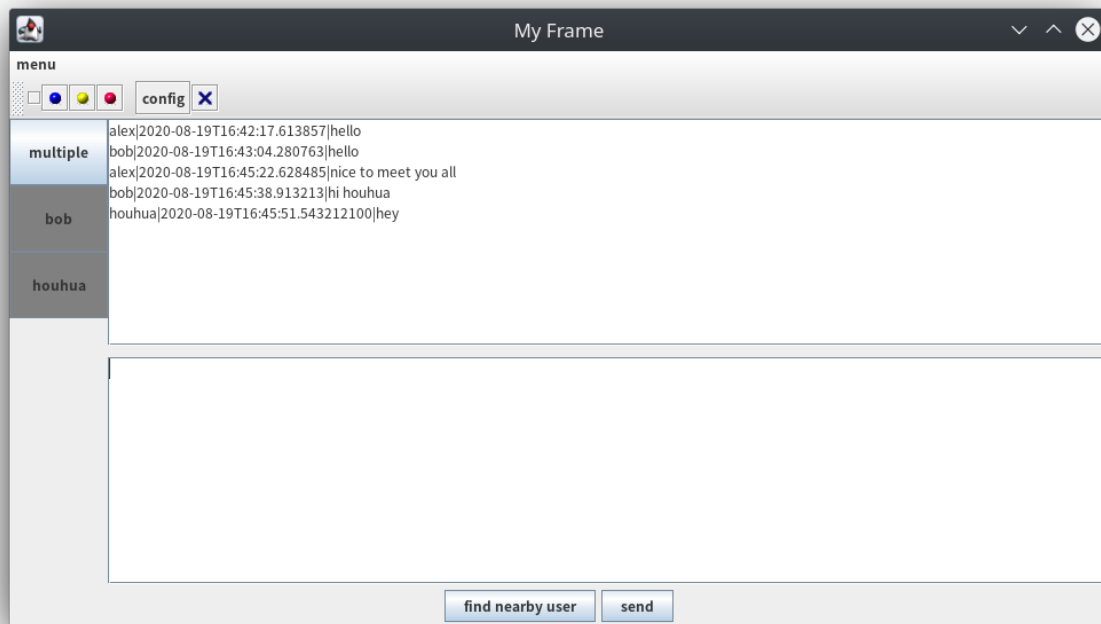
The message correctly display in the text area above.

click the yellow ball



the back ground changed to yelow.

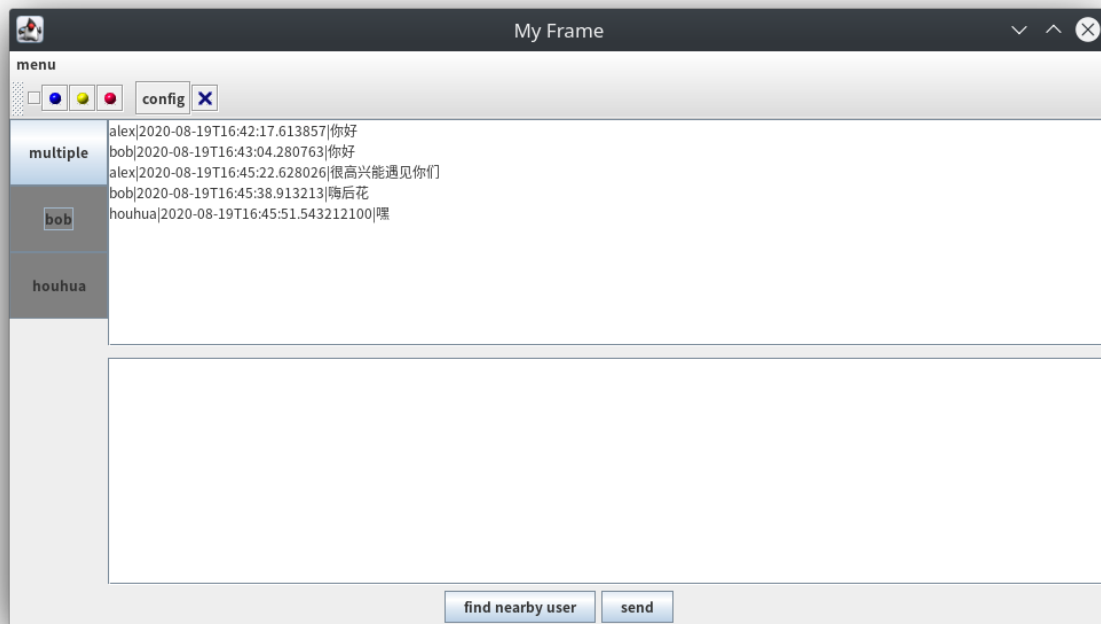
change to multiple mode and select both users.



we can send and receive messages to/from multiple users.

config⇒translation setting⇒y

double click any users to refresh the text area.



translation is functional.

config⇒encryption setting⇒n (turn off the encryption)

Wireshark interface showing network traffic on interface wlo1. The packet list displays several DNS and UDP packets. The selected packet (No. 708) is a UDP packet from 192.168.50.91 to 192.168.50.43, port 8189. The packet details show it is a Standard query response for PTR _companion-link._tcp.local, "QM" question.

No.	Time	Source	Destination	Protocol	Length	Info
668	83.565688314	fe80::43:459d:2ff1::	ff02::fb	MDNS	186	Standard query 0x0000 PTR _companion-link._tcp.local, "QU" qu...
669	83.770808657	192.168.50.53	224.0.0.251	MDNS	166	Standard query 0x0000 PTR _homekit._tcp.local, "QU" question ...
670	83.770870789	fe80::1443:3d81:828...	ff02::fb	MDNS	186	Standard query 0x0000 PTR _homekit._tcp.local, "QU" question ...
708	84.053583333	192.168.50.91	192.168.50.43	UDP	88	8189 -> 8189 Len=46
709	84.053634133	192.168.50.91	192.168.50.99	UDP	88	8189 -> 8189 Len=46
727	84.488510372	192.168.50.99	224.0.0.251	MDNS	572	Standard query response 0x0000 A, cache flush 192.168.50.99 T...
728	84.488557271	fe80::14cf:3c88:de4...	ff02::fb	MDNS	592	Standard query response 0x0000 A, cache flush 192.168.50.99 T...
736	84.590302640	192.168.50.65	224.0.0.251	MDNS	166	Standard query 0x0000 PTR _companion-link._tcp.local, "QM" qu...
737	84.590344637	fe80::43:459d:2ff1::	ff02::fb	MDNS	186	Standard query 0x0000 PTR _companion-link._tcp.local, "QM" qu...
773	85.411419738	192.168.50.99	224.0.0.251	MDNS	424	Standard query 0x0000 PTR _airport._tcp.local, "QM" question ...
774	85.411462643	fe80::14cf:3c88:de4...	ff02::fb	MDNS	444	Standard query 0x0000 PTR _airport._tcp.local, "QM" question ...
835	87.253238793	fe80::14cf:3c88:de4...	ff02::fb	MDNS	592	Standard query response 0x0000 A, cache flush 192.168.50.99 T...
864	87.662644442	192.168.50.65	224.0.0.251	MDNS	166	Standard query 0x0000 PTR _companion-link._tcp.local, "QM" qu...
865	87.663273529	fe80::43:459d:2ff1::	ff02::fb	MDNS	186	Standard query 0x0000 PTR _companion-link._tcp.local, "QM" qu...
866	87.866917586	192.168.50.53	224.0.0.251	MDNS	166	Standard query 0x0000 PTR _homekit._tcp.local, "QM" question ...
867	87.866959205	fe80::1443:3d81:828...	ff02::fb	MDNS	186	Standard query 0x0000 PTR _homekit._tcp.local, "QM" question ...
881	88.174533433	fe80::14cf:3c88:de4...	ff02::fb	MDNS	351	Standard query response 0x0000 SRV, cache flush 0 0 8770 3e6c...
899	88.584625554	192.168.50.244	224.0.0.251	MDNS	348	Standard query response 0x0000 SRV, cache flush 0 0 8770 3e6c...

Frame 708: 88 bytes on wire (704 bits), 88 bytes captured (704 bits) on interface wlo1, id 0
 Ethernet II, Src: IntelCor_5f:e6:46 (7c:2a:31:5f:e6:46), Dst: IntelCor_2a:50:d5 (20:16:b9:2a:50:d5)
 Internet Protocol Version 4, Src: 192.168.50.91, Dst: 192.168.50.43
 User Datagram Protocol, Src Port: 8189, Dst Port: 8189
 Data (46 bytes)

```

0000  20 16 b9 2a 50 d5 7c 2a 31 5f e6 46 08 00 45 00  . .P |* 1 F E
0010  00 4a 88 4e 40 09 40 11 cc 7d c9 a8 32 5b c9 a8  .J.N@ @ . 2[
0020  32 2b 1f fd 1f fd 00 36 e6 1e 6d 65 73 73 61 67  2+ 6 messag
0030  65 7c 61 6c 65 78 7c 32 30 32 30 2d 30 38 2d 31  e|alex|2 020-08-1
0040  39 54 31 36 3a 35 31 3a 33 31 2e 36 36 31 34 38  9T16:51: 31.66148
0050  39 7c 68 65 6c 6c 6f 3f                               9|hello?
  
```

we are sending the raw messages.

turn on the encryption

*wlo1

文件(F) 编辑(E) 视图(V) 跳转(G) 捕获(C) 分析(A) 统计(S) 电话(Y) 无线(W) 工具(T) 帮助(H)

udp

No.	Time	Source	Destination	Protocol	Length	Info
2272	184.133977992	192.168.50.91	192.168.50.1	DNS	88	Standard query 0x9daf A script.google.com OPT
2273	184.133358435	192.168.50.91	192.168.50.1	DNS	88	Standard query 0x1e06 AAAA script.google.com OPT
2274	184.165882336	192.168.50.1	192.168.50.91	DNS	104	Standard query response 0x0daf A script.google.com A 172.217...
2275	184.218781747	192.168.50.1	192.168.50.91	DNS	116	Standard query response 0x1e06 AAAA script.google.com AAAA 26...
2320	185.158883293	192.168.50.91	192.168.50.1	DNS	107	Standard query 0x9e12 A googlehosted.1.googleusercontent.com ...
2321	185.158324297	192.168.50.91	192.168.50.1	DNS	107	Standard query 0x24b3 AAAA googlehosted.1.googleusercontent.c...
2333	185.175801898	192.168.50.1	192.168.50.91	DNS	123	Standard query response 0x9e12 A googlehosted.1.googleusercontent...
2334	185.209867433	192.168.50.1	192.168.50.91	DNS	135	Standard query response 0x24b3 AAAA googlehosted.1.googleuser...
2368	185.965996327	192.168.50.91	192.168.50.43	UDP	170	8189 → 8189 Len=128
2369	185.366245192	192.168.50.91	192.168.50.99	UDP	170	8189 → 8189 Len=128
2536	190.073727299	192.168.50.53	224.0.0.251	MDNS	166	Standard query 0x0000 PTR _homekit._tcp.local, "QU" question ...
2537	190.073787932	fe80::1443:3d81:828...	ff02::fb	MDNS	186	Standard query 0x0000 PTR _homekit._tcp.local, "QU" question ...
2574	191.096124333	192.168.50.53	224.0.0.251	MDNS	166	Standard query 0x0000 PTR _homekit._tcp.local, "QM" question ...
2575	191.096169344	fe80::1443:3d81:828...	ff02::fb	MDNS	186	Standard query 0x0000 PTR _homekit._tcp.local, "QM" question ...
2610	191.916445393	192.168.50.65	224.0.0.251	MDNS	175	Standard query 0x0000 PTR _companion-link._tcp.local, "QM" qu...
2611	191.916479605	fe80::43:459d:2ff1...	ff02::fb	MDNS	195	Standard query 0x0000 PTR _companion-link._tcp.local, "QM" qu...
2626	192.326345279	192.168.50.72	224.0.0.251	MDNS	130	Standard query 0x0000 PTR _companion-link._tcp.local, "QM" qu...
2627	192.326411588	fe80::10d2:b5ba:af8...	ff02::fb	MDNS	150	Standard query 0x0000 PTR _companion-link._tcp.local, "QM" qu...

> Frame 2368: 170 bytes on wire (1360 bits), 170 bytes captured (1360 bits) on interface wlo1, id 0

> Ethernet II, Src: IntelCor_5f:e6:46 (7c:2a:31:5f:e6:46), Dst: IntelCor_2a:50:d5 (20:16:b9:2a:50:d5)

> Internet Protocol Version 4, Src: 192.168.50.91, Dst: 192.168.50.43

> User Datagram Protocol, Src Port: 8189, Dst Port: 8189

> Data (128 bytes)

```

0000  20 16 b9 2a 50 d5 7c 2a 31 5f e6 46 08 00 45 00  ...P[*_L_F_E
0010  00 9c d4 89 49 09 40 11 7f f0 c9 a8 32 5b c9 a8  ...@0...-2[
0020  32 2b 1f fd 1f fd 00 00 e6 70 61 39 64 33 38 35  2+...pa9d385
0030  37 65 61 36 32 38 37 32 62 39 61 31 65 36 31 39  7ea62872 b9a1e619
0040  66 35 62 66 34 65 35 65 66 63 37 31 30 63 33 38  f5bf4e5e fc710c38
0050  61 63 35 34 62 64 66 39 31 36 34 35 32 32 62 39  ac54bdf9 164522b9
0060  65 31 35 36 32 35 62 65 39 30 66 37 30 37 34 33  e15625be 90f70743
0070  36 64 65 31 30 32 34 66 38 31 66 65 37 33 62 31  6de3024f 81fc73b1
0080  33 33 63 66 36 66 64 64 36 65 35 32 38 35 35 31  33cf6fdd 6e528551
0090  65 63 34 38 63 33 62 30 35 38 38 36 37 66 66 39  ec48c3b0 58867ff0
00a0  64 33 33 30 37 39 66 36 32 64                      d33879f6 2d

```

User Datagram Protocol: Protocol

分组: 2716 - 已显示: 277 (10.2%)

配置: Default

the message we send is encrypted.