

Praktikum Algoritma dan Pemrograman

Modul 10

Kegiatan 1. Data diri dari server

```
# modul 10-1 serv.py - H:\vigooo\modul 10-1 serv.py (2.7.14)
File Edit Format Run Options Window Help
# nama berkas: p_topser2.py
# TCP Server untuk client p_topcli2.py
import socket
s=socket.socket(socket.AF_INET, socket.SOCK_STREAM)
s.bind(('', 5003))
s.listen(3)
print "Server penjawab otomatis sudah siap."
data = ''
kamus={'nama': 'Alvin Vigo Pratama',
       'NIM': 'L200190226',
       'angkatan': "Angkatan '19"}
while data.lower() != 'keluar':
    komm, addr=s.accept()
    while data.lower() != 'keluar':
        data=komm.recv(1024)
        if data.lower()=='keluar':
            s.close()
            break
        print 'Pertanyaan:', data
        if kamus.has_key(data):
            komm.send(kamus[data])
        else:
            komm.send('Maaf, perintah tidak dimengerti')
```

```
# modul 10-1 cli.py - H:\vigooo\modul 10-1 cli.py (2.7.14)
File Edit Format Run Options Window Help
# nama berkas: p_topcli2.py
# Client TCP untuk server p_topser2.py
import socket

hostname='localhost'
pesan=''
s=socket.socket(socket.AF_INET, socket.SOCK_STREAM)
s.connect((hostname, 5003))
print "Mesin penjawab otomatis sudah siap"
while pesan.lower() != 'keluar':
    pesan=raw_input('Pertanyaan:')
    s.send(pesan)
    if pesan.lower() != 'keluar':
        response=s.recv(1024)
        print 'Jawaban:', response
    elif pesan.lower()=='keluar':
        print 'siap!!'
s.close()
```

```
Python 2.7.14 Shell
File Edit Shell Debug Options Window Help
Python 2.7.14 (v2.7.14:84471935ed, Sep 16 2017, 20:25:58) [MSC v.1500 64 bit (AMD
64)] on win32
Type "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: H:\vigooo\modul 10-1 serv.py =====
Server penjawab otomatis sudah siap.
Pertanyaan: nama
Pertanyaan: NIM
Pertanyaan: angkatan
Pertanyaan: asdalfk
>>>
```

```
Python 2.7.14 Shell
File Edit Shell Debug Options Window Help
Python 2.7.14 (v2.7.14:84471935ed, Sep 16 2017, 20:25:58) [MSC v.1500 64 bit (AMD
64)] on win32
Type "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: H:\vigooo\modul 10-1 cli.py =====
Mesin penjawab otomatis sudah siap
Pertanyaan:nama
Jawaban: Alvin Vigo Pratama
Pertanyaan:NIM
Jawaban: L200190226
Pertanyaan:angkatan
Jawaban: Angkatan '19
Pertanyaan:asdalfk
Jawaban: Maaf, perintah tidak dimengerti
Pertanyaan:keluar
siap!!
>>>
```

Kegiatan 2. Informasi tentang server

The image shows a Python socket server and client interaction. The top row contains two code editors. The left editor, titled 'modul 10-2 serv.py', contains the server code. The right editor, titled 'modul 10-2 cli.py', contains the client code. The bottom row contains two terminal windows. The left terminal, titled 'Python 2.7.14 Shell', shows the server's output. The right terminal, titled 'Python 2.7.14 Shell', shows the client's output.

```
modul 10-2 serv.py - H:\vigooo\modul 10-2 serv.py (2.7.14)
File Edit Format Run Options Window Help
import socket
import platform

s=socket.socket(socket.AF_INET, socket.SOCK_STREAM)
s.bind(("", 543))
s.listen(5)
print "Program komunikasi tentang server"
perintah=""

while perintah.lower() != "quit":
    komm, addr=s.accept()
    while perintah.lower()!="quit":
        perintah=komm.recv(1024)
        if perintah.lower()=="quit":
            s.close()
            break
        print "Command:",perintah
        if perintah.lower() == 'machine':
            respon=platform.machine()
            komm.send(respon)
        elif perintah.lower() == 'release':
            respon=platform.release()
            komm.send(respon)
        elif perintah.lower() == 'system':
            respon=platform.system()
            komm.send(respon)
        elif perintah.lower() == 'version':
            respon=platform.version()
            komm.send(respon)
        elif perintah.lower() == 'node':
            respon=platform.node()
            komm.send(respon)
        else:
            print("unknown command")

modul 10-2 cli.py - H:\vigooo\modul 10-2 cli.py (2.7.14)
File Edit Format Run Options Window Help
import socket

hostname='localhost'
respon=""
s=socket.socket(socket.AF_INET, socket.SOCK_STREAM)
s.connect((hostname, 543))
print "Program komunikasi tentang server"
while respon.lower() != 'quit':
    respon=raw_input('Command:')
    s.send(respon)
    if respon.lower() != 'quit':
        response=s.recv(1024)
        print 'Response:', response

s.close()

Python 2.7.14 Shell
File Edit Shell Debug Options Window Help
Python 2.7.14 (v2.7.14:84471935ed, Sep 16 2017, 20:25:58) [MSC v.1500 64 bit (AMD
64)] on win32
Type "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: H:\vigooo\modul 10-2 serv.py =====
Program komunikasi tentang server
Command: machine
Command: system
Command: release
Command: version
Command: node
>>>

Python 2.7.14 Shell
File Edit Shell Debug Options Window Help
Python 2.7.14 (v2.7.14:84471935ed, Sep 16 2017, 20:25:58) [MSC v.1500 64 bit (AMD
64)] on win32
Type "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: H:\vigooo\modul 10-2 cli.py =====
Program komunikasi tentang server
Command:machine
Response: AMD64
Command:system
Response: Windows
Command:release
Response: 10
Command:version
Response: 10.0.17134
Command:node
Response: LAPTOP-BOTRFTUE
Command:quit
>>>
```

Kegiatan 3. Menghitung luas bangun geometri

```
kegiatan3server.py - F:\Kuliah\Praktikum Algoritma\Python\Modul 10\kegiatan3server.py (2.7.14)
File Edit Format Run Options Window Help
import socket
s = socket.socket(socket.AF_INET, socket.SOCK_STREAM)
s.bind(('', 50002))
s.listen(5)
print "Server Siap"
perintah = ''
a=0
t=0
while perintah != 'keluar':
    komm, addr = s.accept()
    while perintah != 'keluar':
        item = komm.recv(1024).lower().split(" ")
        perintah = item[0]
        if perintah == 'keluar':
            komm.send('done')
            s.close()
            break
        print "pesan:",perintah
        if len(item)==2:
            if perintah == 'alas':
                a=int(item[1])
                komm.send('alas disimpan')
            elif perintah == 'tinggi':
                t=int(item[1])
                komm.send('tinggi disimpan')
            else:
                komm.send('Pesan tidak diketahui')
        elif perintah == 'hitung':
            L=float(a*t)
            response = 'Luas jajar genjang dengan alas {} tinggi {} adalah {}'.format(a,t,L)
            komm.send(response)
        else:
            komm.send('Pesan tidak diketahui')
```

```
kegiatan3client.py - F:\Kuliah\Praktikum Algoritma\Python\Modul 10\kegiatan3client.py (2.7.14)
File Edit Format Run Options Window Help
import socket
hostname='localhost'
pesan = ''
s = socket.socket(socket.AF_INET, socket.SOCK_STREAM)
s.connect((hostname, 50002))
print "Menghitung Luas Jajaran Genjang"
while pesan.lower() != 'keluar':
    pesan = raw_input("pesan:")
    s.send(pesan)
    if pesan.lower() == 'keluar':
        response = s.recv(1024)
        print "Response:-"
        s.close()
        break
    elif pesan.lower() != 'keluar':
        response = s.recv(1024)
        print "Response:",response
s.close()
```

```
Python 2.7.14 Shell
File Edit Shell Debug Options Window Help
Python 2.7.14 (v2.7.14:84471935ed, Sep 16 2017, 20:25:58) [MSC v.1500 64 bit (AMD64)] on win32
Type "copyright", "credits" or "license()" for more information.
>>>
== RESTART: F:\Kuliah\Praktikum Algoritma\Python\Modul 10\kegiatan3server.py ==
Server Siap
pesan: alas
pesan: tinggi
pesan: hitung
>>>
```

```
Python 2.7.14 Shell
File Edit Shell Debug Options Window Help
Python 2.7.14 (v2.7.14:84471935ed, Sep 16 2017, 20:25:58) [MSC v.1500 64 bit (AMD64)] on win32
Type "copyright", "credits" or "license()" for more information.
>>>
== RESTART: F:\Kuliah\Praktikum Algoritma\Python\Modul 10\kegiatan3client.py ==
Menghitung Luas Jajaran Genjang
pesan:alas=5
Response: alas disimpan
pesan:tinggi=6
Response: tinggi disimpan
pesan:hitung
Response: Luas jajar genjang dengan alas 5 tinggi 6 adalah 30.0
pesan:keluar
Response:-
>>>
```

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