

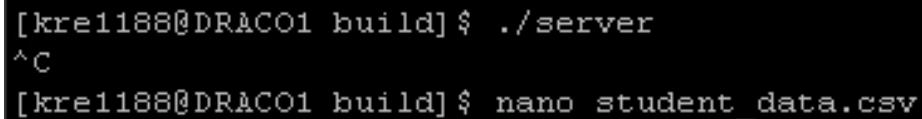
## Lab 4

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To compile, run the **make** command with the accompanying Makefile.



```
[kre1188@DRACO1 build]$ ./server
^C
[kre1188@DRACO1 build]$ nano student_data.csv
```

**Figure 1: Compile**

### server.c

```
void main();
\\ utilizes student_data_load(); from student-data.c to load data from file
\\ utilizes student_data_init(); from student-data.c to initialize student
    values
\\ utilizes setup_shared_memory(); from shared-memory.c to allocate memory
\\ Determine active or inactive status
```

### shared-memory.h

```
void setup_shared_memory();
int detach_shared_memory();
void cpy_student_data_to_shared_memory(struct students students);
```

### shared-memory.c

```
\\ Get shared memory ID and allocate memory
void setup_shared_memory();

\\ Clear memory
int detach_shared_memory();
```

```
\\ Copy data
void cpy_student_data_to_shared_memory(struct students students);
```

## student-data.h

```
struct students student_data_load();
void student_data_save(struct students studentData);
int student_data_exists();
struct students student_data_init();
```

## student-data.c

```
\\ Load student data from file
struct students student_data_load();

\\ Save data
void student_data_save(struct students studentData);

\\ Check if file exists
int student_data_exists();

\\ Init student values
struct students student_data_init();
```

## students.h

```
typedef struct student {
    char userID[10];
    char name[50];
    int age;
    float gpa;
    int status;
    time_t lastLoginTime;
    int totalActiveTime;
} Student;

struct students {
    struct student students[NUM_STUDENTS];
};
```

```
int student_is_active(struct student s);  
int student_set_active(struct student s);  
int student_set_inactive(struct student s);
```

## students.c

```
\\ return status  
int student_is_active(struct student s){}  
  
\\ Set status to active  
int student_set_active(struct student s){}  
  
\\ Set status to inactive  
int student_set_inactive(struct student s){}
```

## Contributions

Distint Howie	Shared memory implementation, Testing, Documentation
Robert Krencoy	Student data handling, Testing, Documentation
Anthony Stepich	Student data handling, Testing, Documentation