HPCC Workshop Slide Summary

pwd	print working directory
cd	change working directory
ls	list directory

.	current directory
..	parent directory
~	home directory
-	previous directory

mkdir	make directory
cp	copy file
cat	display contents of text file
rm	remove file

chmod	Change permissions (change mode)
ls -a -l	List all long (including permissions)

qsub	Submit a job to the queue
qdel	Delete a job from the queue
showq	Show the current job queue
checkjob	Check the status of the current job
showstart	Show the estimated start time of the job

```
#!/bin/bash –login
#PBS –l walltime=00:01:00
#PBS –l nodes=1:ppn=1,feature=gbe


cd ${PBS_O_WORKID}
./hello


qstat –f ${PBS_JOBID}
```

```
#!/bin/bash –login
#PBS –l walltime=00:05:00,mem=2gb
#PBS –l nodes=1:ppn=1,feature=gbe
#PBS –t 1-19


cd ${PBS_O_WORKDIR}


mkdir ${PBS_ARRAYID}
Cd ${PBS_ARRAYID}
../myprogram ../${PBS_ARRAYID}.in > ${PBS_ARRAYID}.out
qstat –f ${PBS_JOBID}
```

```bash
#!/bin/bash -login
#PBS -l walltime=00:05:00
#PBS -l nodes=1:ppn=1,feature=gbe
#PBS -t 1-100


cd ${PBS_O_WORKID}


./myprogram ${PBS_ARRAYID}


qstat -f ${PBS_JOBID}
```

```
./myprogram -a 100 -z 3023
./myprogram dosomething different
./myprogram
./myprogram -s 100
./myprogram -s 200
./myprogram -s 300
./myprogram -w 400
./myotherporgram
./mythirdprogram
```

```bash
#!/bin/bash -login
#PBS -l walltime=00:05:00
#PBS -l nodes=1:ppn=1,feature=gbe
#PBS -t 1-100


cd ${PBS_O_WORKID}


cmd=`tail -n ${PBS_ARRAYID} commands.txt | head -n 1`
echo ${cmd}
${cmd}


qstat -f ${PBS_JOBID}
```

```bash
#!/bin/bash -login
#PBS -l walltime=00:05:00
#PBS -l nodes=1:ppn=1,feature=gbe
#PBS -t 1-100
cd ${PBS_O_WORKID}
sleep $(( ${RANDOM} % 100 ))

for file in *.in; do
  output="./${file%  }.out"
  if [ ! -f ${output} ]; then
    touch ${output}
    ./myprogram ${file} > ${output}
    qsub -t 0 -N ${PBS_JOBNAME} ${0}
    exit 0
  fi
done
```

```bash
#!/bin/bash -login
#PBS -l walltime=00:01:00
#PBS -l nodes=1:ppn=5,feature=gbe

cd ${PBS_O_WORKDIR}
export OMP_NUM_THREADS=${PBS_NUM_PPN}

./simpleOMP

qstat -f ${PBS_JOBID}
```

```bash
#!/bin/bash -login
#PBS -l nodes=10:ppn=1
cd ${PBS_O_WORKDIR}
mpirun <program_name>
```

```bash
#!/bin/bash -login
#PBS -l nodes=10:ppn=1
cd ${PBS_O_WORKDIR}
module swap OpenMPI MVAPICH
mpiexec <program_name>
```