

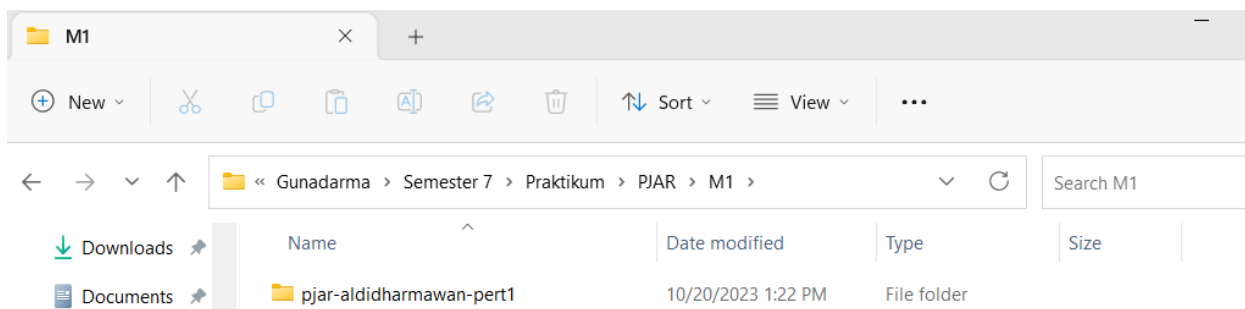
## ACTIVITY PERTEMUAN 1

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**MATERI** : Pengenalan Socket Programing TCP/UDP dengan Python  
**MATA PRAKTIKUM** : Pemrograman Jaringan

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### Langkah – langkah

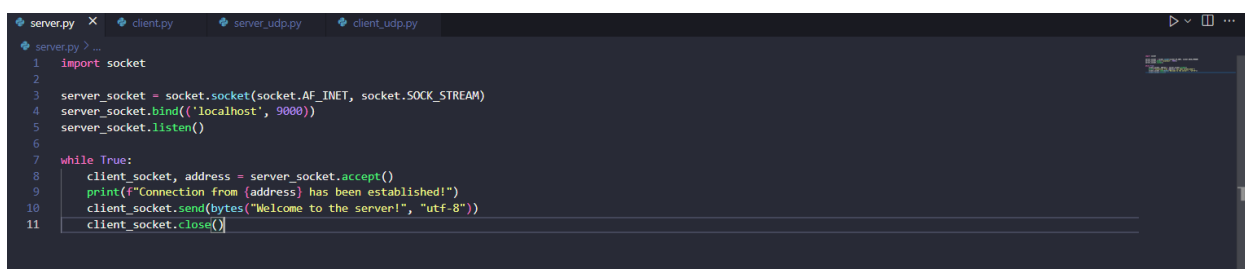
- Buat folder di file manager.



- Open folder tersebut pada visual studio.
- Kemudian buat file seperti di bawah ini dengan format python.



- Masukkan code program pada masing masing file seperti pada gambar di bawah ini.
- Server.py



- Client.py

```
server.py client.py x server_udp.py client_udp.py
client.py > ...
1 import socket
2
3 client_socket = socket.socket(socket.AF_INET, socket.SOCK_STREAM)
4 client_socket.connect(('localhost', 9000))
5
6 message = client_socket.recv(1024)
7 print(message.decode("utf-8"))
```

- Client\_udp.py

```
client_udp.py > ...
1 import socket
2
3 client_socket = socket.socket(socket.AF_INET, socket.SOCK_DGRAM)
4 message = "Hello, UDP Server!"
5 client_socket.sendto(message.encode("utf-8"), ('localhost', 9001))
6 data, address = client_socket.recvfrom(1024)
7 print(data.decode("utf-8"))
```

- Server\_udp.py

```
server_udp.py > ...
1 import socket
2
3 server_socket = socket.socket(socket.AF_INET, socket.SOCK_DGRAM)
4 server_socket.bind(('localhost', 9001))
5
6 print('Listening on port 9001....')
7 while True:
8     data, address = server_socket.recvfrom(1024)
9     print('Received message: ', data.decode('utf-8'), 'from', address)
10    server_socket.sendto(data, address)
```

- Jalankan client.py pada terminal lalu mengetikkan py client.py
- Lakukan hal yang sama pada server.py

The screenshot shows two terminal windows in Visual Studio Code. The left terminal, titled 'client.py', shows the execution of 'python client.py' and the output: 'Connection from ('127.0.0.1', 53904) has been established!', 'Connection from ('127.0.0.1', 54054) has been established!', and an empty prompt. The right terminal, titled 'server.py', shows the execution of 'python server.py' and the output: 'Welcome to the server!', 'Welcome to the server!', and an empty prompt.

- Lakukan hal yang serupa pada client\_udp.py dan server\_udp.py seperti gambar di bawah ini.

The screenshot shows two terminal windows in Visual Studio Code. The left terminal, titled 'client\_udp.py', shows the execution of 'python client\_udp.py' and the output: 'Listening on port 9001....', 'Received message: Hello, UDP Server! from ('127.0.0.1', 58582)', and an empty prompt. The right terminal, titled 'server\_udp.py', shows the execution of 'python server\_udp.py' and the output: 'Hello, UDP Server!', and an empty prompt.