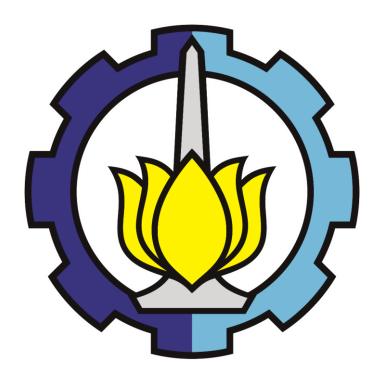
Tugas Implementasi Program Server



OLEH:

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Pemrograman Jaringan - D

DOSEN PENGAMPU:

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S1 TEKNIK INFORMATIKA

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Tugas

- 1. Jalankan program server seperti dalam pembahasan.
- 2. Buatlah program client yang dapat melakukan 100 request get pada dalam satu saat untuk operasi get file "pokijan.jpg".

Jawab

- 1. Set alpine 1 sebagai server dan alpine 2 sebagai client.
- 2. Mengedit file file_server.py pada folder progjar4a dan arahkan "ip_address" ke IP Address Alpine 1 (server) dan ganti port menjadi 7777. Lalu mengedit file file_client_cli dan arahkan ip address ke IP Address Alpine 1 (server) dan buka command pada line 70 "remote_get('donalbebek,jpg)" serta ganti port menjadi 7777. Pada folder progjar4a tambahkan file multi_process.py yang diambil dari progjar3/concurrency serta modifikasi beberapa bagian seperti pada library, urls = 'pokijan.jpg', target=remote_get, dan range sebanyak 100.
- 3. Masukkan semua file pada progjar4a ke repositori github baru, link github = https://github.com/rykz-s/Progjar4a
- 4. Lakukan clone repository github pada repository yang baru dibuat ke alpine 1 dan alpine 2

```
👃 ryukazuas@LAPTOP-ED7BOT6G 🗴 👃 ryukazuas@LAPTOP-ED7BOT6G 🗴 📗 + 🔻
                inet addr:192.168.122.129 Bcast:192.168.122.255 Mask:255.255.255.0
                UP BROADCAST RUNNING MULTICAST MTU:1500 Metric:1
                RX packets:60 errors:0 dropped:0 overruns:0 frame:0
                 TX packets:14 errors:0 dropped:0 overruns:0 carrier:0
                collisions:0 txqueuelen:1000
RX bytes:12248 (11.9 KiB) TX bytes:3732 (3.6 KiB)
                Link encap:Local Loopback
                inet addr:127.0.0.1 Mask:255.0.0.0
inet6 addr: ::1/128 Scope:Host
                UP LOOPBACK RUNNING MTU:65536 Metric:1
                RX packets:0 errors:0 dropped:0 overruns:0 frame:0
TX packets:0 errors:0 dropped:0 overruns:0 carrier:0
collisions:0 txqueuelen:1000
                RX bytes:0 (0.0 B) TX bytes:0 (0.0 B)
/ # mkdir home/work
  # cd home/work/
/# cd home/work/
/home/work # git clone https://github.com/rykz-s/Progjar4a.git
Cloning into 'Progjar4a'...
remote: Enumerating objects: 20, done.
remote: Counting objects: 100% (20/20), done.
remote: Compressing objects: 100% (18/18), done.
remote: Total 20 (delta 4), reused 0 (delta 0), pack-reused 0
Unpacking objects: 100% (20/20), done.
/home/work # ls
 /home/work # cd Progjar4a
 /home/work/Progjar4a # ls
```

5. Jalankan file_server.py pada alpine 1 karena alpine 1 diset sebagai server.

```
keyboardInterrupt:
/home/work/Progjar4a # nano file_server.py
/home/work/Progjar4a # python3 file_server.py
warnIng:root:server berjalan di ip address ('192.168.122.129', 7777)
warnIng:root:connection from ('192.168.122.134', 39072)
warnIng:root:connection from ('192.168.122.134', 39074)
warnIng:root:server berjalan di ip address ('192.168.122.134', 39074)
warnIng:root:connection from ('192.168.122.134', 39076)
warnIng:root:semproses: GET pokijan.jpg
warnIng:root:memproses request: GET
warnIng:root:memproses request: GET
```

6. Menjalankan file_interface.py pada alpine 2(client)

```
README.md file_interface.py file_server.py multi_process.py

/home/work/Progjar4a # python3 file_interface.py
/home/work/Progjar4a # python3 file_interface.py
/fome/work/Progjar4a # python3 file_interface.py
/fome/work/Progjar4a # python3 file_interface.py
/fstatus:: 'Ok', 'data': ['pokijan.jpg', 'donalbebek.jpg', 'rfc2616.pdf']}
/fstatus:: 'Ok', 'data': ['pokijan.jpg', 'data_file': '/pokijan.jpg', 'data_file': 'dokija
```

7. Menjalankan file_protocol.py pada alpine 2 (client)

```
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/home/work/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
gECBAMFBWIFBAIDAAAAAAECAXEEEIEXBUFRE2FXSfAIMoGRocHRQuEUI1Jy8RUZNLIkQwaCkv/aAAwDAQACEQMRAD8A1Ti7iJNkz2hTmUo5UJ6qI+QGp8usU
Yq4G7Gd/wDqC8cXmVdLAOuVKQgDwj+ZqyyK8ZG/7avNctw97VTRshczJthit6RBuHJ0lJ/rr8KV2DmYRbv7rsu4d0o3pdCXZOt7i4UlJ7dyee2LBsOo+3dXJ
M9qsecH5CluHUccurgH+9V8P0pHIbU7bvH/ANor4fpS52FJktp97ms/D9KGdjqJJbdc+8Znw291T0w5RwLc+8fh+lD0xlAfbK+ajRUmRxR6CrqaGZksj2Vda
maXUlonozdTQzS6ktHoLvdTRz56ktEXe60M0upLRPJV1qZpdQ2iIlXWjmllJaJwpS/vH4UM8iZYjalufe+VTtJEyIGYpcvJU0A4RmXB21EHwqyEnrcXJqOre
d++aTowZRhb737RVNnYjTGnrp/k6r3D9KbMK0yC5f3I2dV8D8xRUhXcaVxDdp+2k+aR+UU1wZmQLvjK9QU6t6mPU/nTpJkzuwzb8b3qipJLY70A9nPsjNRsh
VUYKxf0jYi0QAWNROrZ08PWplBMimwf/wDlbEhM/Rzpp9Wf/lrRyIbOyVhHpiuULAummltk94tgoWkdQCohUdNPOg6fQZS6myWd2262h1tQUhaQpKhsUkSDV
VhzPPSA8px1DSjIbUSI09aCJ8YqyJXNgcISdR622/L2UbiEpDBjnm00j3+GmlC5ApbskaCDHu/WkbCS2LcnbKPPW50rY1iZb256x4UtwpE9i00pR0hG21pJM
dRHm7Wq7liiS0MUSaI7ygbkDz0o2A5pHaADsQalhc4OxniG1tEy+8lPhMmfIa1ZGEpbCSqJFftPSjhqs2Za0QYGZMzpuMs+0/SnlQkhe1D2HcVWT6koauG1
VqlM6nSdjS0nJbokqJ8wt2yJjMmekiaWwcyHEkHaoS57FQJ5FQgstSxLnhRQDc5LdCwcwMxdrVr/mfkaaPMsg7slqZqsl0MLt6NywT167WmTEcSk7a0bi0IN
ubOmuVuIDxm0hbYH3hVkWIIoDWbSSv8VPcSwEx+0TmTIMRrG/PXXf21ZFgW5W3WzsNPzpwg99uiE3j0LOqVhiQrUIccSn80bN81GqZ7lsdiRx1ayppUd45hvpoRBAPPUzQTFmAmbYDWCD8qjYhPbtCQIPspWxrBG3t45fzpGxkgg1aigMkTEM6bUtx0h9DNAaw52NJJDJgfiHFl24SENhSlAmVKCEJA3KlH8qenBPVlNWs46
.
RRT7/iu4Ugg39iyojQN5lnzB0+k1ojTguTkc05LczrHrlzN2rl4H1TAyqMyN+6eUGkuW2iCgKi4dbSFhTic2o76td9um9ENkPYYyh4S48ERrmUSSqCPVG501
RuwNtiDctqGYhSRMTAOgkbjSaKChlwmZCyIgp1Mweh3FS9iBbAsOW+TNy2yRGri1ArjkKVysKOtjbfRQGewUgraICjAQSVGN1Knr5VnrrW41J8i+VQWiqBFUIKpYAqAQfim7X4//E0UPDcnxQsJc4U3QsMpDamGlhlIYcZoB0ZCuLfwo3FcSv4vb/WM/j/krIPRlbj6+JHtLTV3wX+X86dvYpUdwBxNbgKSIEQZ956VbTegrWpWLy1TBy7zz+NW3AA7pqCaJDXvQ/ett2BStQSS8sjU6iE6+8Eeyqp7lsdi08VgfVT+9H/bSEkB27eddaDYLEy3t/kluFIINW9K0kS2mYoDpElKKAx2lFADZ
3lqMW5lHpk/s5JdbuHX3bhYlkUmeyHIRISB5lop52lbRGe0VJ3epkzjjIkcoUlA6HOo666mAOe01fqFXsc390zm+qQpIj7SplR+A9lRX5hRGSgEQJBTJOu22
o60QnardxtDbpIKFkwUkE6cj09tS62Bc4tE53UpKlN9oQJOognQk9NqjegS94Fw0u1fU28yl2QT2apBcRzUytOh08jpWSdVSV4v13jKLzaoJ4pgQw95m7aSP
o9wÙyhlIV2WYg5SDtoSNOYo0qnaLK90LVhbY12zwm3S527b5ErÙmMyREp32GlVubasxlCK1SCNKMKgEVEAql7EFUIQr8jM2D978jRiNHcmipuKKgQUUAnCkV
ApjC26VosUgNitoC4yeiifhTRdkySSIlvb957/mfkKZvYoUdWVrjC3hSOgGvx61dS2Kqi1KvcZY2nx5jTTTnVwgKukpPnHwA+dEhpXo3wsOWKFGB33AJO4zn
```

5. Menjalankan file_client_cli.py pada alpine 2(client) maka akan muncul seperti berikut ini

```
👠 ryukazuas@LAPTOP-ED7BOT6G 🗴 🍶 ryukazuas@LAPTOP-ED7BOT6G 🗴 🍶 ryukazuas@LAPTOP-ED7BOT6G ×
Um/ZYGxjBHVMKRlPqq18Y8/KtNLGUot04lPhU3JK5qHDdq43asoI9VtA9yRprXWVTMroqnSUZNXKl6c0HHXUMXSJKWcyXgPuKIIX1gEGfxTsDV8WZmZhb3Wm
h0qPUqHL7FQ2AtRMbaddT+VZKuHlN6CuDlseYLiyXrxsonuocBkRvl/SjToSpwd+dhoRcU7l5t76q3EZMJMXlV0IyYTs7wHQqjxP8qTK0pHd+00SMqsjg9RU
SAeikyMyTzEjwIIBpJQjJWmrrlsCUVNWYDu0KPoxAu2XGh+0Q00aOu+cCUzPMCs74Y5a0pJ92z9fEodJrYkMekGyCF0JflIEnuqn3EVRLhGJ5L6othKcQXfe
lft05atmdZccAATtqEifeSOWhq+nwPnXenRfk30JKTs/l+4MRflSgtxzOs6q72g/Xzq2cIR0hGyPYYGmlB3km+7bwQUwrHG7dSn3cwQEK2E7EHbySazV6Eq6
UI9VuZeOYWVXC2h+l5n4J0/mQuLeOrS7ZQw0XM5eZUJSE6BYPWrsHwuthqjqStbLLn3HkMEv/Ip/wB0fNArHQ2plQcIk+prrmB0j8604RSz6Ht+KzjGg4t9C
XWDXE5buhm4BHdygGRmQD3SnNEx8qmPwWdXicLtY47Ddk9Jrb138+8u2J8eWCUlDucBQgpKRqDodM22tY1wmvvCyfieftkL03KRw36QxavrtipS7LMezUofW
InvAGTqJMVvxeAlXo2dlPS/Q01W5wzWJvHHH1o/ZustqczLyAHLoClxCtTOmiTvWDAcIxFDExqTtZX59zRkUWmdcM8TXLrirp1aVqKcmUEAKCepT6vPWNCTv
sduNw9CS7J+PgdzDcNniaDnt08V+SxD0hWSUgurU0r7q0k/FEgjxrlR4RWteFpd6f5OPWw1WjLJUi0+88f9IVplIbUVrM5RqgFXISoTv0B3FaaPCKv67RRWo
N6FTfeU+ov3BBUdkjUR0gbDoD4zW+UoUoklR2XPqen4Vwtr+ZWXgn5sPt8R2to0lJzzGchKOpid/AD2VgqYCriJZ1b4s5PF6c3iG3a3Jdy/IEv8XReXCXUJO
RPHdzJjvc5j70/9grdQwzw1BxdryfL16uNwiiu2zy5a/HkQ8TxdcDlQ2patpTJA36U8aN1rojvzxlnljqDmGlylxSVFQIIEEBOx+FNKWmWK0KFTu3Os1qWlX
FSZACHSQJICNCRqYPOsiwFXdWseTq4eUJukd0iq2jxTdm5DbwZClEdxWYZkkER5n4Cui4ylS7N+8aXSk6Kk/D6kjGuKGXG3EJKgrTQgDZQ00um0VXQws4TUm
ZYU2ncqjuIL0IV4bzv47Ct9i90wRw7GHWgJXovXVwo5Ax46Vnr4aNRd5Z29RbMmYbilxf0i0YWorWDqSQkAAySd4Anas6cBCLu0i2OOrp7m94LZrYZQ044px
SZlcJTm10sJECtdlyKJTcndh6KgoCc4Mw5SipVmxJ1JyAT7BAo3YLI6Twbh42tGf4RQJlQ6hh0xGotWf4RUJlR7/wClbKZ+joHlIHuBihlRMqPWOGbRBJDKd
TOSqjyBOlDJHoTKiUMItx/wW/4B+lTJHoSx2MNZH/Cb/hFTJHoE7Fk1+zR/CKGSPQhHXglqre3ZPm2g/lTWSIQn+Dc0X61lbn/CQPkKa7Iejg/DwABZ24A2h
pA+MUrSe5ZGrOHutr4j6OHLMbWzPX1E+fSk7KHRF/8AHYnbtJfNkkYWx+xa/gT+lHs49EVvFVn+uXzYjhVvIPYtSNjkTI9sUySWxXKpKTvJtjjlm0oyptBPU
pBPvIo2Fuz02jf3EfwihlXQftan9T+Z4bNv9mj+EfpUSSFc5S3bOhboAgITH5BRBc6DSfuj3ChYmZ9RFlP3R7hRI23uehAHIe6oA9qEPahBVCCqE0VD+pNQg
 oqEPZqEI93ZNOCHG0LH76Qr5ioQr17wHhbh71kxz9VOTcifUijmZAO/6OcLgf7IgTI9ZZ08JUY9lHMyBfhzhWytglxi3bbXEZwJVB3GYyr40GyB9xAoEP/Z
/home/work/Progjar4a # python3 file_client_cli.py
WARNING:root:connecting to ('192.168.122.19', 6666)
WARNING:root:sending message
WARNING:root:data received from server:
daftar file :
- pokijan.jpg
  donalbebek.jpg

    rfc2616.pdf

WARNING:root:connecting to ('192.168.122.19', 6666)
WARNING:root:sending message
WARNING:root:data received from server:
/home/work/Progjar4a #
```

6. Lakukan command ls pada direktori Progjar4a maka file donalbebek.jpg akan muncul

```
/home/work/Progjar4a # ls
PROTOKOL.txt pvcache file_client_cli.py file_protocol.py files
README.md donalbebek.jpg file_interface.py file_server.py multi_process.py
/home/work/Progjar4a # |
```

7. Untuk melakukan 100 request get maka jalankan multi_process.py pada alpine 2 (client) maka akan muncul seperti berikut pada alpine 2(client)

```
🉏 ryukazuas@LAPTOP-ED7BOT6G 🗴 🉏 ryukazuas@LAPTOP-ED7BOT6G 🗵
/home/work/Progjar4a # nano file_client_cli.py
/home/work/Progjar4a # python3 multi_process.py
mendownload GET [0]
mendownload GET [1]
mendownload GET [2]
mendownload GET [3]
mendownload GET [4]
WARNING:root:connecting to ('192.168.122.129', 7777)
WARNING:root:sending message
mendownload GET [5]
mendownload GET [6]
mendownload GET [7]
WARNING:root:connecting to ('192.168.122.129', 7777)
WARNING:root:connecting to ('192.168.122.129', 7777)
WARNING:root:sending message
mendownload GET [8]
mendownload GET [9]
WARNING:root:connecting to ('192.168.122.129', 7777)
WARNING:root:sending message
WARNING:root:data received from server:
WARNING:root:connecting to ('192.168.122.129', 7777)
WARNING:root:sending message
WARNING:root:connecting to ('192.168.122.129', 7777)
WARNING:root:sending message
WARNING:root:data received from server:
WARNING:root:connecting to ('192.168.122.129', 7777)
WARNING:root:sending message
WARNING:root:sending message
mendownload GET [10]
mendownload GET [11]
```

```
🍶 ryukazuas@LAPTOP-ED7BOT6G 🗴 🍶 ryukazuas@LAPTOP-ED7BOT6G 🗵
WARNING:root:data received from server:
WARNING:root:data received from server:
WARNING:root:connecting to ('192.168.122.129', 7777)
WARNING:root:connecting to ('192.168.122.129', 7777)
WARNING:root:sending message
WARNING:root:data received from server:
WARNING:root:data received from server:
WARNING:root:data received from server:
WARNING:root:connecting to ('192.168.122.129', 7777)
WARNING:root:sending message
mendownload [98]
mendownload [99]
WARNING:root:data received from server:
WARNING:root:connecting to ('192.168.122.129', 7777)
WARNING:root:sending message
WARNING:root:data received from server:
WARNING:root:data received from server:
WARNING:root:data received from server:
WARNING:root:connecting to ('192.168.122.129', 7777)
WARNING:root:sending message
WARNING:root:data received from server:
WARNING:root:data received from server:
WARNING:root:connecting to ('192.168.122.129', 7777)
WARNING:root:sending message
WARNING:root:sending message
WARNING:root:data received from server: WARNING:root:data received from server:
WARNING:root:data received from server
Waktu TOTAL yang dibutuhkan 0:00:02.269625 detik 2021-07-02 06:48:03.244668 s/d 2021-07-02 06:48:05.514293
/home/work/Progjar4a #
```

8. Lakukan command ls pada direktori Progjar4a maka file pokijan.jpg telah ada pada direktori

```
/home/work/Progjar4a # ls
PROTOKOL.txt __pycache__ file_interface.py file_server.py multi_process.py
README.md file_client_cli.py file_protocol.py files pokijan.jpg
```

9. Pada alpine 1 (server) akan terlihat seperti berikut

```
🌡 ryukazuas@LAPTOP-ED7BOT6G 🗴 🍶 ryukazuas@LAPTOP-ED7BOT6G 🗴
WARNING:root:string diproses: GET pokijan.jpg
WARNING:root:memproses request: GET
WARNING:root:connection from ('192.168.122.134', 39266)
WARNING:root:connection from ('192.168.122.134', 39268)
WARNING:root:string diproses: GET pokijan.jpg
WARNING:root:memproses request: GET
WARNING:root:string diproses: GET pokijan.jpg
WARNING:root:memproses request: GET
WARNING:root:connection from ('192.168.122.134', 39270)
WARNING:root:string diproses: GET pokijan.jpg
WARNING:root:memproses request: GET
WARNING:root:string diproses: GET pokijan.jpg
WARNING:root:memproses request: GET
WARNING:root:string diproses: GET pokijan.jpg
WARNING:root:memproses request: GET
```