

PRAKTIKUM TOPIK LANJUTAN(KOMUNIKASI JARINGAN)

MODUL 10

KEGIATAN 1

Sisi Server

```
servertcp.py - D:\ums\Laparak\servertcp.py (2.7.14)
File Edit Format Run Options Window Help
# nama berkas : servertcp.py
# TCP client : clienttcp.py
import socket
import platform
s = socket.socket(socket.AF_INET, socket.SOCK_STREAM)
s.bind(("", 20001))
s.listen(2)
print "Server penjawab otomatis siap"
data = ""
kamus = {"nama": "Mutiara Aisya Harfi Putri",
          "NIM": "L200190240",
          "angkatan": "2019",
          "status": "Mahasiswa",
          "prodi": "Informatika"}

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()
```

Ln: 1 Col: 28
1:05 AM
12/12/2019

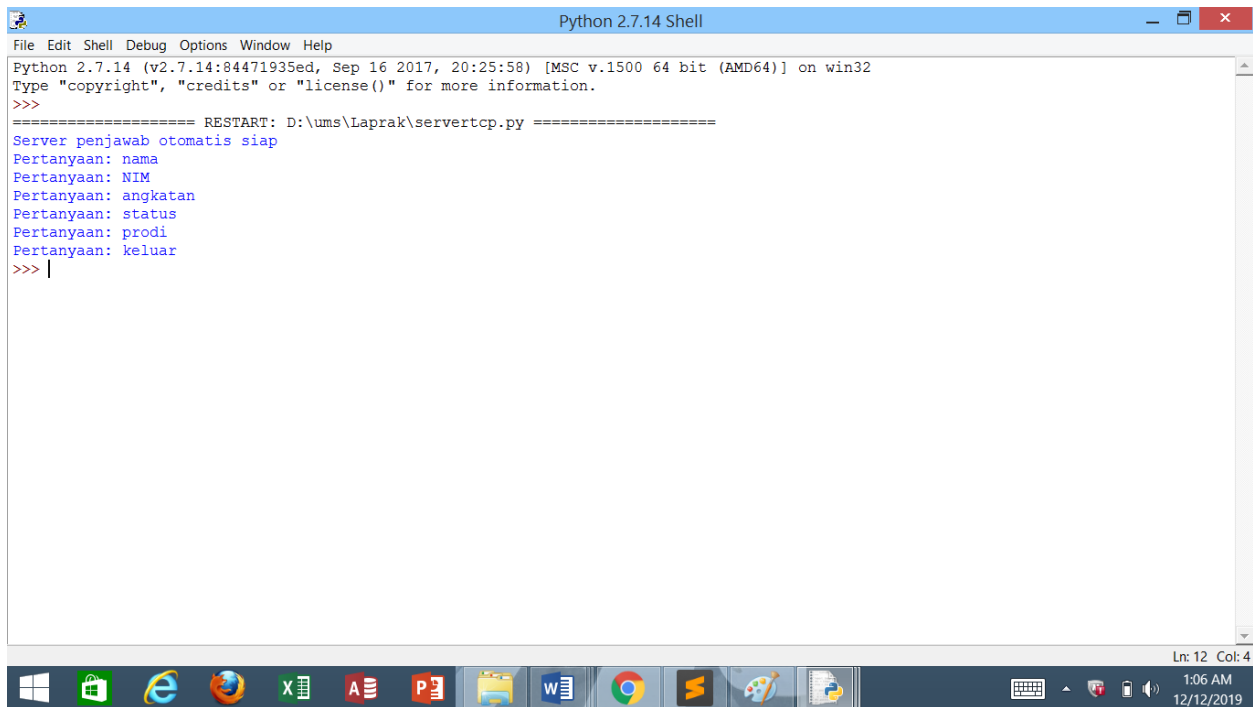
Sisi Client

```
clienttcp.py - D:\ums\Laparak\clienttcp.py (2.7.14)
File Edit Format Run Options Window 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, 20001))
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()
```

Ln: 4 Col: 0
1:06 AM
12/12/2019

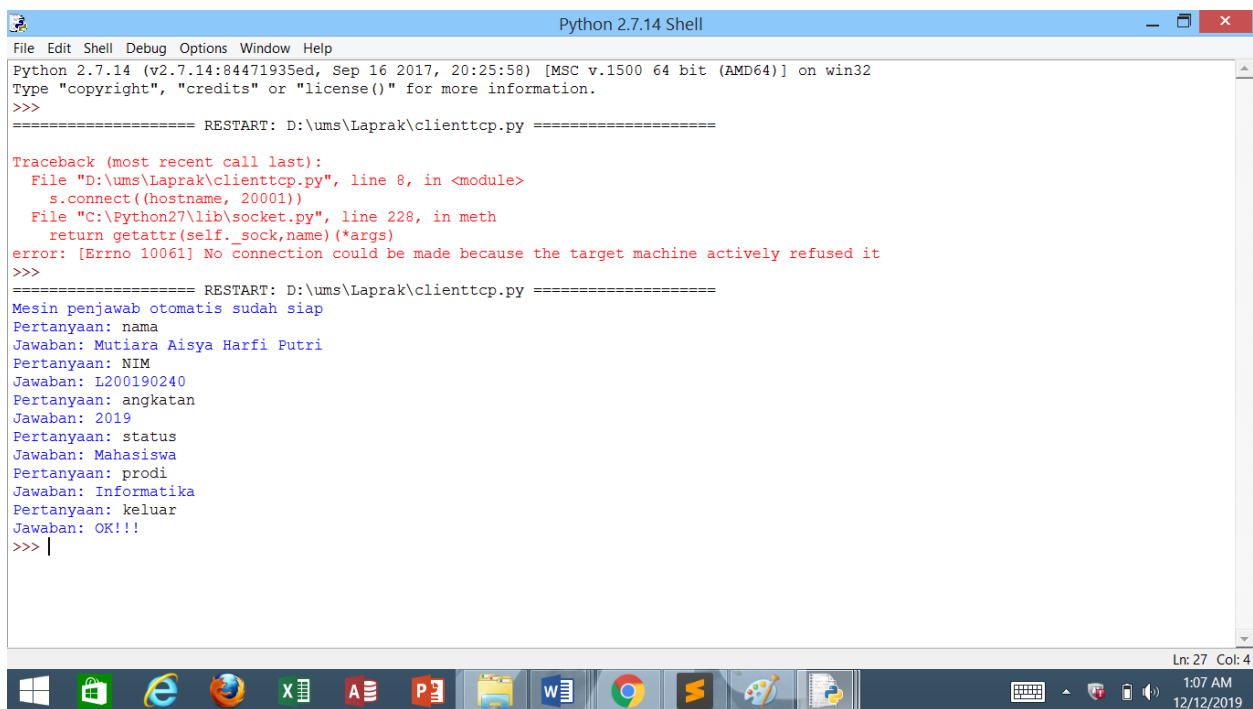
Terminal Server



```
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: D:\ums\Laparak\servertcp.py =====
Server penjawab otomatis siap
Pertanyaan: nama
Pertanyaan: NIM
Pertanyaan: angkatan
Pertanyaan: status
Pertanyaan: prodi
Pertanyaan: keluar
>>> |
```

The screenshot shows a Windows taskbar at the bottom with various application icons including File Explorer, Word, Chrome, and others. The system clock in the bottom right corner indicates 1:06 AM on 12/12/2019.

Terminal Client



```
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: D:\ums\Laparak\clienttcp.py =====
Traceback (most recent call last):
  File "D:\ums\Laparak\clienttcp.py", line 8, in <module>
    s.connect(hostname, 20001)
  File "C:\Python27\lib\socket.py", line 228, in meth
    return getattr(self._sock,name)(*args)
error: [Errno 10061] No connection could be made because the target machine actively refused it
>>>
===== RESTART: D:\ums\Laparak\clienttcp.py =====
Mesin penjawab otomatis sudah siap
Pertanyaan: nama
Jawaban: Mutiara Aisya Harfi Putri
Pertanyaan: NIM
Jawaban: L200190240
Pertanyaan: angkatan
Jawaban: 2019
Pertanyaan: status
Jawaban: Mahasiswa
Pertanyaan: prodi
Jawaban: Informatika
Pertanyaan: keluar
Jawaban: OK!!!
>>> |
```

The screenshot shows a Windows taskbar at the bottom with various application icons. The system clock in the bottom right corner indicates 1:07 AM on 12/12/2019.

KEGIATAN 2

Sisi Server

```
servertcp1.py - D:\ums\Laparak\servertcp1.py (2.7.14)
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
            s.close()
            break
        print "Pertanyaan:", data
        if kamus.has_key(data):
            komm.send(kamus[data])
        else:
            komm.send("Maaf perintah tidak ada")

s.close()
```

Ln: 13 Col: 38
1:14 AM
12/12/2019

Sisi Client

```
clienttcp1.py - D:\ums\Laparak\clienttcp1.py (2.7.14)
File Edit Format Run Options Window Help
# 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()
```

Ln: 11 Col: 4
1:14 AM
12/12/2019

Terminal Server

```
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: D:\ums\Laparak\servertcp1.py =====
Program server
Pertanyaan: machine
Pertanyaan: release
Pertanyaan: system
Pertanyaan: version
Pertanyaan: node
Pertanyaan: quit
>>> |
```

Terminal Client

```
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: D:\ums\Laparak\clienttcp1.py =====
Traceback (most recent call last):
  File "D:\ums\Laparak\clienttcp1.py", line 8, in <module>
    s.connect((hostname, 2000))
  File "C:\Python27\lib\socket.py", line 228, in meth
    return getattr(self._sock,name)(*args)
error: [Errno 10061] No connection could be made because the target machine actively refused it
>>>
===== RESTART: D:\ums\Laparak\clienttcp1.py =====
Program komunikasi tentang server
Pertanyaan: machine
Jawaban: AMD64
Pertanyaan: release
Jawaban: 8.1
Pertanyaan: system
Jawaban: Windows
Pertanyaan: version
Jawaban: 6.3.9600
Pertanyaan: node
Jawaban: Toshiba
Pertanyaan: quit
Jawaban: OK
>>>
```

KEGIATAN 3

Sisi Server

```
servertcp2.py - D:\ums\Laparak\servertcp2.py (2.7.14)
File Edit Format Run Options Window 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 tabung otomatis siap"
data = ""
kamus = {"jari-jari":0,
         "garis pelukis":0,
         "keluar":"OK!!!" }
def hitungluastabung(r, s):
    import math
    return str(math.pi*r*(r+s))

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()
            break
        elif data.lower() == "hitung":
            print "Pesan:", data
            komm.send("luas kerucut berjari-jari %s adalah %s"%(kamus["jari-jari"], hitungluastabung(kamus["jari-jari"], kamus["garis ]
            continue
        print "Pesan:", data
        for i in kamus:
```

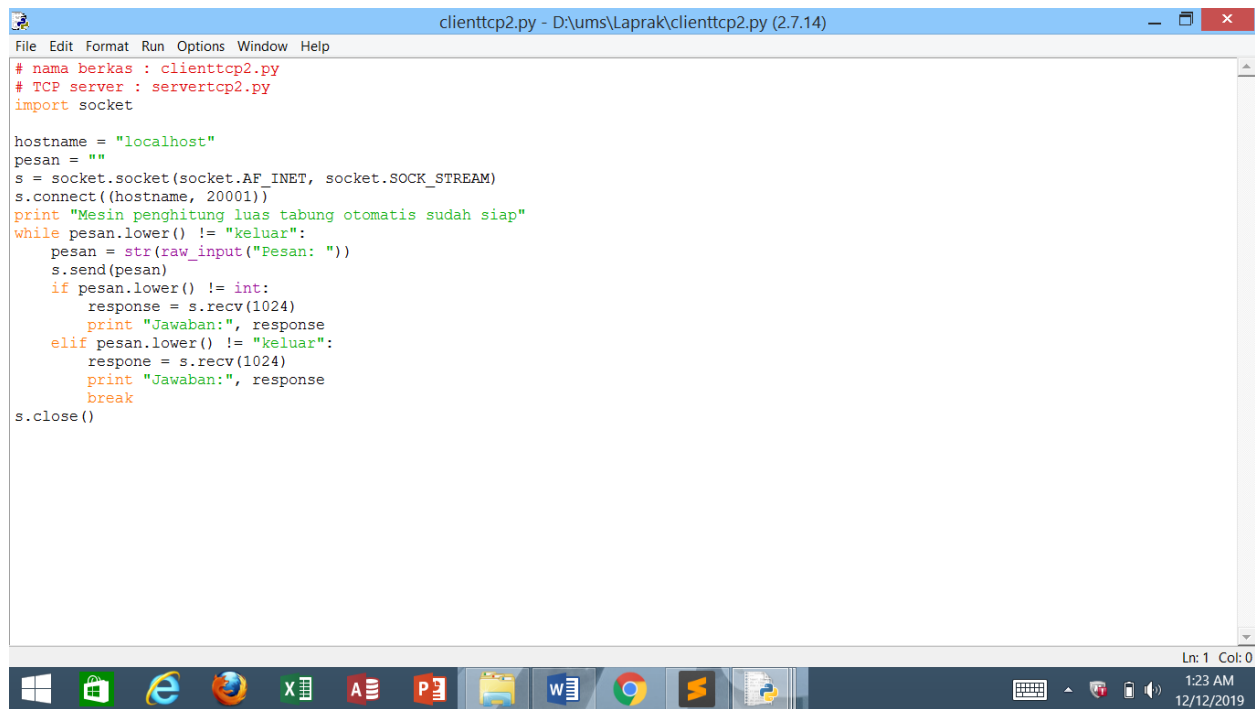
Ln: 6 Col: 0
1:22 AM
12/12/2019

```
servertcp2.py - D:\ums\Laparak\servertcp2.py (2.7.14)
File Edit Format Run Options Window Help
kamus = {"jari-jari":0,
         "garis pelukis":0,
         "keluar":"OK!!!" }
def hitungluastabung(r, s):
    import math
    return str(math.pi*r*(r+s))

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()
            break
        elif data.lower() == "hitung":
            print "Pesan:", data
            komm.send("luas kerucut berjari-jari %s adalah %s"%(kamus["jari-jari"], hitungluastabung(kamus["jari-jari"], kamus["garis ]
            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 ('jari-jari dan garis pelukis')")
    print "Pesan:", data
    s.close()
```

Ln: 6 Col: 0
1:22 AM
12/12/2019

Sisi Client

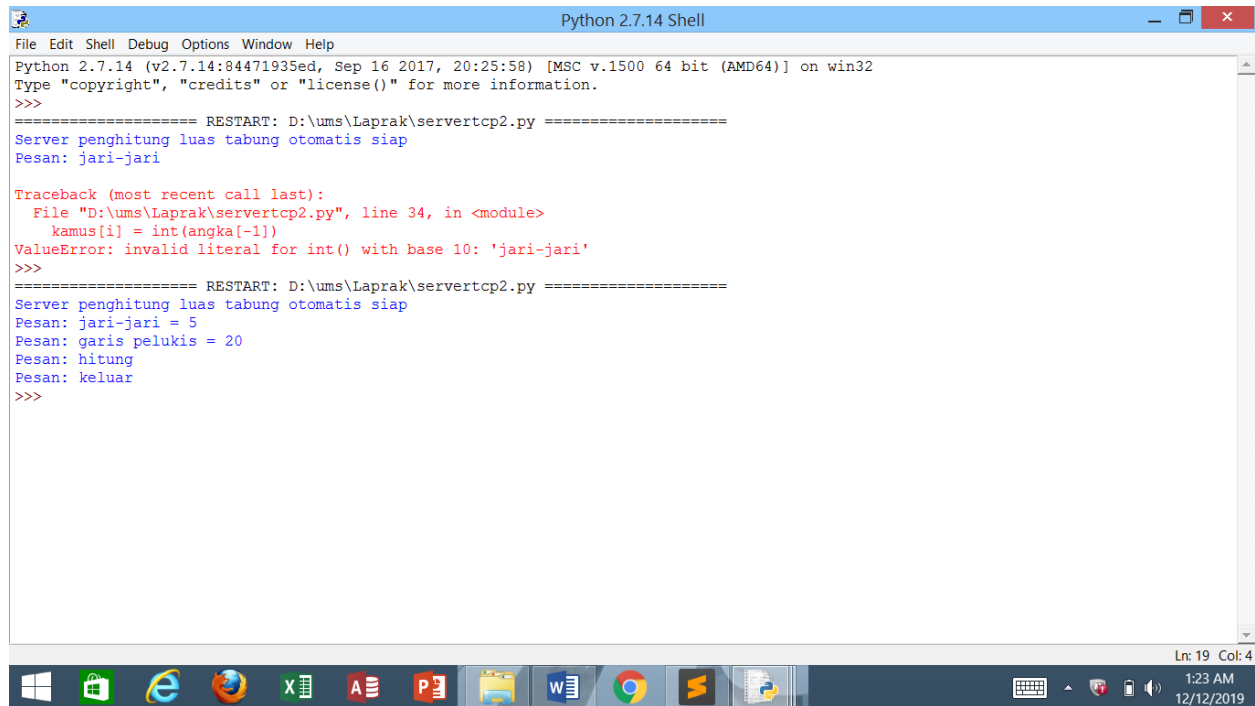
A screenshot of a Python script editor window titled 'clienttcp2.py - D:\ums\Laparak\clienttcp2.py (2.7.14)'. The window contains a Python script for a TCP client. The script sets the hostname to 'localhost' and attempts to connect to a server on port 20001. It prints a message about a calculator and enters a loop where it prompts the user for a message. Depending on the message, it either receives a response from the server or breaks the loop. The taskbar at the bottom shows various application icons and the system clock indicating 1:23 AM on 12/12/2019.

```
clienttcp2.py - D:\ums\Laparak\clienttcp2.py (2.7.14)
File Edit Format Run Options Window 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 tabung otomatis sudah siap"
while pesan.lower() != "keluar":
    pesan = str(raw_input("Pesan: "))
    s.send(pesan)
    if pesan.lower() != int:
        response = s.recv(1024)
        print "Jawaban:", response
    elif pesan.lower() != "keluar":
        response = s.recv(1024)
        print "Jawaban:", response
        break
s.close()
```

Terminal Server

A screenshot of a Python 2.7.14 Shell terminal window. The terminal shows the execution of a script that restarts a server. It displays the server's prompt, user input, and a traceback error message. The user then enters several commands to interact with the server. The taskbar at the bottom shows application icons and the system clock indicating 1:23 AM on 12/12/2019.

```
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: D:\ums\Laparak\servertcp2.py =====
Server penghitung luas tabung otomatis siap
Pesan: jari-jari

Traceback (most recent call last):
  File "D:\ums\Laparak\servertcp2.py", line 34, in <module>
    kamus[i] = int(angka[-1])
ValueError: invalid literal for int() with base 10: 'jari-jari'
>>>
===== RESTART: D:\ums\Laparak\servertcp2.py =====
Server penghitung luas tabung otomatis siap
Pesan: jari-jari = 5
Pesan: garis pelukis = 20
Pesan: hitung
Pesan: keluar
>>>
```

Terminal Client

```
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: D:\ums\Laparak\clienttcp2.py =====
Mesin penghitung luas tabung otomatis sudah siap
Pesan: jari-jari
Jawaban:
Pesan:
===== RESTART: D:\ums\Laparak\clienttcp2.py =====
Mesin penghitung luas tabung otomatis sudah siap
Pesan: jari-jari = 5
Jawaban: Parameter dicatat
Pesan: garis pelukis = 20
Jawaban: Parameter dicatat
Pesan: hitung
Jawaban: luas kerucut berjari-jari 5 adalah 392.699081699
Pesan: keluar
Jawaban: OK!!
>>> |
```

Ln: 19 Col: 4

123 AM
12/12/2019