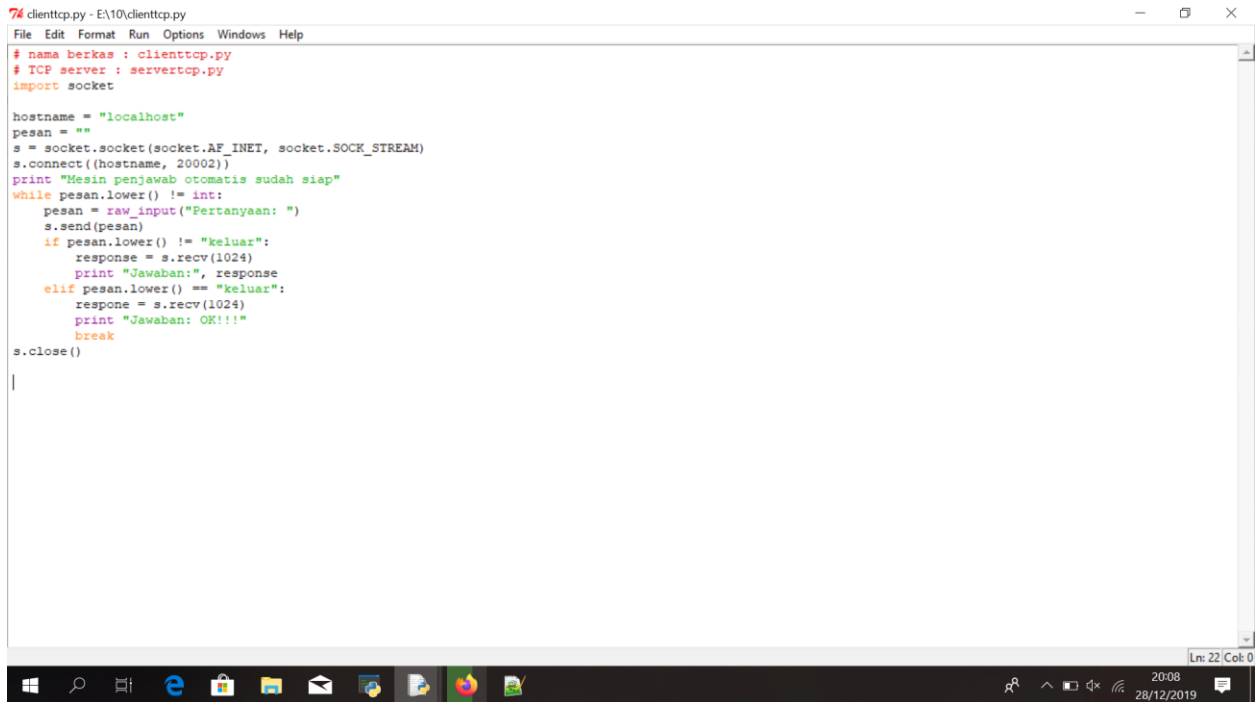


NAMA : MUHAMMAD FARID RAMADHAN

NIM : L200190230

KEGIATAN 1:

Sisi client

A screenshot of a Windows desktop environment. At the top, a text editor window titled 'clienttcp.py - E:\10\clienttcp.py' is open. The editor has a menu bar with 'File', 'Edit', 'Format', 'Run', 'Options', 'Windows', and 'Help'. The code inside is a Python script for a TCP client. It sets the hostname to 'localhost', creates a socket, connects to port 20002, and enters a loop where it prompts the user for a question. If the user enters 'keluar', it prints the received response. If the user enters 'keluar' again, it prints 'Jawaban: OK!!!' and breaks the loop. The script ends with 's.close()'. The Windows taskbar is visible at the bottom, showing various application icons and the system clock displaying 20:08 on 28/12/2019.

```
clienttcp.py - E:\10\clienttcp.py
File Edit Format Run Options Windows Help

# nama berkas : clienttcp.py
# TCP server : servertcp.py
import socket

hostname = "localhost"
pesan = ""
s = socket.socket(socket.AF_INET, socket.SOCK_STREAM)
s.connect((hostname, 20002))
print "Mesin penjawab otomatis sudah siap"
while pesan.lower() != int:
    pesan = raw_input("Pertanyaan: ")
    s.send(pesan)
    if pesan.lower() != "keluar":
        response = s.recv(1024)
        print "Jawaban:", response
    elif pesan.lower() == "keluar":
        response = s.recv(1024)
        print "Jawaban: OK!!!"
        break
s.close()

|
```

Sisi server

```
servertcp.py - E:\10\servertcp.py
File Edit Format Run Options Windows Help
# nama berkas : servertcp.py
# TCP client : clienttcp.py
import socket
import platform
s = socket.socket(socket.AF_INET, socket.SOCK_STREAM)
s.bind(("", 20002))
s.listen(2)
print "Server penjawab otomatis siap"
data = ""
kamus = {"nama": "Muhammad Farid Ramadhan",
         "NIM": "L200190230",
         "angkatan": "2019",}

while data.lower() != "keluar":
    komm, addr=s.accept()
    while data.lower() != "keluar":
        data = komm.recv(1024)
        if data.lower() == "keluar":
            komm.send("OK!!")
            s.close()
            print "Pertanyaan:", data
            break
        print "Pertanyaan:", data
        if kamus.has_key(data):
            komm.send(kamus[data])
        else:
            komm.send("Maaf perintah tidak ada")
    s.close()
```

Sisi terminal client

```
*Python Shell*
File Edit Shell Debug Options Windows Help
Python 2.7 (r27:82525, Jul 4 2010, 07:43:08) [MSC v.1500 64 bit (AMD64)] on win32
Type "copyright", "credits" or "license()" for more information.
>>> ===== RESTART =====
>>>
Mesin penjawab otomatis sudah siap
Pertanyaan: nama
Jawaban: Muhammad Farid Ramadhan
Pertanyaan: NIM
Jawaban: L200190230
Pertanyaan: angkatan
Jawaban: 2019
Pertanyaan: alamat
Jawaban: Maaf perintah tidak ada
Pertanyaan:
```

Sisi terminal server

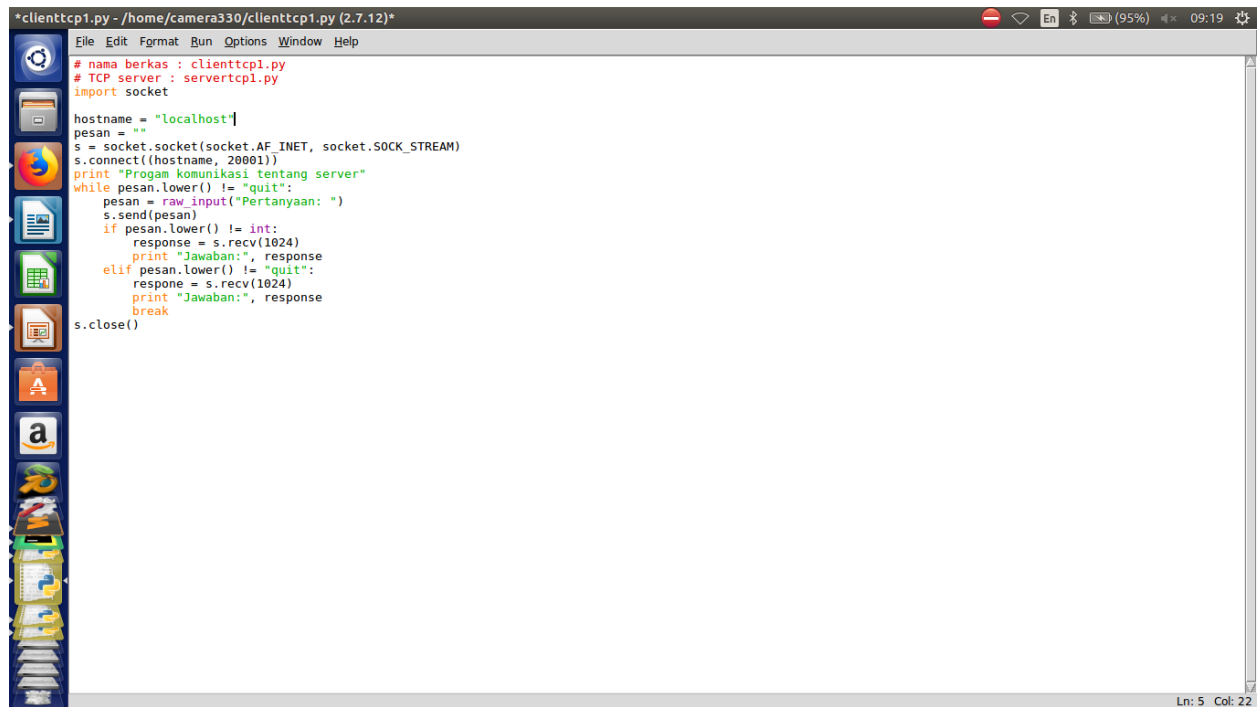
```
Python Shell
File Edit Shell Debug Options Windows Help
Python 2.7 (r27:82525, Jul 4 2010, 07:43:08) [MSC v.1500 64 bit (AMD64)] on win32
Type "copyright", "credits" or "license()" for more information.
>>> ===== RESTART =====
>>>
Server penjawab otomatis siap
Pertanyaan: nama
Pertanyaan: NIM
Pertanyaan: angkatan
Pertanyaan: alamat
```

sisi server.

```
*servertcp1.py - /home/camera330/servertcp1.py (2.7.12)*
File Edit Format Run Options Window Help
# nama berkas : servertcp1.py
# TCP client : clienttcp1.py
import socket
import platform
s = socket.socket(socket.AF_INET, socket.SOCK_STREAM)
s.bind(('', 20001))
s.listen(2)
print "Program server"
data = ""
kamus = {"machine":platform.machine(),
         "release":platform.release(),
         "system":platform.system(),
         "version":platform.version(),
         "node":platform.node(),
         "quit":"OK"}

while data.lower() != "quit":
    komm, addr=s.accept()
    while data.lower() != "quit":
        data = komm.recv(1024)
        if data.lower() == 'quit':
            komm.send(kamus[data])
            print "Pertanyaan:", data
            komm.close()
            break
        print "Pertanyaan:", data
        if kamus.has_key(data):
            komm.send(kamus[data])
        else:
            komm.send("Maaf perintah tidak ada")
    s.close()
```

sisi client.



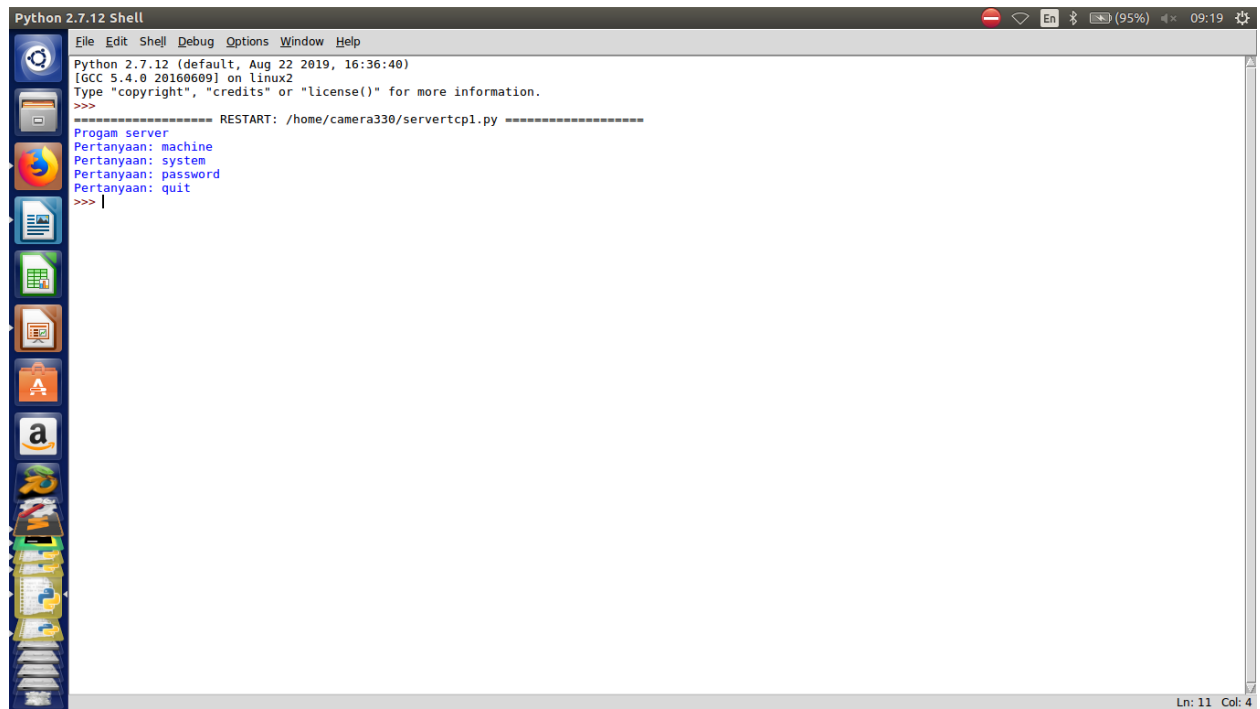
The screenshot shows a Python 2.7.12 IDE window titled '*clienttcp1.py - /home/camera330/clienttcp1.py (2.7.12)*'. The code is as follows:

```
# nama berkas : clienttcp1.py
# TCP server : servertcp1.py
import socket

hostname = "localhost"
pesan = ""
s = socket.socket(socket.AF_INET, socket.SOCK_STREAM)
s.connect((hostname, 20001))
print "Program komunikasi tentang server"
while pesan.lower() != "quit":
    pesan = raw_input("Pertanyaan: ")
    s.send(pesan)
    if pesan.lower() != int:
        response = s.recv(1024)
        print "Jawaban:", response
    elif pesan.lower() != "quit":
        response = s.recv(1024)
        print "Jawaban:", response
    break
s.close()
```

The status bar at the bottom right indicates 'Ln: 5 Col: 22'.

Sisi terminal server.



The screenshot shows a Python 2.7.12 Shell window titled 'Python 2.7.12 Shell'. The code is as follows:

```
Python 2.7.12 (default, Aug 22 2019, 16:36:40)
[GCC 5.4.0 20160609] on linux2
Type "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: /home/camera330/servertcp1.py =====
Program server
Pertanyaan: machine
Pertanyaan: system
Pertanyaan: password
Pertanyaan: quit
>>> |
```

The status bar at the bottom right indicates 'Ln: 11 Col: 4'.

sisi terminal client.

```
Python 2.7.12 Shell
File Edit Shell Debug Options Window Help
Python 2.7.12 (default, Aug 22 2019, 16:36:40)
[GCC 5.4.0 20160609] on linux2
Type "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: /home/camera330/clienttcp1.py =====
Progam komunikasi tentang server
Pertanyaan: machine
Jawaban: i686
Pertanyaan: system
Jawaban: Linux
Pertanyaan: password
Jawaban: Maaf perintah tidak ada
Pertanyaan: quit
Jawaban: OK
>>>
```

Ln: 5 Col: 0

KEGIATAN 3 :

Sisi server

```
servertcp2.py - E:\10\servertcp2.py
File Edit Format Run Options Windows Help

# nama berkas : servertcp2.py
# TCP client : clienttcp2.py
import socket

s = socket.socket(socket.AF_INET, socket.SOCK_STREAM)
s.bind(("", 20001))
s.listen(20)
print "Server penghitung luas balok otomatis siap"
data = ""
kamus = {"alas":0,
         "lebar":0,
         "tinggi":0,
         "keluar":"",""}
def hitungluasbalok(alas, tinggi, lebar):
    return str(2*(alas*lebar)+ 2*(alas*tinggi)+ 2*(lebar*tinggi))

while data.lower() != "keluar":
    komm, addr=s.accept()
    while data.lower() != "keluar":
        data = komm.recv(1024)
        angka = data.split()
        if data.lower() == 'keluar':
            komm.send(kamus[data])
            s.close()
        elif data.lower() == "hitung":
            print "pesan:", data
            komm.send("Luas Balok beralas %s, berlebar %s dan tinggi %s adalah %s"%(kamus["alas"], kamus["lebar"], kamus["tinggi"], hitungluasbalok(kamus["al
            continue
            print "pesan:", data
            for i in kamus:
                if i in data:
                    kamus[i] = int(angka[-1])
                    komm.send("parameter dicatat")
                    break
            else:
                komm.send("Maaf perintah tidak ada")
    s.close()
```

Sisi client

```
clienttcp2.py - E:\10\clienttcp2.py
File Edit Format Run Options Windows Help

# nama berkas : clienttcp2.py
# TCP server : servertcp2.py
import socket

hostname = "localhost"
pesan = ""
s = socket.socket(socket.AF_INET, socket.SOCK_STREAM)
s.connect((hostname,20001))
print "Mesin penghitung luas balok otomatis sudah siap"
while pesan.lower() != "keluar":
    pesan = str(raw_input("pesan: "))
    s.send(pesan)
    if pesan.lower() != int:
        response = s.recv(1024)
        print "Respon:", response
    elif pesan.lower() != "keluar":
        response = s.recv(1024)
        print "Respon:", response
    break
s.close()
```

Terminal client

```
Python Shell
File Edit Shell Debug Options Windows Help
Python 2.7 (r27:82525, Jul 4 2010, 07:43:08) [MSC v.1500 64 bit (AMD64)] on win32
Type "copyright", "credits" or "license()" for more information.
>>> ===== RESTART =====
>>>
Mesin penghitung luas balok otomatis sudah siap
pesan: alas = 10
Respon: parameter dicatat
pesan: lebar = 10
Respon: parameter dicatat
pesan: tinggo = 10
Respon: Maaf perintah tidak ada
pesan: tinggi = 10
Respon: parameter dicatat
pesan: hitung
Respon: Luas Balok beralas 10, berlebar 10 dan tinggi 10 adalah 600
pesan: keluar
Respon: -
>>> |
```

Terminal server

```
Python Shell
File Edit Shell Debug Options Windows Help
Python 2.7 (r27:82525, Jul 4 2010, 07:43:08) [MSC v.1500 64 bit (AMD64)] on win32
Type "copyright", "credits" or "license()" for more information.
>>> ===== RESTART =====
>>>
Server penghitung luas balok otomatis siap
pesan: alas = 10
pesan: lebar = 10
pesan: tinggo = 10
pesan: tinggi = 10
pesan: hitung
pesan: keluar

Traceback (most recent call last):
  File "E:\10\servertcp2.py", line 32, in <module>
    kamus[1] = int(angka[-1])
ValueError: invalid literal for int() with base 10: 'keluar'
>>> |
```