Running MPI examples on a single machine

Note: this tutorial assumes that you are using a text editor that you are comfortable with (be it vim, nano, emacs…)

First, you will need to install message passing interface for python:  
  
$ sudo apt-get install openmpi-bin libopenmpi-dev python-mpi4py

…

Pip also works:  
$pip install mpi4py  
$pip3 install mpi4py

At this point, all of the MPI libraries are installed, and we are ready to write parallelized code! To get started, we are going to need some sample code. Using version control software called git, we are going to “clone” a repository developed by our students at SDSC. For our purposes, this step is just downloading a directory. (Git is a powerful version control system that enables developers to share and update files, preserving changes and allowing branches. We are just using Git to Get a copy of some shared code.)  
  
$ git clone https://github.com/sdsc/sandbox-cluster-guide.git

If you don’t have git:  
$ sudo apt-get install git  
  
Finally, a good tutorial!  
Jeremy Bejarano’s “A Python Introduction to Parallel Computing with MPI”  
http://materials.jeremybejarano.com/MPIwithPython