

# Read me about socket homework

## Compile (On flare)

```
$ cd hw5
$ ls
compute_v1.c      manage_v1.c      rangeschedule_v3.h  report_v1.c
$ /development/SUNWspro/bin/cc manage_v1.c -o manage -lsocket -lnsl
```

```
/development/SUNWspro/bin/cc manage_v1.c -o manage -lsocket -lnsl
```

```
/development/SUNWspro/bin/cc compute_v1.c -o compute -lsocket -lnsl
```

```
/development/SUNWspro/bin/cc report_v1.c -o report -lsocket -lnsl
```

## Test:

Since I don't have permission to 'bind' on flare, I test this program on my local Solaris machine.

1. Start manager:

```
unknown# ./manage 55
```

2. Start one compute:

```
compute_v1.c.101. warning. assignment
unknown# ./compute localhost 55 1
```

3. Output, the range size would decide by the manager. Every range would compute for nearly 15 seconds.

```
-----
unknown# ./compute localhost 55 1
connection successful
Client registered successfully. Start compute from 1 to 50001
new range starts! Start from 50001 to 68369
new range starts! Start from 68369 to 86737
new range starts! Start from 86737 to 139972
-----
```

4. Report Current status

```
unknown# gcc report_v1.c -o report -lsocket -lnsl
unknown# ./report localhost 55
connection successful
-----
Perfect Numbers: |6|28|496|8128 are found by Machine
1
the name of machine 1 is localhost
This machine has tested 193874 numbers
Currently, it is workin
g on range from 182449 to 193875
-----
```

5. Shut down message:

Shut down from compute with "Ctrl + c"

```
unknown# ./manage 55
257266
The compute 1 has been terminated, the last tested number is: 257266

new range starts! Start from 236511 to 246295
new range starts! Start from 246295 to 255721
new range starts! Start from 255721 to 264794
^Csig invoked
unknown#
```

6. Restart new compute: (get the new range disjointed from the ones tested.)

```
new range starts! Start from 170483 to 182449
new range starts! Start from 182449 to 193875
new range starts! Start from 193875 to 205031
new range starts! Start from 205031 to 215993
new range starts! Start from 215993 to 226481
new range starts! Start from 226481 to 236511
new range starts! Start from 236511 to 246295
new range starts! Start from 246295 to 255721
new range starts! Start from 255721 to 264794
^Csig invoked
unknown# ./compute localhost 55 1
connection successful
Client registered successfully. Start compute from 264794 to 314794
```

7. Shut down from report -k cmd:

The screenshot displays three terminal windows. The leftmost window shows the source code for the program, including the `manage_v1.c` and `compute_v1.c` files. The middle window shows the output of the `manage` command, which includes range scheduling and a kill message. The rightmost window shows the output of the `compute` command, which includes range scheduling and a report message.

```
compute_v1.c~      rangeschedule.h~      report_v1.c~
core               rangeschedule_v2.h~  report_v1.c~
manage            rangeschedule_v2.h~
unknown# gcc manage_v1.c -o manage -lssocket -lnsl
manage_v1.c: In function
manage_v1.c:54: warning
manage_v1.c: In function
manage_v1.c:149: warnin
pe
unknown#
.: Command not found
unknown# ./manage 55
^Csig invoked
unknown# ^C
unknown# ./manage 55
^C^Csig invoked
unknown# ./manage 55
257266
The compute 1 has been
Kill cmd received!
send msg to Machine 1
322215
The compute 1 has been
unknown#

if(rangein15Sec
rangein1
//printf("%ld",r
snprintf(buf, si
write(s, buf, st

process_cmd(char *c
char buf[100];
char *pch = strtok(cmd, "|");
switch(*pch)
{
case 'r': //register
pch = strtok (NULL, "|");
long start_point = atol(pch);
pch = strtok (NULL, "|");

compute_v1.c" selected (4.6 KB)

unknown# ./manage 55
connection successful
Client registered successfully. Start compute from 1 to 50001
new range starts! Start from 50001 to 68369
new range starts! Start from 68369 to 86737
new range starts! Start from 86737 to 139972
new range starts! Start from 139972 to 156570
new range starts! Start from 156570 to 170483
new range starts! Start from 170483 to 182449
new range starts! Start from 182449 to 193875
new range starts! Start from 193875 to 205031
new range starts! Start from 205031 to 215993
new range starts! Start from 215993 to 226481
new range starts! Start from 226481 to 236511
new range starts! Start from 236511 to 246295
new range starts! Start from 246295 to 255721
new range starts! Start from 255721 to 264794
^Csig invoked
unknown# ./compute localhost 55
connection successful
Client registered successfully.
new range starts! Start from 314794 to 322215
kill message received
unknown#

^Cunknown# ^C
unknown#
unknown# ./report localhost 55 -k
connection successful
Manager was killed by reporter.
Perfect Numbers: [6]28[496]8128 are found by Machine
1
the name of machine 1 is localhost
This machine has tested 193874 numbers
Currently, it is workin
g on range from 182449 to 193875
-----
unknown#
```