

# Báo cáo Week 7 - Thực hành Lập trình mạng - Kỳ 2025.1

Nguyễn Khánh Nam - 20225749

Github: [https://github.com/nammannam/IT4062\\_Network\\_Programming](https://github.com/nammannam/IT4062_Network_Programming)

File account.txt:

```
protocol.h  account.txt x
W7 > account.txt
You, yesterday | 1 author (You)
1 admin admin123 admin@gmail.com google.com 1
2 namnk namnk123 namnk@gmail.com youtube.com 1
3 hungng hung2a9 hungng@hust.edu soict.hust.edu.vn 0
4 locdinh loc2004 123@gmail.com daotao.ai 1
5 quangvn vnquang12 quangvn22@gmail.com youtube.com 1
6 test2 test123 test2new@gmail.com youtube.com 1
7
```

Kết quả: Mô hình 1 Server - 3 Clients

```
Nov 26 22:43
Code
./server w7 x
namng@namng-ASUS:/mnt/BA145E2B145DEB41/Study/2025.1/THLTM/Code$ cd W7/
namng@namng-ASUS:/mnt/BA145E2B145DEB41/Study/2025.1/THLTM/Code/W7$ ./server 8080
Shared memory initialized successfully.
Server is listening on port 8080...
Accepted connection from client (127.0.0.1:49882)
Accepted connection from client (127.0.0.1:50040)
Accepted connection from client (127.0.0.1:45176)
DEBUG: len = 5
[SERVER][[CHILD 77425] Nhận yêu cầu LOGIN: namnk
[SERVER][[CHILD 77425] Gửi yêu cầu nhập password cho namnk
DEBUG: len = 5
[SERVER][[CHILD 74932] Nhận yêu cầu LOGIN: admin
[SERVER][[CHILD 74932] Gửi yêu cầu nhập password cho admin
DEBUG: len = 7
[SERVER][[CHILD 77287] Nhận yêu cầu LOGIN: locdinh
[SERVER][[CHILD 77287] Gửi yêu cầu nhập password cho locdinh
]

Code
./client w7 x
namng@namng-ASUS:/mnt/BA145E2B145DEB41/Study/2025.1/THLTM/Code/W7$ ./client 127.0.0.1 8080
Connected to server (127.0.0.1:8080)
admin
[CLIENT] Enter password:]

Code
./client w7 x
namng@namng-ASUS:/mnt/BA145E2B145DEB41/Study/2025.1/THLTM/Code/W7$ ./client 127.0.0.120 8080
Connected to server (127.0.0.120:8080)
locdinh
[CLIENT] Enter password:]
```

```
Nov 26 22:43

/server w7 x
Shared memory initialized successfully.
DEBUG: len = 8
[SERVER][[CHILD 74932] Nhận password cho username: admin
[SHARED MEM] Added client: admin (PID: 74932)
[SERVER][[CHILD 74932] Đăng nhập thành công: admin
[AUTH LOG] Login success: admin from 127.0.0.1:49882
DEBUG: len = 3
[SERVER][[CHILD 77287] Nhận password cho username: locdinh
[SERVER][[CHILD 77287] Password sai cho: locdinh (Attempts: 1/3)
[AUTH LOG] Login failed: locdinh from 127.0.0.1:50040 - wrong password
DEBUG: len = 7
[SERVER][[CHILD 77287] Nhận yêu cầu LOGIN: locdinh
[SERVER][[CHILD 77287] Gửi yêu cầu nhập password cho locdinh
DEBUG: len = 7
[SERVER][[CHILD 77287] Nhận password cho username: locdinh
[SHARED MEM] Added client: locdinh (PID: 77287)
[SERVER][[CHILD 77287] Đăng nhập thành công: locdinh
[AUTH LOG] Login success: locdinh from 127.0.0.1:50040
[]

/client w7 x
namng@namng-ASUS: /mnt/BA145E2B145DEB41/Study/2025.1/THLTM/Code/w7$ ./client 127.0.0.1 8080
Connected to server (127.0.0.1:8080)
admin
[CLIENT] Enter password:admin123
[CLIENT] Server CONFIRM (0x11): admin
[]

namng@namng-ASUS: /mnt/BA145E2B145DEB41/Study/2025.1/THLTM/Code/w7$ ./client 127.0.0.9 8080
Connected to server (127.0.0.9:8080)
namk
[CLIENT] Enter password:namk123
[CLIENT] Server CONFIRM (0x11): namk
[]

namng@namng-ASUS: /mnt/BA145E2B145DEB41/Study/2025.1/THLTM/Code/w7$ ./client 127.0.0.120 8080
Connected to server (127.0.0.120:8080)
locdinh
[CLIENT] Enter password:loc
[CLIENT] Server DENY (0x00): ERROR: Incorrect password. Attempt 1/3. Warning: Account will be locked after 3 failed attempts.
locdinh
[CLIENT] Enter password:loc2004
[CLIENT] Server CONFIRM (0x11): locdinh
[]
```

## + Lenh who, help

```
Nov 26 22:44

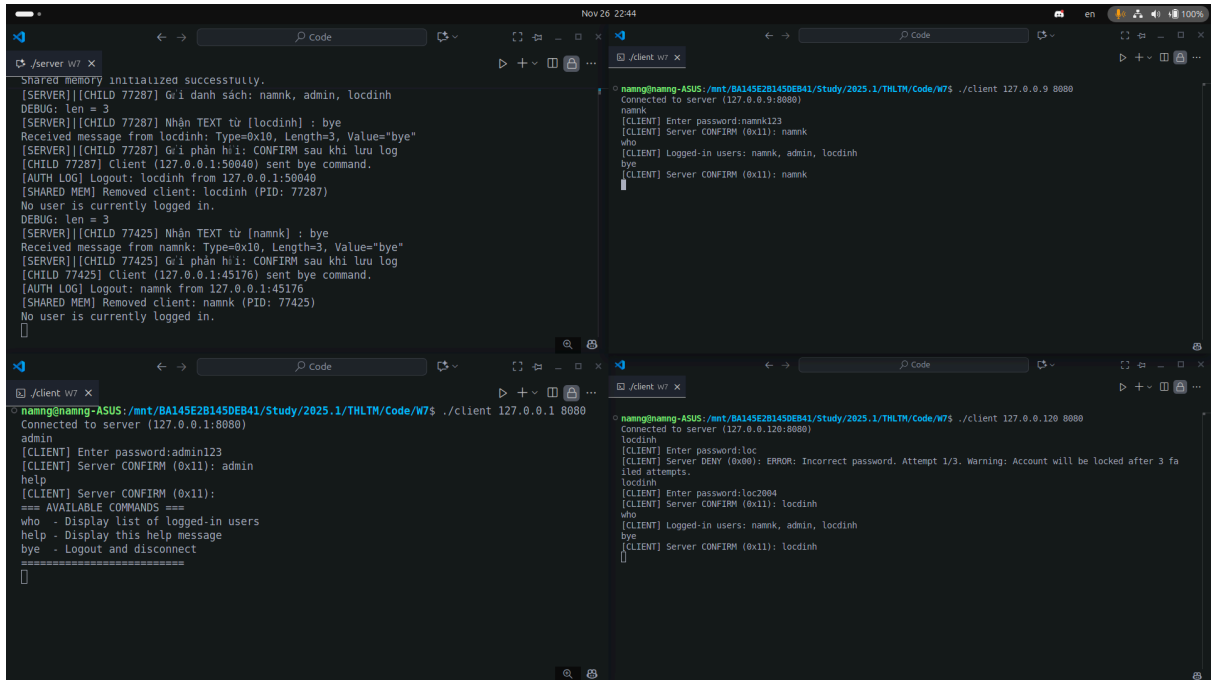
/server w7 x
Shared memory initialized successfully.
DEBUG: len = 7
[SERVER][[CHILD 77287] Nhận yêu cầu LOGIN: locdinh
[SERVER][[CHILD 77287] Gửi yêu cầu nhập password cho locdinh
DEBUG: len = 7
[SERVER][[CHILD 77287] Nhận password cho username: locdinh
[SHARED MEM] Added client: locdinh (PID: 77287)
[SERVER][[CHILD 77287] Đăng nhập thành công: locdinh
[AUTH LOG] Login success: locdinh from 127.0.0.1:50040
DEBUG: len = 0
[SERVER][[CHILD 77425] Nhận yêu cầu WHO từ [namk]
[SERVER][[CHILD 77425] Gửi danh sách: namk, admin, locdinh
DEBUG: len = 0
[SERVER][[CHILD 74932] Nhận yêu cầu HELP từ [admin]
[SERVER][[CHILD 74932] Gửi HELP message
DEBUG: len = 0
[SERVER][[CHILD 77287] Nhận yêu cầu WHO từ [locdinh]
[SERVER][[CHILD 77287] Gửi danh sách: namk, admin, locdinh
[]

/client w7 x
namng@namng-ASUS: /mnt/BA145E2B145DEB41/Study/2025.1/THLTM/Code/w7$ ./client 127.0.0.1 8080
Connected to server (127.0.0.1:8080)
admin
[CLIENT] Enter password:admin123
[CLIENT] Server CONFIRM (0x11): admin
help
[CLIENT] Server CONFIRM (0x11):
=== AVAILABLE COMMANDS ===
who - Display list of logged-in users
help - Display this help message
bye - Logout and disconnect
=====
[]

/client w7 x
namng@namng-ASUS: /mnt/BA145E2B145DEB41/Study/2025.1/THLTM/Code/w7$ ./client 127.0.0.9 8080
Connected to server (127.0.0.9:8080)
locdinh
[CLIENT] Enter password:loc
[CLIENT] Server DENY (0x00): ERROR: Incorrect password. Attempt 1/3. Warning: Account will be locked after 3 failed attempts.
locdinh
[CLIENT] Enter password:loc2004
[CLIENT] Server CONFIRM (0x11): locdinh
who
[CLIENT] Logged-in users: namk, admin, locdinh
[]

/client w7 x
namng@namng-ASUS: /mnt/BA145E2B145DEB41/Study/2025.1/THLTM/Code/w7$ ./client 127.0.0.120 8080
Connected to server (127.0.0.120:8080)
locdinh
[CLIENT] Enter password:loc
[CLIENT] Server DENY (0x00): ERROR: Incorrect password. Attempt 1/3. Warning: Account will be locked after 3 failed attempts.
locdinh
[CLIENT] Enter password:loc2004
[CLIENT] Server CONFIRM (0x11): locdinh
who
[CLIENT] Logged-in users: namk, admin, locdinh
[]
```

## + Dang xuat he thong



```
Nov 26 22:44

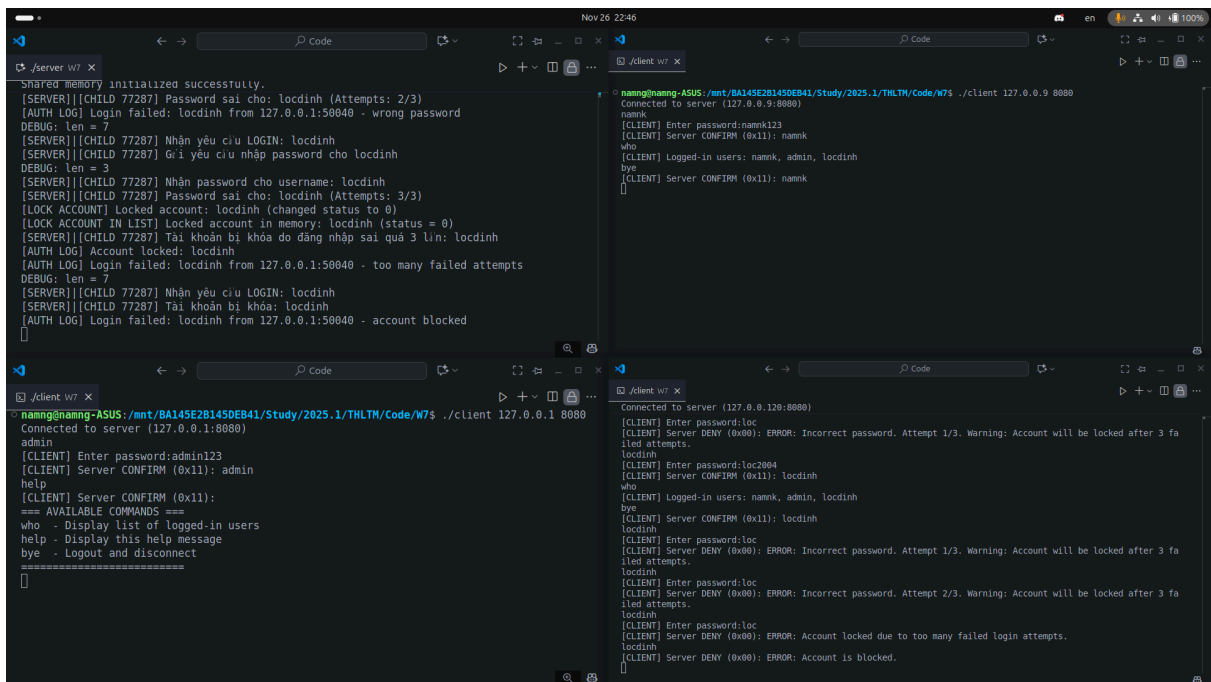
.vscode
  .server w7 x
    Shared memory initialized successfully.
    [SERVER][[CHILD 77287] G'i danh sách: namnk, admin, locdinh
    DEBUG: len = 3
    [SERVER][[CHILD 77287] Nhận TEXT từ [locdinh] : bye
    Received message from locdinh: Type=0x10, Length=3, Value="bye"
    [SERVER][[CHILD 77287] G'i phản hồi: CONFIRM sau khi lưu log
    [CHILD 77287] Client (127.0.0.1:50040) sent bye command.
    [AUTH LOG] Logout: locdinh from 127.0.0.1:50040
    [SHARED MEM] Removed client: locdinh (PID: 77287)
    No user is currently logged in.
    DEBUG: len = 3
    [SERVER][[CHILD 77425] Nhận TEXT từ [namnk] : bye
    Received message from namnk: Type=0x10, Length=3, Value="bye"
    [SERVER][[CHILD 77425] G'i phản hồi: CONFIRM sau khi lưu log
    [CHILD 77425] Client (127.0.0.1:45176) sent bye command.
    [AUTH LOG] Logout: namnk from 127.0.0.1:45176
    [SHARED MEM] Removed client: namnk (PID: 77425)
    No user is currently logged in.
    []

  .client w7 x
    namng@namng-ASUS:/mnt/BA145E2B145DEB41/Study/2025.1/THLTH/Code/W7$ ./client 127.0.0.9 8080
    Connected to server (127.0.0.9:8080)
    namnk
    [CLIENT] Enter password:namk123
    [CLIENT] Server CONFIRM (0x11): namnk
    who
    [CLIENT] Logged-in users: namnk, admin, locdinh
    bye
    [CLIENT] Server CONFIRM (0x11): namnk
    []

  .client w7 x
    namng@namng-ASUS:/mnt/BA145E2B145DEB41/Study/2025.1/THLTH/Code/W7$ ./client 127.0.0.1 8080
    Connected to server (127.0.0.1:8080)
    admin
    [CLIENT] Enter password:admin123
    [CLIENT] Server CONFIRM (0x11): admin
    help
    [CLIENT] Server CONFIRM (0x11):
    === AVAILABLE COMMANDS ===
    who - Display list of logged-in users
    help - Display this help message
    bye - Logout and disconnect
    =====
    []

  .client w7 x
    namng@namng-ASUS:/mnt/BA145E2B145DEB41/Study/2025.1/THLTH/Code/W7$ ./client 127.0.0.120 8080
    Connected to server (127.0.0.120:8080)
    locdinh
    [CLIENT] Enter password:loc
    [CLIENT] Server DENY (0x00): ERROR: Incorrect password. Attempt 1/3. Warning: Account will be locked after 3 failed attempts.
    locdinh
    [CLIENT] Enter password:loc2004
    [CLIENT] Server CONFIRM (0x11): locdinh
    who
    [CLIENT] Logged-in users: namnk, admin, locdinh
    bye
    [CLIENT] Server CONFIRM (0x11): locdinh
    []
```

## + Khoa tai khoan



```
Nov 26 22:46

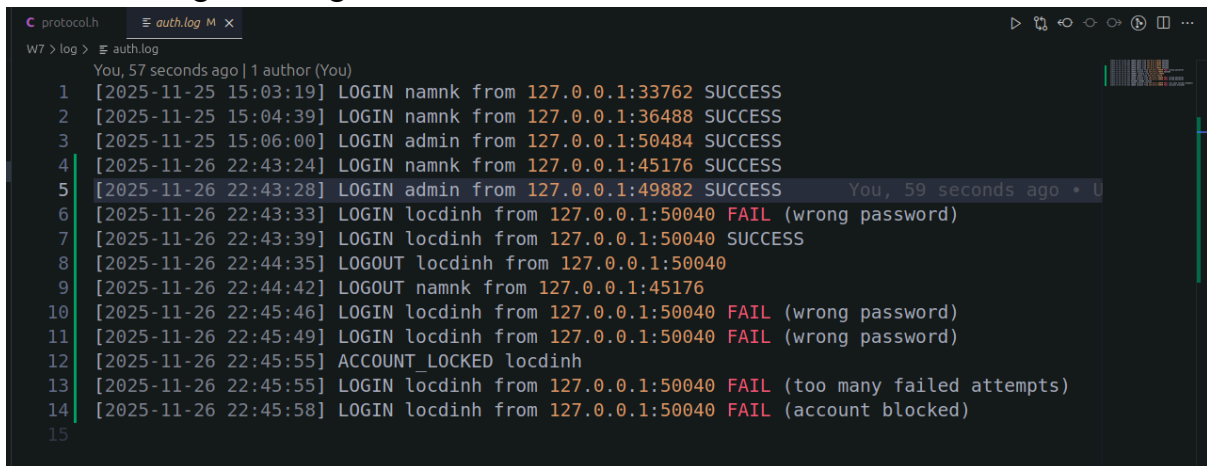
.vscode
  .server w7 x
    Shared memory initialized successfully.
    [SERVER][[CHILD 77287] Password sai cho: locdinh (Attempts: 2/3)
    [AUTH LOG] Login failed: locdinh from 127.0.0.1:50040 - wrong password
    DEBUG: len = 7
    [SERVER][[CHILD 77287] Nhận yêu c'u LOGIN: locdinh
    [SERVER][[CHILD 77287] G'i yêu c'u nhập password cho locdinh
    DEBUG: len = 3
    [SERVER][[CHILD 77287] Nhận password cho username: locdinh
    [SERVER][[CHILD 77287] Password sai cho: locdinh (Attempts: 3/3)
    [LOCK ACCOUNT] Locked account: locdinh (changed status to 0)
    [LOCK ACCOUNT IN LIST] Locked account in memory: locdinh (status = 0)
    [SERVER][[CHILD 77287] Tài khoản bị khóa do đăng nhập sai quá 3 lần: locdinh
    [AUTH LOG] Account locked: locdinh
    [AUTH LOG] Login failed: locdinh from 127.0.0.1:50040 - too many failed attempts
    DEBUG: len = 7
    [SERVER][[CHILD 77287] Nhận yêu c'u LOGIN: locdinh
    [SERVER][[CHILD 77287] Tài khoản bị khóa: locdinh
    [AUTH LOG] Login failed: locdinh from 127.0.0.1:50040 - account blocked
    []

  .client w7 x
    namng@namng-ASUS:/mnt/BA145E2B145DEB41/Study/2025.1/THLTH/Code/W7$ ./client 127.0.0.1 8080
    Connected to server (127.0.0.1:8080)
    admin
    [CLIENT] Enter password:admin123
    [CLIENT] Server CONFIRM (0x11): admin
    help
    [CLIENT] Server CONFIRM (0x11):
    === AVAILABLE COMMANDS ===
    who - Display list of logged-in users
    help - Display this help message
    bye - Logout and disconnect
    =====
    []

  .client w7 x
    namng@namng-ASUS:/mnt/BA145E2B145DEB41/Study/2025.1/THLTH/Code/W7$ ./client 127.0.0.9 8080
    Connected to server (127.0.0.9:8080)
    namnk
    [CLIENT] Enter password:namk123
    [CLIENT] Server CONFIRM (0x11): namnk
    who
    [CLIENT] Logged-in users: namnk, admin, locdinh
    bye
    [CLIENT] Server CONFIRM (0x11): namnk
    []

  .client w7 x
    namng@namng-ASUS:/mnt/BA145E2B145DEB41/Study/2025.1/THLTH/Code/W7$ ./client 127.0.0.120 8080
    Connected to server (127.0.0.120:8080)
    [CLIENT] Enter password:loc
    [CLIENT] Server DENY (0x00): ERROR: Incorrect password. Attempt 1/3. Warning: Account will be locked after 3 failed attempts.
    locdinh
    [CLIENT] Enter password:loc2004
    [CLIENT] Server CONFIRM (0x11): locdinh
    who
    [CLIENT] Logged-in users: namnk, admin, locdinh
    bye
    [CLIENT] Server CONFIRM (0x11): locdinh
    locdinh
    [CLIENT] Enter password:loc
    [CLIENT] Server DENY (0x00): ERROR: Incorrect password. Attempt 1/3. Warning: Account will be locked after 3 failed attempts.
    locdinh
    [CLIENT] Enter password:loc
    [CLIENT] Server DENY (0x00): ERROR: Incorrect password. Attempt 2/3. Warning: Account will be locked after 3 failed attempts.
    locdinh
    [CLIENT] Enter password:loc
    [CLIENT] Server DENY (0x00): ERROR: Account locked due to too many failed login attempts.
    locdinh
    [CLIENT] Server DENY (0x00): ERROR: Account is blocked.
    []
```

## - File log auth.log:



```
W7 > log > auth.log
You, 57 seconds ago | 1 author (You)
1 [2025-11-25 15:03:19] LOGIN namnk from 127.0.0.1:33762 SUCCESS
2 [2025-11-25 15:04:39] LOGIN namnk from 127.0.0.1:36488 SUCCESS
3 [2025-11-25 15:06:00] LOGIN admin from 127.0.0.1:50484 SUCCESS
4 [2025-11-26 22:43:24] LOGIN namnk from 127.0.0.1:45176 SUCCESS
5 [2025-11-26 22:43:28] LOGIN admin from 127.0.0.1:49882 SUCCESS You, 59 seconds ago * u
6 [2025-11-26 22:43:33] LOGIN locdinh from 127.0.0.1:50040 FAIL (wrong password)
7 [2025-11-26 22:43:39] LOGIN locdinh from 127.0.0.1:50040 SUCCESS
8 [2025-11-26 22:44:35] LOGOUT locdinh from 127.0.0.1:50040
9 [2025-11-26 22:44:42] LOGOUT namnk from 127.0.0.1:45176
10 [2025-11-26 22:45:46] LOGIN locdinh from 127.0.0.1:50040 FAIL (wrong password)
11 [2025-11-26 22:45:49] LOGIN locdinh from 127.0.0.1:50040 FAIL (wrong password)
12 [2025-11-26 22:45:55] ACCOUNT_LOCKED locdinh
13 [2025-11-26 22:45:55] LOGIN locdinh from 127.0.0.1:50040 FAIL (too many failed attempts)
14 [2025-11-26 22:45:58] LOGIN locdinh from 127.0.0.1:50040 FAIL (account blocked)
15
```