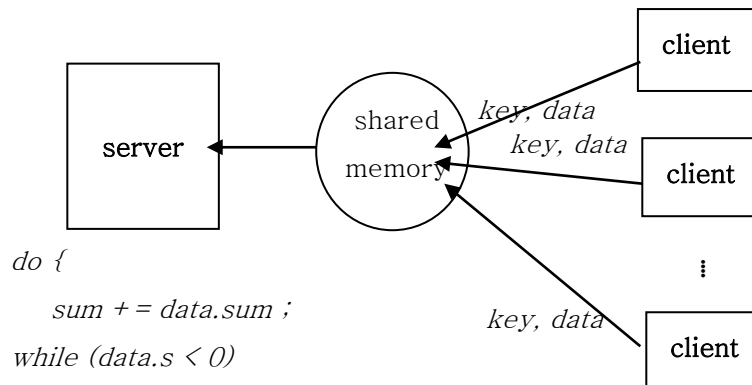


### Lap 3 – IPC(Inter Process Communication)



(1) Complete the following C program(client.c) to write a data onto the shared memory created by the server.

- Create an ID using the same key of the server.
- Use a semaphore to unlock the shared memory before writing a data.
- Assign the data to a semaphore if it is less than 0 (data < 0).

```

#include <stdio.h>
#include <stdlib.h>
#include <string.h>
#include <sys/types.h>
#include <sys/ipc.h>
#include <sys/shm.h>

typedef struct {
    char s; // semaphore
    int sum;
} SHM;

main(int argc, char*argv[])
{
    int shm_id;
    void *shm_addr;
    SHM *shm;
    int key;

    int data;

    if (argc != 3) {
        printf("usage: %s key data\n", argv[0]);
        exit(1);
    }
    key = atoi(argv[1]);
    data = atoi(argv[2]);

    /*
    FILL IN THIS BLANK
    */
    exit(0);
}

```

(2) After compile client.c successfully, test it using the next command. Then you can see your number is accumulated(added) onto the shared memory.

client key any\_number (supposed executable program is client.)

(3) Submit your program when you are done - **submit client.c** .