

Praktikum Algoritma dan Pemrograman modul 10

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Kegiatan 1

The screenshot displays two Python IDE windows and a terminal window. The left IDE window shows the code for a server script named '1.A.py'. It uses the 'socket' module to listen on port 50001 and handle incoming connections. The server has a predefined dictionary 'kamus' with personal information and a loop that processes incoming data, sending responses or error messages. The right IDE window shows the code for a client script named '1.B.py'. It connects to the server at 'localhost:50001' and has a loop to send commands and receive responses. The terminal window at the bottom shows the execution of these scripts, with the server outputting the user's information and the client sending commands like 'Nama', 'Nim', 'Angkatan', and 'Keluar'.

```
1.A.py - D:\Modul 10 & 11\1.A.py (2.7.17)
import socket
s=socket.socket(socket.AF_INET,socket.SOCK_STREAM)
s.bind(('',50001))
s.listen(5)
print 'Program Komunikasi Tentang Data Diri'
data = ''
kamus = {'Nama':'Asyam Daffa Tsaqif', 'Nim':'L200190227', 'Angkatan':'2019', 'Keluar':'Siap!'}
while data.lower() != 'Keluar':
    kmm,addr = s.accept()
    while data.lower() != 'Keluar':
        data = kmm.recv(1024)
        print 'perintah:',data
        if kamus.has_key(data):
            kmm.send(kamus[data])
        else:
            kmm.send('Maaf,Perintah tidak dimengerti')
```

```
1.B.py - D:\Modul 10 & 11\1.B.py (2.7.17)
import socket
hostname = 'localhost'
pesan = ''
s=socket.socket(socket.AF_INET,socket.SOCK_STREAM)
s.connect((hostname,50001))
print 'Program Komunikasi Tentang Data Diri'
while pesan.lower() != 'q':
    pesan=raw_input('perintah: ')
    s.send(pesan)
    if pesan.lower() == 'keluar':
        response=s.recv(1024)
        print 'jawab: ',response
        s.close()
        break
    elif pesan.lower() != 'keluar':
        response=s.recv(1024)
        print 'jawab:',response
s.close()
```

```
Python 2.7.17 Shell
Python 2.7.17 (v2.7.17:c2f86d86e6, Oct 19 2019, 21:01:17) [MSC v.1500 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: D:\Modul 10 & 11\1.B.py =====
Program Komunikasi Tentang Data Diri
perintah: Nama
jawab Asyam Daffa Tsaqif
perintah: Nim
jawab L200190227
perintah: Angkatan
jawab 2019
perintah: Keluar
jawab: Siap!
```

Kegiatan 2

The screenshot displays three Python IDE windows and a terminal window. The left IDE window shows the code for a server script named '02.b.py'. It uses the 'socket' module to listen on port 50006 and handle incoming connections. The server has a predefined dictionary 'kamus' with system information and a loop that processes incoming data, sending responses or error messages. The middle IDE window shows the code for a client script named '02.a.py'. It connects to the server at 'localhost:50006' and has a loop to send commands and receive responses. The right IDE window shows the code for a client script named '02.c.py'. It connects to the server at 'localhost:50006' and has a loop to send commands and receive responses. The terminal window at the bottom shows the execution of these scripts, with the server outputting the user's information and the clients sending commands like 'machine', 'release', 'system', 'version', 'node', and 'quit'.

```
02.b.py - D:\Modul 10 & 11\02.b.py (2.7.17)
import socket
s=socket.socket(socket.AF_INET,socket.SOCK_STREAM)
s.bind(('',50006))
s.listen(5)
print 'program komunikasi tentang server'
data = ''
while data.lower() != 'quit':
    kmm,addr = s.accept()
    while data.lower() != 'quit':
        data = kmm.recv(1024)
        print 'command: ',data
        if data.lower() == 'machine':
            respon=platform.machine()
            kmm.send(respon)
        elif data.lower() == 'release':
            respon = platform.release()
            kmm.send(respon)
        elif data.lower() == 'system':
            respon = platform.system()
            kmm.send(respon)
        elif data.lower() == 'version':
            respon = platform.version()
            kmm.send(respon)
        elif data.lower() == 'node':
            respon = platform.node()
            kmm.send(respon)
        elif data.lower() == 'release':
            kmm.send('unknown command')
```

```
02.a.py - D:\Modul 10 & 11\02.a.py (2.7.17)
import socket
import platform
s=socket.socket(socket.AF_INET,socket.SOCK_STREAM)
s.connect((hostname,50006))
s.listen(5)
print 'program komunikasi tentang server'
data = ''
while data.lower() != 'quit':
    kmm,addr = s.accept()
    while data.lower() != 'quit':
        data = kmm.recv(1024)
        print 'command: ',data
        if data.lower() == 'machine':
            respon=platform.machine()
            kmm.send(respon)
        elif data.lower() == 'release':
            respon = platform.release()
            kmm.send(respon)
        elif data.lower() == 'system':
            respon = platform.system()
            kmm.send(respon)
        elif data.lower() == 'version':
            respon = platform.version()
            kmm.send(respon)
        elif data.lower() == 'node':
            respon = platform.node()
            kmm.send(respon)
        elif data.lower() == 'release':
            kmm.send('unknown command')
```

```
02.c.py - D:\Modul 10 & 11\02.c.py (2.7.17)
import socket
hostname = 'localhost'
pesan = ''
s=socket.socket(socket.AF_INET,socket.SOCK_STREAM)
s.connect((hostname,50006))
print 'program komunikasi tentang server'
while pesan.lower() != 'quit':
    pesan=raw_input('command:')
    s.send(pesan)
    if pesan.lower() == 'quit':
        s.close()
        break
    elif pesan.lower() != 'quit':
        respon = s.recv(1024)
        print 'response:',respon
s.close()
```

```
Python 2.7.17 Shell
Python 2.7.17 (v2.7.17:c2f86d86e6, Oct 19 2019, 21:01:17) [MSC v.1500 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: D:\Modul 10 & 11\02.b.py =====
program komunikasi tentang server
command:machine
response: AMD64
command:release
response: 10
command:system
response: Windows
command:version
response: 10.0.18362
command:node
response: DESKTOP-JLNGDI8
command:release
response: 10
command:quit
>>>
```

```
Python 2.7.17 Shell
Python 2.7.17 (v2.7.17:c2f86d86e6, Oct 19 2019, 21:01:17) [MSC v.1500 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: D:\Modul 10 & 11\02.a.py =====
program komunikasi tentang server
command: machine
command: release
command: system
command: version
command: node
command: release
command: quit
>>>
```

Kegiatan 3

<p>3.A.py - D:\Modul 10 & 11\3.A.py (2.7.17)</p> <pre>import socket s=socket.socket(socket.AF_INET,socket.SOCK_STREAM) s.bind(('',50005)) s.listen(5) print 'server siap' perintah='' r=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 == 'jari-jari': r=int(item[1]) komm.send('jari-jari di simpan') else: komm.send('pesan tidak di ketahui') elif perintah == 'hitung': if r!=0: l=float(3.1428571428571*(r**2)) response='luas tabung jari-jari {} adalah {}'.format(r,l) komm.send(response) else: l=float(3.14*(r**2)) response='luas tabung jari-jari {} adalah {}'.format(r,l) komm.send(response) else: komm.send('pesan tidak diketahui')</pre>	<p>3.B.py - D:\Modul 10 & 11\3.B.py (2.7.17)</p> <pre>import socket hostname='localhost' pesan='' s=socket.socket(socket.AF_INET,socket.SOCK_STREAM) s.connect((hostname,50005)) print 'menghitung luas tabung' while pesan.lower() != 'keluar': pesan=raw_input('pesan:') s.send(pesan) if pesan.lower()=='keluar': response = s.recv(1024) print 'response:',response s.close() break elif pesan.lower()!='keluar': response = s.recv(1024) print 'response:',response s.close()</pre>	<p>Python 2.7.17 Shell*</p> <pre>Python 2.7.17 (v2.7.17:c2f86d86e6, Oct 19 2019, 21:01:17) [MSC v.1 D64] on win32 Type "help", "copyright", "credits" or "license()" for more inform >>> ===== RESTART: D:\Modul 10 & 11\3.B.py ===== menghitung luas tabung pesan:jari-jari=7 response: jari-jari di simpan pesan:hitung response: luas tabung jari-jari 7 adalah 154.0 pesan:</pre> <p>Python 2.7.17 Shell*</p> <pre>Python 2.7.17 (v2.7.17:c2f86d86e6, Oct 19 2019, 21:01:17) [MSC v.1 D64] on win32 Type "help", "copyright", "credits" or "license()" for more inform >>> ===== RESTART: D:\Modul 10 & 11\3.A.py ===== server siap pesan: jari-jari pesan: hitung</pre>
<p>Ln 8</p>		