

UNIX Programing Assignment 10

Due date: 2017.1.3 22:00

Demo time: 2017.1.3 18:30 ~ 21:30

5 points

(9-a) (2%) Write a program to determine your system's byte ordering. Explain how does it work and present your test results.

- Please implement your method in C.
- System(3) are not allowed in this assignment, more precisely, you cannot use bash command.
- Show your results on the terminal and explain your implementation to the TA.
- A Makefile to compile your source code.

(9-b) (3%) Write a client program and a server program to continuously report the number of processes currently running on a specified host (UNIX) computer. Make sure your server supports multiple concurrent clients and handle socket-related exceptions.

- You need to implement this assignment in C socket.
- You are allowed to use system calls to check the number of processes on the host
- **Server:** `<./your_server_binary> <port>`
Your server should be able to handle multiple clients, and you can implement this features using `fork()` and multi-thread.
- **Clients:** `<./your_client binary> <server_ip_address> <port>`
Your clients should be able to connect to your server and print the received messages. (Decide the time interval of reporting results by yourself)
- You need to handle following exceptions:
 - Connection error
 - Socket error
- A Makefile to compile your source code.