

KELOMPOK 20

Anggota :

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Screenshot kode program

https://github.com/zahrafayya/Progjar_TM5

Screenshot program

Chat antar client

```
Windows PowerShell
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PS D:\PROGJAR\TMasTMS\Progjar_TM5> cd Challenge_2
PS D:\PROGJAR\TMasTMS\Progjar_TM5\Challenge_2> python server.py
[*] Listening as 0.0.0.0:5002
[+] ('127.0.0.1', 64091) connected.
[+] ('127.0.0.1', 64091) connected.
[+] ('127.0.0.1', 64091) has username Andi
[+] ('127.0.0.1', 64097) connected.
[+] ('127.0.0.1', 64097) connected.
[+] ('127.0.0.1', 64097) has username Nanda

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PS D:\PROGJAR\TMasTMS\Progjar_TM5> cd Challenge_2
PS D:\PROGJAR\TMasTMS\Progjar_TM5\Challenge_2> python client.py
[*] Connecting to 127.0.0.1:5002...
[*] Connected.
Enter your name: Andi

-- Welcome to the program, Andi! --
Please enter commands below to start:
/list - show all online users with their IP and port
/chat - enter the general chatroom
/private <receiver ID> <message> - to send a private message

/chat

-- Welcome to the chatroom! --
Enter q to quit
Halo

[2023-03-07 16:07:01] Andi: Halo

[2023-03-07 16:07:26] Nanda: Hai
Thanks

[2023-03-07 16:07:50] Andi: Thanks

[2023-03-07 16:07:59] Nanda: You're Welcome

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PS D:\PROGJAR\TMasTMS\Progjar_TM5> cd Challenge_2
PS D:\PROGJAR\TMasTMS\Progjar_TM5\Challenge_2> python client.py
[*] Connecting to 127.0.0.1:5002...
[*] Connected.
Enter your name: Nanda

-- Welcome to the program, Nanda! --
Please enter commands below to start:
/list - show all online users with their IP and port
/chat - enter the general chatroom
/private <receiver ID> <message> - to send a private message

/chat

-- Welcome to the chatroom! --
Enter q to quit
Hai

[2023-03-07 16:07:26] Nanda: Hai
Thanks

[2023-03-07 16:07:50] Andi: Thanks
You're Welcome

[2023-03-07 16:07:59] Nanda: You're Welcome
```

Menampilkan list peserta chat lainnya

```
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[+] ('127.0.0.1', 64091) connected.
[+] ('127.0.0.1', 64091) connected.
[+] ('127.0.0.1', 64091) has username Andi
[+] ('127.0.0.1', 64097) connected.
[+] ('127.0.0.1', 64097) connected.
[+] ('127.0.0.1', 64097) has username Nanda

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PS D:\PROGJAR\TMasTMS\Progjar_TM5> cd Challenge_2
PS D:\PROGJAR\TMasTMS\Progjar_TM5\Challenge_2> python client.py
[*] Connecting to 127.0.0.1:5002...
[*] Connected.
Enter your name: Andi

-- Welcome to the program, Andi! --
Please enter commands below to start:
/list - show all online users with their IP and port
/chat - enter the general chatroom
/private <receiver ID> <message> - to send a private message

/list

[+] Online user: 1 Andi

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PS D:\PROGJAR\TMasTMS\Progjar_TM5> cd Challenge_2
PS D:\PROGJAR\TMasTMS\Progjar_TM5\Challenge_2> python client.py
[*] Connecting to 127.0.0.1:5002...
[*] Connected.
Enter your name: Nanda

-- Welcome to the program, Nanda! --
Please enter commands below to start:
/list - show all online users with their IP and port
/chat - enter the general chatroom
/private <receiver ID> <message> - to send a private message

/list

[+] Online user: 2 Nanda
[+] Online user: 1 Andi
```

Mengirim pesan private ke salah satu peserta chat berdasarkan id dengan format /private <ID penerima> <pesan>

<pre>-- Welcome to the program, Nanda! -- Please enter commands below to start: /list - show all online users with their IP and port/c hat - enter the general chatroom /private <receiver ID> <message> - to send a private m essage /list [+] Online user: 2 Nanda [+] Online user: 1 Andi <Private> [2023-03-07 16:10:40] Fia: Halo -- Welcome to the program, Nanda! -- Please enter commands below to start: /list - show all online users with their IP and port /chat - enter the general chatroom /private <receiver ID> <message> - to send a private m essage /private 3 Hai <Private> [2023-03-07 16:11:14] Nanda: Hai []</pre>	<pre>llenge_2> python client.py [*] Connecting to 127.0.0.1:5002... [+] Connected. Enter your name: Fia -- Welcome to the program, Fia! -- Please enter commands below to start: /list - show all online users with their IP and port /chat - enter the general chatroom /private <receiver ID> <message> - to send a private message /private 2 Halo <Private> [2023-03-07 16:10:40] Fia: Halo <Private> [2023-03-07 16:11:14] Nanda: Hai -- Welcome to the program, Fia! -- Please enter commands below to start: /list - show all online users with their IP and port /chat - enter the general chatroom /private <receiver ID> <message> - to send a private message []</pre>	<div>python</div> <div>python</div> <div>python</div> <div>python</div>
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Penjelasan Algoritma:

Pada klien, dibuka thread untuk mendengarkan kepada server dan thread main. Apabila memasukkan command, pesannya akan diteruskan ke server untuk dilihat. Apabila commandnya adalah /list, server akan melakukan iterasi terhadap semua client yang terhubung untuk diambil informasinya dan ditambahkan pada string yang akan dikembalikan lagi ke client. Apabila commandnya adalah /private, dia akan memotong bagian id tujuan dan pesan. Server akan mencari client dengan id yang sama dan mengirimkan pesan ke layar klien pengirim dan penerima saja.