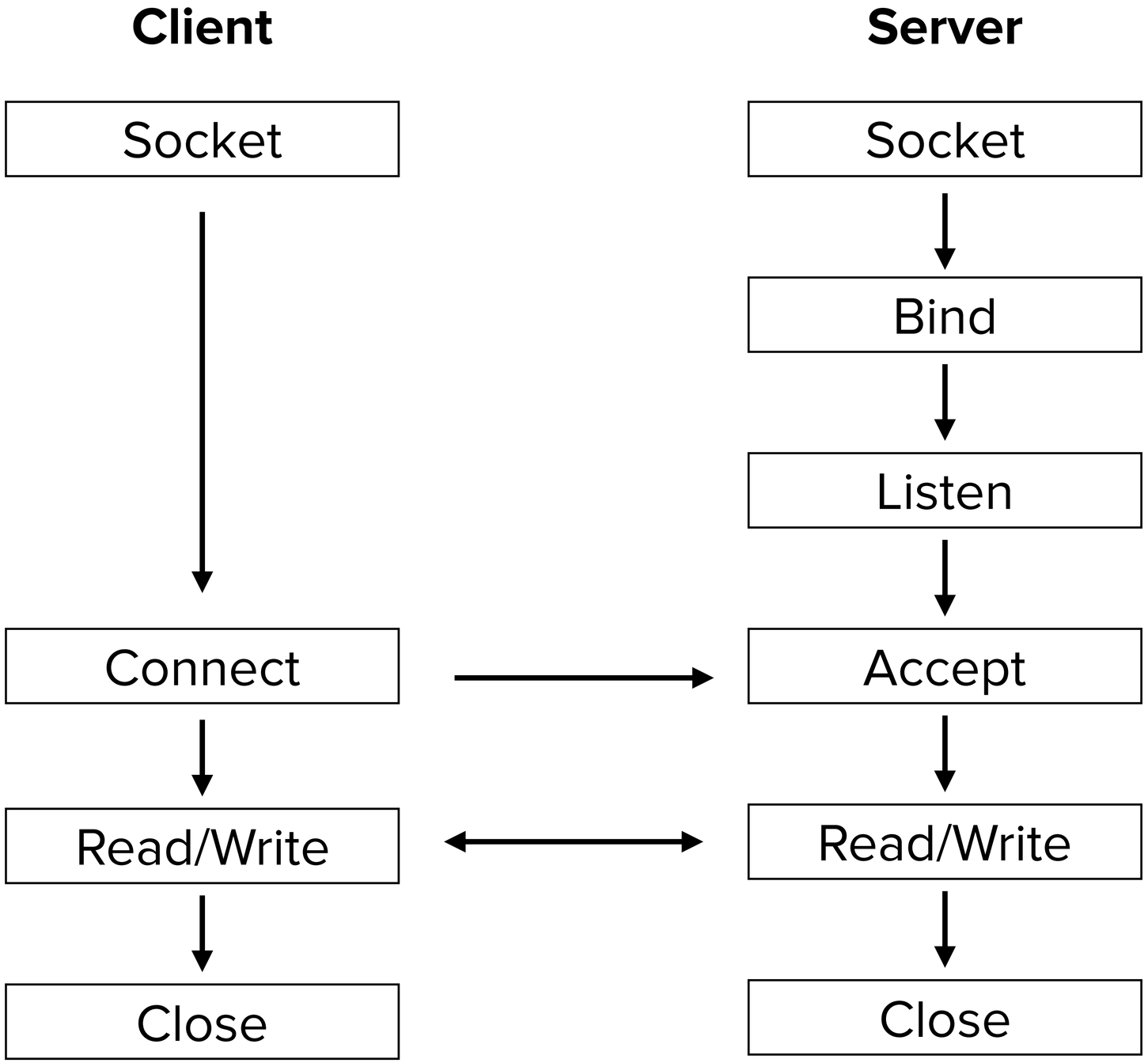
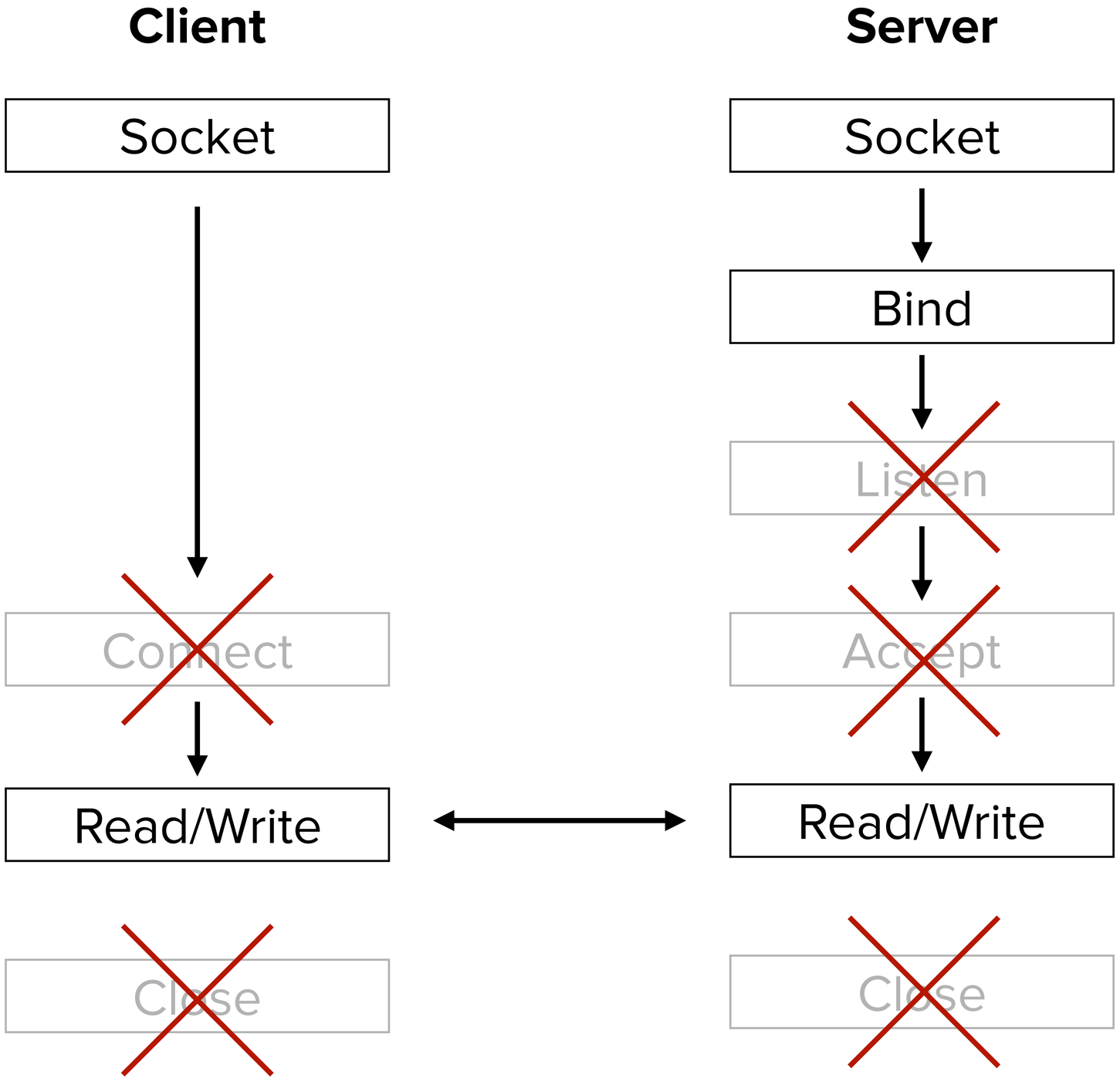
# Computer Networks

week 7. Sockets. UDP

**TCP Sockets**


Client
Server
Socket
Socket
Bind
Listen
Connect
Accept
Read/Write
Read/Write
Close
Close

**UDP Sockets**


Client
Server
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Socket
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Close

## Server side code example (TCP Socket)

```
import socket

s = socket.socket(socket.AF_INET, socket.SOCK_STREAM)
s.bind(('192.168.0.1', 8888))
s.listen(1)
conn, addr = s.accept()
while True:
    data = conn.recv(1024)
    if not data: break
    conn.sendall(data)
conn.close()
```

**Server side code example (UDP Socket)**

```
import socket

s = socket.socket(socket.AF_INET, socket.SOCK_DGRAM)
s.bind(('127.0.0.1', 8889))

while(True):
    msg, addr = s.recvfrom(1024)
    if not data: break
    s.sendto(msg, addr)
```

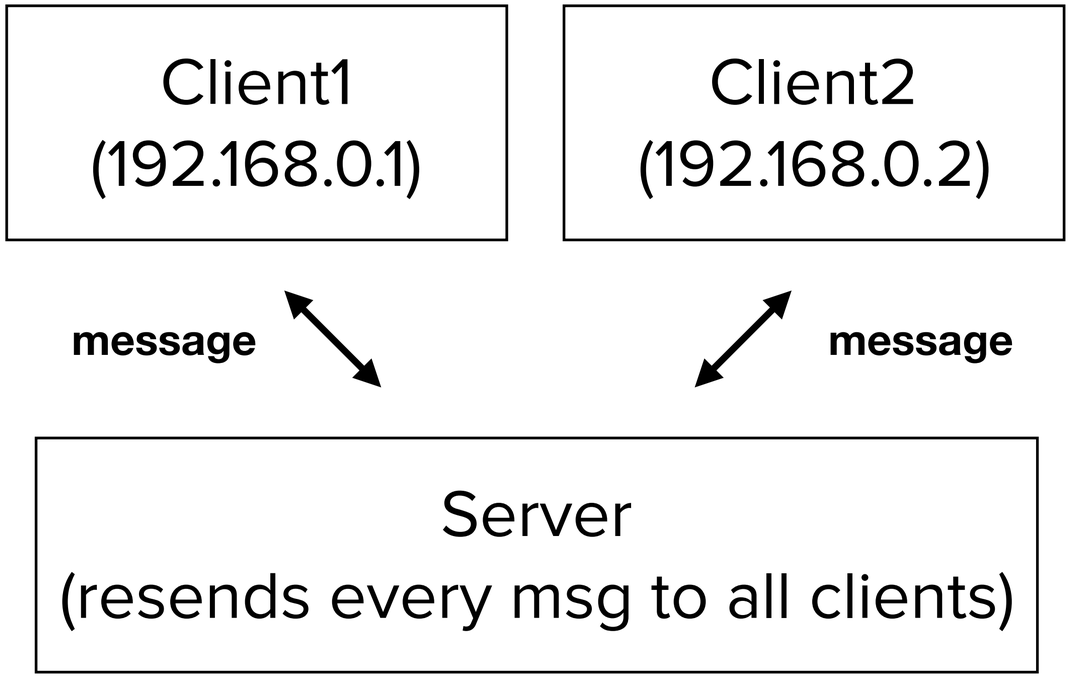
## Client side code example (TCP Socket)

```
import socket

s = socket.socket(socket.AF_INET, socket.SOCK_STREAM)
s.connect(('192.168.0.1', 8888))
s.sendall(b'Hello, world!')
data = s.recv(1024)
s.close()
```

## Client side code example (UDP Socket)

```
import socket
s = socket.socket(socket.AF_INET, socket.SOCK_DGRAM)

s.sendto(b'client message', ('192.168.0.1', 8889))
data = s.recvfrom(1024)
```

**Task. 1 -Write the client-server UDP chat.**
**2- Analyze captured UDP packets.**




**Output:**
**192.168.0.1: hi!**
**192.168.0.2: hello.**
**192.168.0.1: how are you?**
**192.168.0.2: good, and you?**

help: https://www.geeksforgeeks.org/udp-server-client-implementation-c/