Tugas Multithreaded Server and Protocol

Pemrograman Jaringan

Kelas E

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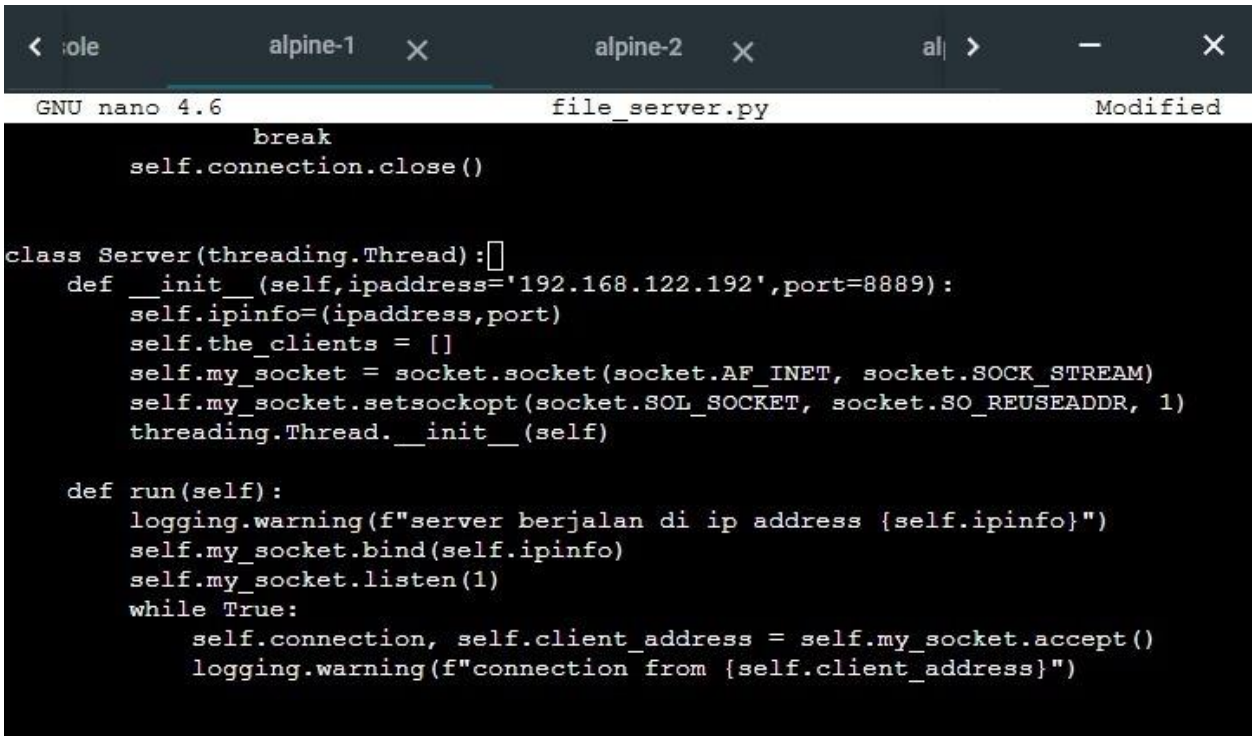
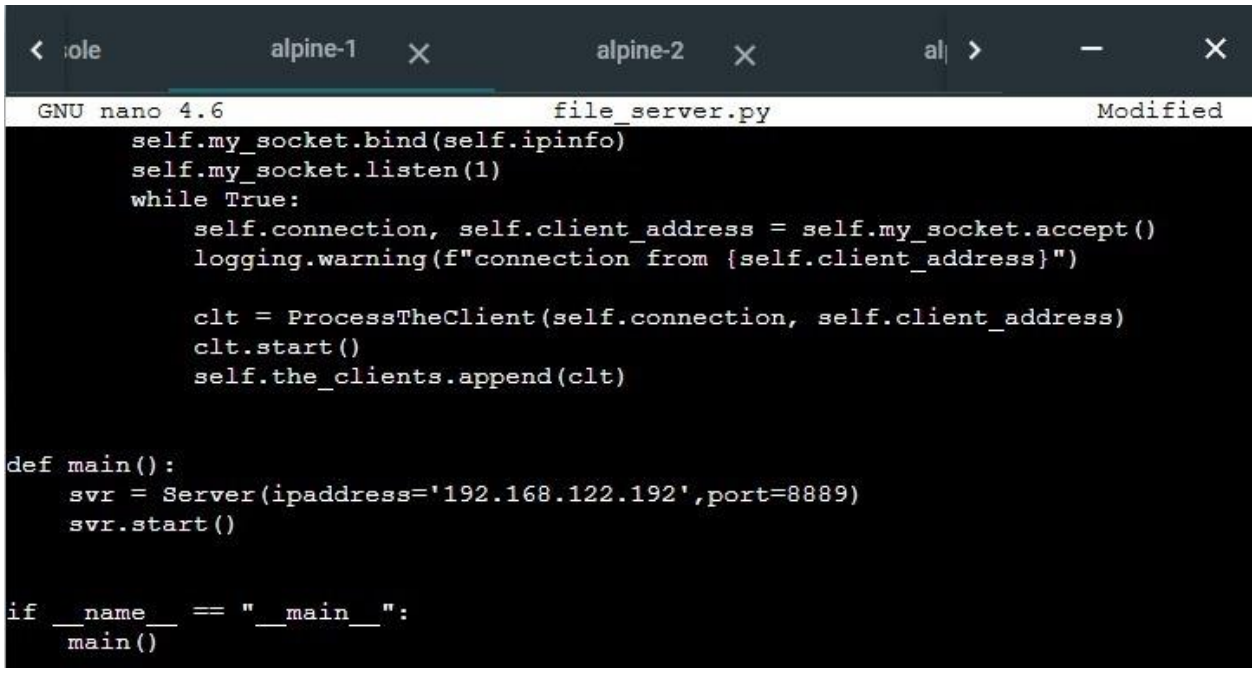
1. Jalankan program server seperti dalam pembahasan
   a. Ganti IP address pada file_serevr.py dengan IP address server (alpine-1)





b. Jalankan file tersebut

```
/home/work/Pemrograman_Jaringan_E/progjar4a # nano file_server.py
/home/work/Pemrograman_Jaringan_E/progjar4a # python3 file_server.py
WARNING:root:server berjalan di ip address ('192.168.122.192', 8889)
```

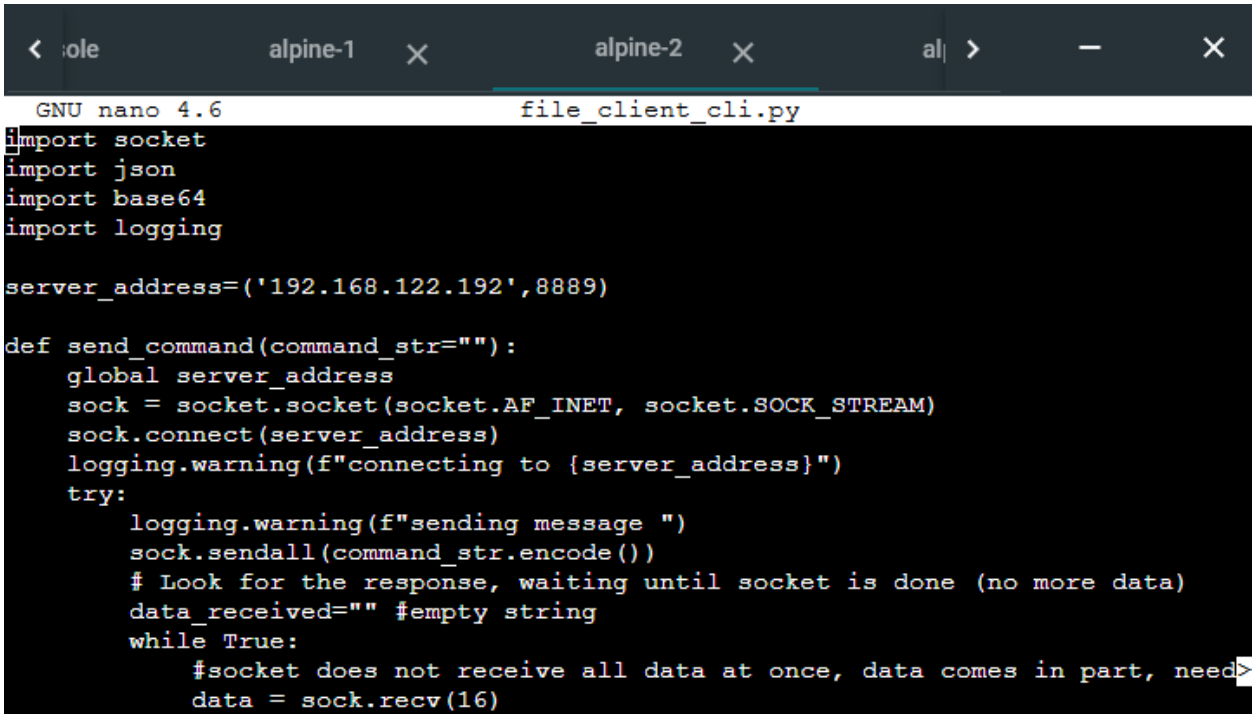
c. Jalankan file_interface.py pada client (alpine-2)

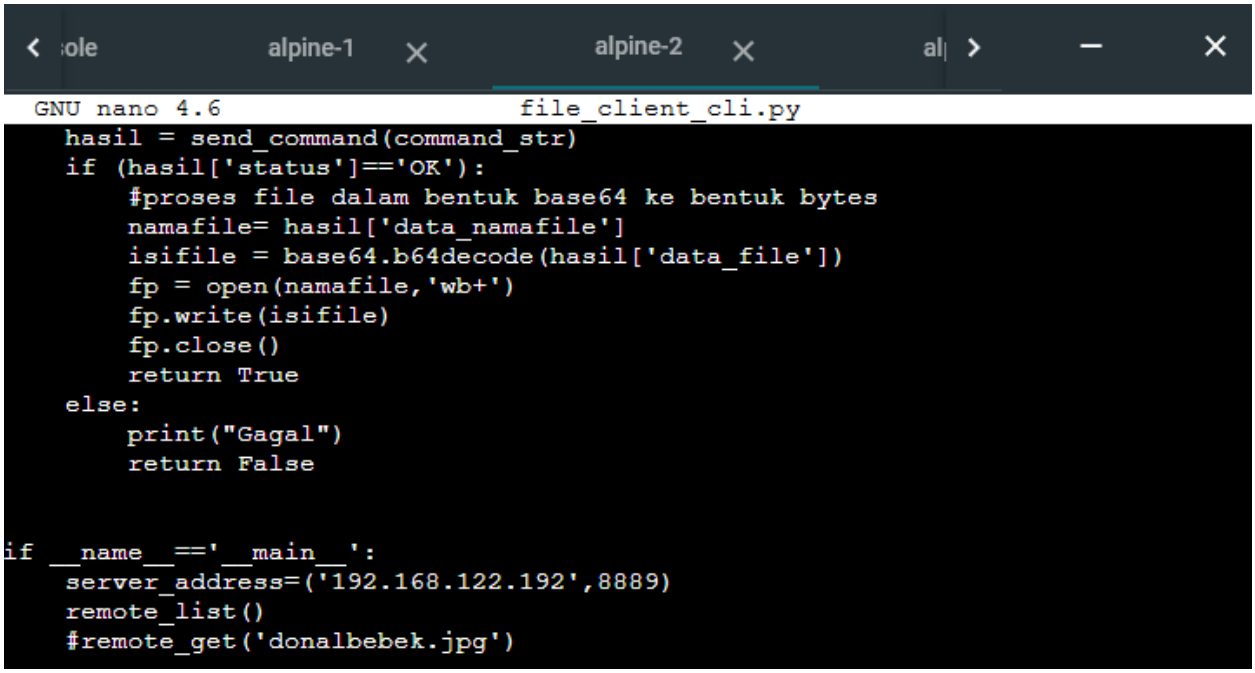
```
/home/work/Pemrograman_Jaringan_E/progjar4a # python3 file_interface.py
{'status': 'OK', 'data': ['pokijan.jpg', 'donalbebek.jpg', 'rfc2616.pdf']}
{'status': 'OK', 'data_namafile': 'pokijan.jpg', 'data_file': '/9j/4AAQSkZJRgABA
QAAAQABAAD/2wCEAAkGBxITEhUSExMVFRUXGBkYFxgYGBgXHRgXFhgYGxgYGhgYHiggGCAlGxcXITElJ
SkrLi4uGiAzODMsNygtLisBCgoKDg0OGxAQGy0mHyYtLS0vLS0tLy0tLS0tLS0tLS0tLS0tLS0tLS0tL
S0tLS0tLS0tLS0tLS0tLS0tLS0tLf/AABEIALwBDAMBEQACEQEDEQH/xAAcAAABBQEBAQAAAAAAAAAAA
AAFAAMEBgcCAQj/xABJEAABAwIEAwQGBwUFBwQDAAABAgMRAAQFEiExBkFREyJhcQcygZGhsRQjQlJyw
dFTYpLh8BUzg7KzJDRDc4KiwhYyl0vEXNaP/xAAaAQACAwEBAAAAAAAAAAAAAAABAgADBAUG/8QAOxEAA
gECBAMFBwIFBAIDAAAAAAECAxEEEiExBUFRE2FxsfAiMoGRochHRQuEUI1Jy8RUzNLIkQwaCkv/aAAwDA
QACEQMRAD8A1Ti7iJNkz2hTmUo5UJ6qI+QGp8usUYq4G7Gd/wDqC8cXXmVdLAOuVKQuDwj+ZqyyK8z/7
avNctw97VTRshczJthit6RBuHJ01J/rr8KV2DmYRbv7r9u4d0o3pdCXZ0Ot7i4U1J7dyee2tBsOo+3dX
M9qsecH5CluHUccurgH+9V8P0pHIbU7bvH/ANor4fpS52FJktp97ms/D9KGdjjqJbdc+82nZnw291TOw5
wLc+8hlDOx+ajRUmRxRF+2iZ2Yjalufe+VTtEynrsXJqcXJqORmRB21EhwqyEnrcXJqOre
d++aTOwZ8Hj0Ms/Dk6r3RVVnYq/qZ8JZ4ZXmEVe8zAXSRHTVGWsSFrTeVqMKdRmMHRIdYpTP1ANvRNB8pdeWz8ZVwR6o08MnTnm0KcJdUTJ2Gap7d9fCgpdebYXGkVjSMXurfQnesC0TyLUkJqOeoovNZcMdXodEkw8l9Xmk5tUVtQpiWdOptNGdMRnLRbW6WBdicTx2HfIU
VhzPPSA8px1DSjIbUS622/W&#x2F;L2UbiEpCDHu
LcnbKPPw50rY1iZb256x4tw...
```

d. Jalankan file_protocol.py pada client (alpine-2)

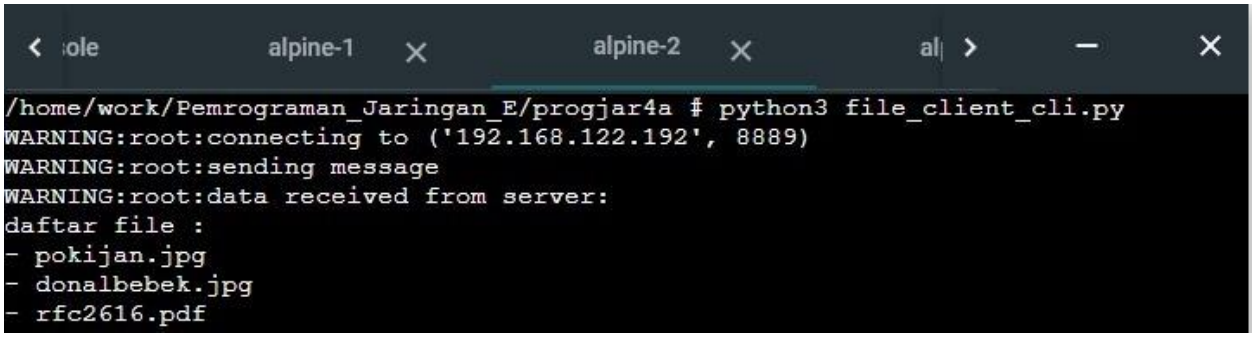
```
/home/work/Pemrograman_Jaringan_E/progjar4a # python3 file_protocol.py
WARNING:root:string diproses: LIST
WARNING:root:memproses request: LIST
{"status": "OK", "data": ["pokijan.jpg", "donalbebek.jpg", "rfc2616.pdf"]}
WARNING:root:string diproses: GET pokijan.jpg
WARNING:root:memproses request: GET
{"status": "OK", "data_namafile": "pokijan.jpg", "data_file": "/9j/4AAQSkZJRgABA
QAAAQABAAD/2wCEAAkGBxITEhUSExMVFRUXGBkYFxgYGBgXHRgXFhgYGxgYGhgYHiggGCAlGxcXITElJ
SkrLi4uGiAzODMsNygtLisBCgoKDg0OGxAQGy0mHyYtLS0vLS0tLy0tLS0tLS0tLS0tLS0tLS0tLS0tL
S0tLS0tLS0tLS0tLS0tLS0tLS0tLf/AABEIALwBDAMBEQACEQEDEQH/xAAcAAABBQEBAQAAAAAAAAAAA
AAFAAMEBgcCAQj/xABJEAABAwIEAwQGBwUFBwQDAAABAgMRAAQFEiExBkFREyJhcQcygZGhsRQjQlJyw
dFTYpLh8BUzg7KzJDRDc4KiwhYyl0vEXNaP/xAAaAQACAwEBAAAAAAAAAAAAAAABAgADBAUG/8QAOxEAA
gECBAMFBwIFBAIDAAAAAAECAxEEEiExBUFRE2FxsfAiMoGRochHRQuEUI1Jy8RUzNLIkQwaCkv/aAAwDA
QACEQMRAD8A1Ti7iJNkz2hTmUo5UJ6qI+QGp8usUYq4G7Gd/wDqC8cXXmVdLAOuVKQuDwj+ZqyyK8z/7
avNctw97VTRshczJthit6RBuHJ01J/rr8KV2DmYRbv7r9u4d0o3pdCXZ0Ot7i4U1J7dyee2tBsOo+3dX
M9qsecH5CluHUccurgH+9V8P0pHIbU7bvH/ANor4fpS52FJktp97ms/D9KGdjjqJbdc+82nZnw291TOw5
wLc+8hlDOx+ajRUmRxRF+2iZ2Yjalufe+VTtEynrsXJqcXJqORmRB21EhwqyEnrcXJqOre
```

e. Ubah IP server_address pada file_client_cli di client (alpine-2) menjadi IP address dari server yang digunakan (alpine-1)



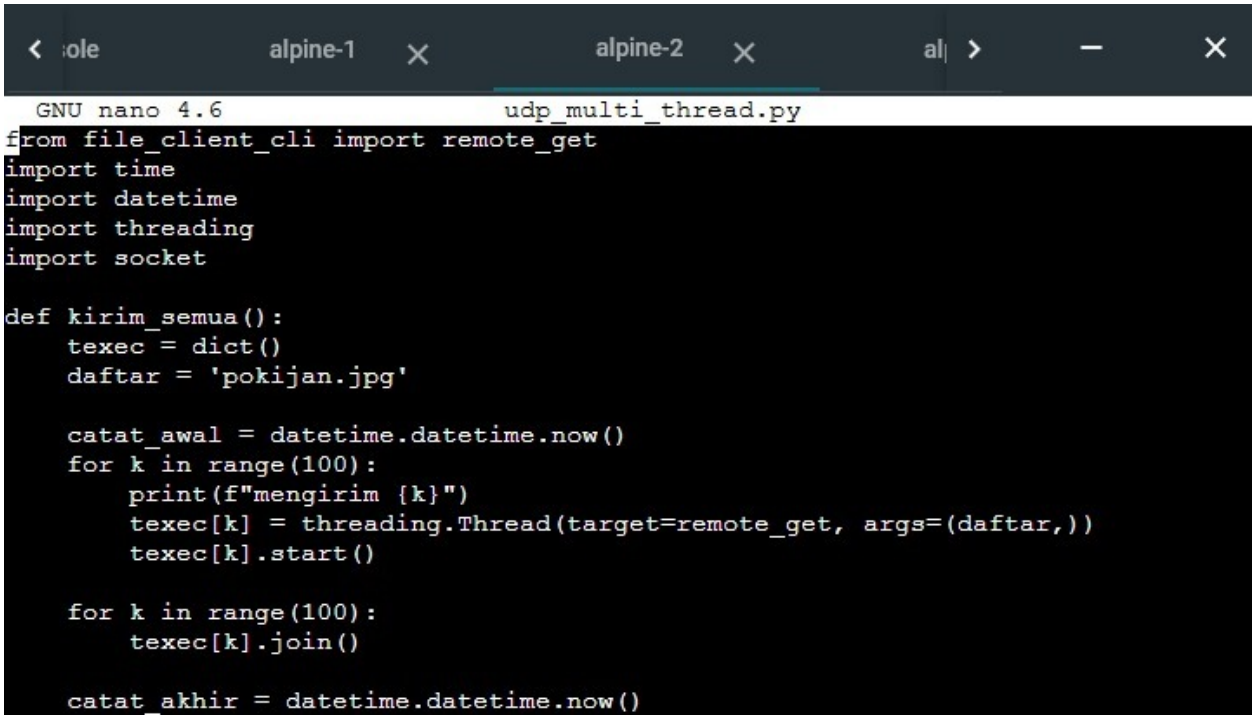


f. Jalankan file_client_cli.py pada client (alpine-2)



2. Buatlah program client yang dapat melakukan 100 request get pada dalam satu saat untuk operasi get file "pokijan.jpg"

a. Buat program dalam file baru pada client (alpine-2) supaya dapat melakukan 100 request get



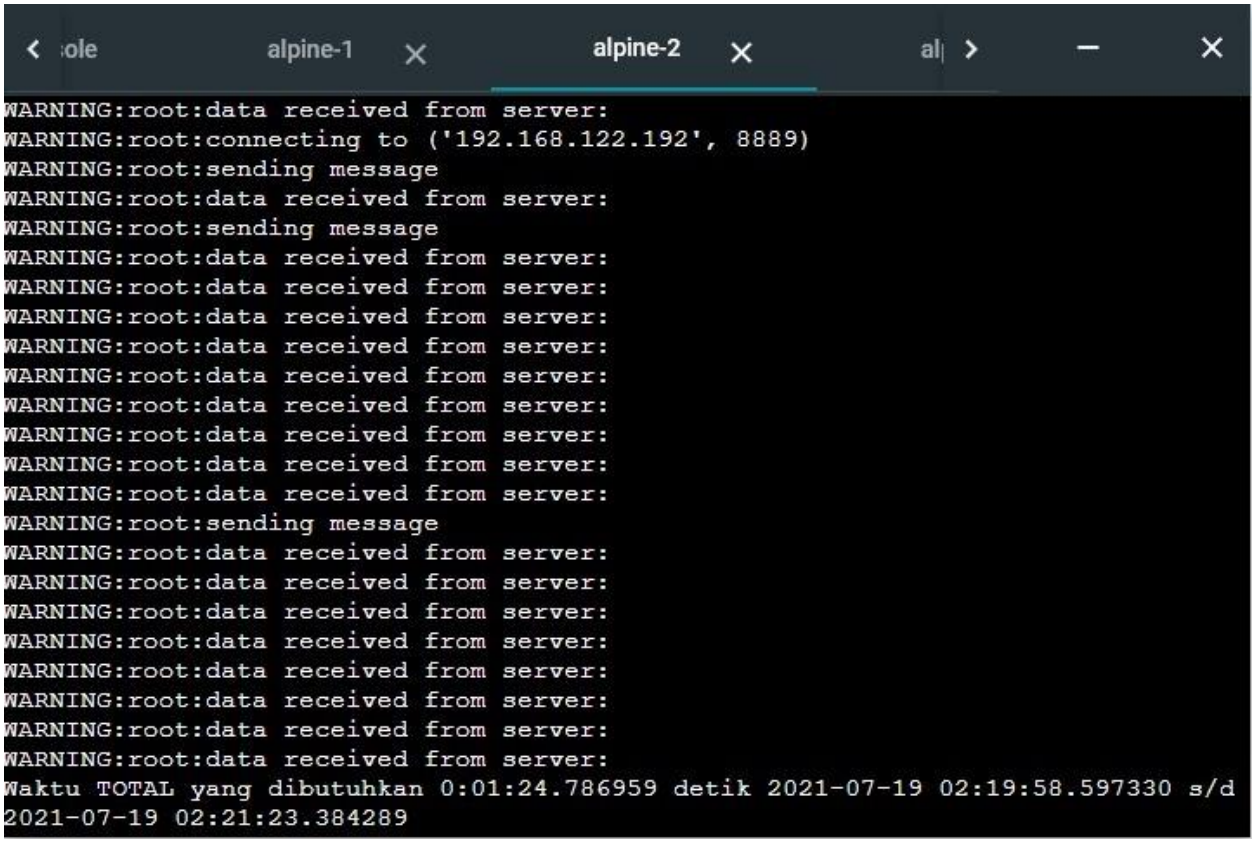
```
 GNU nano 4.6                    udp_multi_thread.py
def kirim_semua():
    texec = dict()
    daftar = 'pokijan.jpg'

    catat_awal = datetime.datetime.now()
    for k in range(100):
        print(f"mengirim {k}")
        texec[k] = threading.Thread(target=remote_get, args=(daftar,))
        texec[k].start()

    for k in range(100):
        texec[k].join()

    catat_akhir = datetime.datetime.now()
    selesai = catat_akhir - catat_awal
    print(f"Waktu TOTAL yang dibutuhkan {selesai} detik {catat_awal} s/d {catat>

if __name__=='__main__':
    kirim_semua()
```

b. Jalankan file_server.py pada server (alpine-1)

```
/home/work/Pemrograman_Jaringan_E/progjar4a # python3 file_server.py
WARNING:root:server berjalan di ip address ('192.168.122.192', 8889)
```

c. Jalankan udp_multi_thread.py pada client (alpine-2)

```
/home/work/Pemrograman_Jaringan_E/progjar4a # python3 udp_multi_thread.py
mengirim 0
mengirim 1
mengirim 2
mengirim 3
mengirim 4
mengirim 5
mengirim 6
mengirim 7
mengirim 8
mengirim 9
mengirim 10
WARNING:root:connecting to ('192.168.122.192', 8889)
WARNING:root:sending message
mengirim 11
```


ole
alpine-1
alpine-2
al
WARNING:root:data received from server:
WARNING:root:connecting to ('192.168.122.192', 8889)
WARNING:root:sending message
WARNING:root:data received from server:
WARNING:root:sending message
WARNING:root:data received from server:
WARNING:root:data received from server:
WARNING:root:data received from server:
WARNING:root:data received from server:
WARNING:root:data received from server:
WARNING:root:data received from server:
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WARNING:root:data received from server:
WARNING:root:data received from server:
WARNING:root:sending message
WARNING:root:data received from server:
WARNING:root:data received from server:
WARNING:root:data received from server:
WARNING:root:data received from server:
WARNING:root:data received from server:
WARNING:root:data received from server:
WARNING:root:data received from server:
WARNING:root:data received from server:
Waktu TOTAL yang dibutuhkan 0:01:24.786959 detik 2021-07-19 02:19:58.597330 s/d
2021-07-19 02:21:23.384289