Job Submission Assignment

For this assignment we are going to submit your first parallel job on the Fulton supercomputer. I have provided the program file that we will run. You will create a SLURM scheduler script that will submit the job. You will then view the output.

Email back the output as well as the *jobid* that was assigned your job to verify that you have completed the exercise.

- Take the file "testJob" and copy it into your FSL home directory
- You may have to give the file “executable” permissions. The system probably won’t immediately know that the files is an executable. To do this, use the command `chmod +x testJob`
- Go to the Fulton Supercomputing Website and find the Job Script Generator and follow these directions to generate the appropriate script.
- Create a script that uses 4 processes (un-check the box that says "Limit this job to one node")
    - Change wall time to 5 seconds
    - Give the job a name
    - Check the box "Run with mpiexec"
    - Set memory per processor to 10 MB per processor
    - in the "program (including path)" field, you can find the path of where you saved the file on FSL by typing `PWD`. If you highlight the text in the terminal, this will copy the text to your clipboard. (Also, just FYI, you can paste into the terminal from the clipboard by right clicking on the mouse.) Just go ahead and paste the text into the field on the script generator. Then add a slash and the filename. For example, mine appears like follows: `/fslhome/jmbejara/testJob`
    - give a filename to output the file to. I would use something like "testJob.out"
- Now copy the generated script from the website and save it on FSL with a ".sh" extension. For example, "testJob.sh"
- use the scheduler command qsub to submit the job. Example: `sbatch testJob.sh`
  If you forgot any of the scheduler commands, you can view them here:
  https://marylou.byu.edu/scheduler_commands.php
  if you use squeue, be sure to add the "-u" option show that you get the info you're looking for. For example, my username is jmbejara. So I would type the following:

  ```
  squeue -u jmbejara
  ```

- when the job completes, open the output file that you chose. You will know if you got the correct output.
- to complete the assignment, email back the output as well as the *jobid* to verify that you completed the assignment.