I. Start the MPI environment
mpdboot –n 8 –f mpd.hosts
(mpdboot is a Python script that boots the MPICH2 engine by spawning MPICH2 supervisory processes on nodes specified by file mpd.hosts)

II. Track the MPI environment
mpdtrace –l

III. A simple helloworld program
1. Look at the content of hello.c
   more hello.c
2. Compilation
   mpicc hello.c –o hello.out
3. Run the MPI program on 4 nodes
   mpirun –np 4 ./hello.out
4. Run the MPI program on 8 nodes
   mpirun –np 8 ./hello.out

Question: What will happen if you run command “mpirun –np 10 ./hello.out”

IV. A modified helloworld program
1. Look at the content of hello2.c
   more hello2.c
Question: What is the difference between hello2.c and hello.c?
2. Compilation
   mpicc hello2.c –o hello2.out
3. Run the MPI program on 8 nodes
   mpirun –np 8 ./hello2.out

Question: Run it one more time, are you going to get the same output?

V. A program to evaluate PI
1. Look at the content of cpi.c
   more cpi.c
2. Compilation
   mpicc cpi.c –o cpi.out
3. Run the MPI program on 1 nodes
   mpirun –np 1 ./cpi.out

Questions:
Change the number of CPU to be 2. Rerun the job. What is the wall clock time now?
Change the number of CPU to be 4. Rerun the job. What is the wall clock time now?
Change the number of CPU to be 8. Rerun the job. Again, what is the wall clock time?
How about 16?