

```
// In a terminal, log in to Discovery & go to the assignment 5 directory
aiichironakano@MacBook-Pro-34 ~ % ssh anakano@discovery.usc.edu
[anakano@discovery1 ~]$ cd cs596/as05
// Edit hmd.h to run with 1 MPI rank (vproc[3]={1,1,1},nproc=1) & 1|2|4|8 threads
// and compile hmd.c with resulting executables named hmd1|2|4|8, respectively
```

vthrd[3] in hmd.h	nthrd in hmd.h	Executable
{1,1,1}	1	hmd1
{2,1,1}	2	hmd2
{2,2,1}	4	hmd4
{2,2,2}	8	hmd8

```
[anakano@discovery1 as05]$ mpicc -O -o hmd1 hmd.c -lm -fopenmp
[anakano@discovery1 as05]$ mpicc -O -o hmd2 hmd.c -lm -fopenmp
[anakano@discovery1 as05]$ mpicc -O -o hmd4 hmd.c -lm -fopenmp
[anakano@discovery1 as05]$ mpicc -O -o hmd8 hmd.c -lm -fopenmp
```

```
// In another terminal, transfer a necessary file from laptop to discovery
aiichironakano@MacBook-Pro-34 csci596-as05 % sftp anakano@discovery.usc.edu
sftp> cd cs596/as05
sftp> put hmd-scale.sl
```

```
// In the first terminal (ssh), edit pmd.in for part 3 of assignment 5
```

```
[anakano@discovery1 as05]$ vi pmd.in
[anakano@discovery1 as05]$ more pmd.in
24 24 24
0.8
1.0
0.005
100
101
```

```
// Run the script for a strong-scaling test
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```
[anakano@discovery1 as05]$ sbatch hmd-scale.sl
Submitted batch job 26358648
```

```
// In the second terminal (sftp), transfer the output file from Discovery to laptop
```

```
sftp> get hmd-scale.out
sftp> exit
```