

CS5115 – PA6: Client–Server Communication in C

Build and Execution Instructions

1. Directory Setup

Ensure the following files are in the same directory:

- Makefile
- server.c
- client.c

Navigate to the directory in your terminal:

Command: cd /path/to/PA6

2. Build Programs

Run the following command to compile both server and client programs using the Makefile:

Command: make

This will generate two executables: **server** and **client**.

3. Start the Server

Run the server in the background using:

Command: make run_server

You should see output similar to:

```
Starting server...
Server started (PID: 3471)
```

4. Run the Client

In a new terminal window, start a client using:

Command: make run_client

Example session:

```
Enter operation: mul
Enter two integers (e.g., 6 9): 6 9
Result from server: 54
Enter operation: exit
Bye.
```

5. Stop and Clean Up

To stop the background server process:

Command: make stop

To remove executables and logs:

Command: make clean

To perform a full cleanup:

Command: make distclean

6. Verify Server Logs

View server activity logs using:

Command: cat server_output.log

Expected log output example:

```
[2025-11-08 18:42:03] Server started. Socket: /tmp/pa6_arith.sock
[2025-11-08 18:42:18] PID 3520: mul(6,9) = 54
[2025-11-08 18:42:22] Server shutting down.
```