SALIH KILICLI – STAT 624 HOMEWORK 5

—— SETUP ——

dos2unix HW5.job   # Otherwise it gives error about line breakers

squeue –u $username

pestat -u $username

lnu joib_id

sacct -X -j job_id

myproject -l

I have written a bash file including "Mandel.c" from previous homework in order to submit it to the Terra cluster as a batch job. In order to make sure it runs on the **'medium'** queue I first set the wall clock limit to 3 hours since max limit for **'short'** queue is 2 hours and for **'medium'** is 1 day. However, when I run the job it was pending for a long time. Then, I tried to use - -**partition=medium** command to request a medium queue and it works for Terra. As a result, I changed the wall clock limit to 3 mins and the bash file and outputs of running specific commands are given below.

—— HW5.job file ——

#!/bin/bash

ENVIRONMENT SETTINGS

#SBATCH - -export=NONE   # Do not propagate environment

#SBATCH - -get-user-env=L   # Replicate login environment

##NECESSARY JOB SPECIFICATIONS

#SBATCH - -job-name=HW5   # Change job name to HW5

#SBATCH - -time=00:03:00   # Set the wall clock limit to 3 min

#SBATCH - -nodes=1   # Request 1 node

#SBATCH - -ntasks-per-node=10   # Request 10 cores for each node

#SBATCH - -mem=2G   # Request 2 GB per node

#SBATCH - -partition=medium   # Request medium queue

#SBATCH - -output=stdout.%j   # Send stdout and stderr to :stdout.[jobid]"

```
# load required modules

echo "loading module: intel/2019"

module load intel/2019

# This number should match number of processor cores requested

export OMP_NUM_THREADS=10

for i in `seq 1 30`; do              # Prints the date 30 times so that program run 30s late

    echo "$i: $(date)"

    sleep 1                          # Change sleep time to 10 to trigger over time limit error

done


echo "..... Running Mandel C File ....."

# run your program

mandel.C
```

----- FINAL REMARKS -----

Problem 1: Image below is the output of running job file on Terra and other commands.

```
[math3mantic@terra2 hw5]$ ls
HW5.job  mandel  mandel.c
[math3mantic@terra2 hw5]$ dos2unix HW5.job
dos2unix: converting file HW5.job to Unix format ...
[math3mantic@terra2 hw5]$ sbatch HW5.job
Submitted batch job 3243715
(from job_submit) your job is charged as below
         Project Account: 122753717080
         Account Balance: 4999.892222
         Requested SUs:   0.5
[math3mantic@terra2 hw5]$ squeue -u math3mantic
JOBID       NAME          USER              PARTITION        NODES CPUS STATE     TIME      TIME_LEFT  START_TIME           REASON          NODELIST
3243715     HW5           math3mantic       medium           1     10   RUNNING   0:03      2:57       2019-10-07T12:00:5 None             tnxt-0461
[math3mantic@terra2 hw5]$ pestat -u math3mantic
Select only user math3mantic
Hostname     Partition   Node Num_CPU CPUload Memsize Freemem  Joblist
                         State Use/Tot  (MB)    (MB)  JobId User ...
tnxt-0461        long       mix 10  28   0.04*  57344  57602  3243715 math3mantic
[math3mantic@terra2 hw5]$ lnu 3243715
JOBID       NAME          USER              PARTITION        NODES CPUS STATE     TIME      TIME_LEFT  START_TIME
3243715     HW5           math3mantic       medium           1     10   RUNNING   0:25      2:35       2019-10-07T12:00:52

HOSTNAMES   CPU_LOAD  FREE_MEM   MEMORY    CPUS(A/I/O/T)
tnxt-0461   0.04      57602      57344     10/18/0/28
[math3mantic@terra2 hw5]$ sacct -X -j 3243715
    JobID          JobName           User    NCPUS  NNodes    State     Elapsed   CPUTime          Start                 End    ReqMem
   NodeList
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   3243715              HW5     math3mantic      10        1   RUNNING    00:00:34  00:05:40 2019-10-07T12:00:52          Unknown      2Gn
   tnxt-0461
[math3mantic@terra2 hw5]$ myproject -l
=================================================================================
         List of math3mantic's Project Accounts
---------------------------------------------------------------------------------
|  Account   | FY | Default | Allocation |Used & Pending SUs|  Balance |    PI      |
---------------------------------------------------------------------------------
|122753717080| 2020|    Y|    5000.00|           -0.11|   4999.89|Schmiediche, Henrik |
---------------------------------------------------------------------------------
[math3mantic@terra2 hw5]$
```