```
ssh dev-intel10

pwd
cd /mnt/scratch/
ls
cd ~

man qsub

cat .bashrc
mkdir hpccworkshop
cd ./hpccworkshop

module list
module avail
powertools


module load powertools
powertools
getexample
getexample helloworld


cd ~/hpccworkshop/helloworld
ls –la
ls –la > numOfLines
cat numOfLines
wc -l * | sort -n

cd ~/hpccworkshop/helloworld
ls –la
chmod u+x minlines
ls -la
./minlines

env
echo ${MACHTYPE}
export MYVAR="Hello World"
echo ${MYVAR}

pwd
${CC} -O3 -o hello hello.c
./hello

xeyes
firefox &
ps <- Find the process ID #### for firefox
kill ####
```

```
cd ~/hpccworkshop/helloworld
nano hello.qsub
qsub simple.qsub
showq

qstat –f ######
showstart –e all ######
```

ADVANCED WORKSHOP

```
module load powertools
powertools

dev

nano ~/.bashrc

getexample
getexample blender_farm
cd ./blender_farm
less blender_farm.qsub
qsub blender_farm.qsub

getexample bowtie
cd ./bowtie
less ./bowtie.qsub
qsub bowtie.qsub

module unload OpenMPI
module load MVAPICH
module swap OpenMPI MVAPICH

module load powertools
getexample helloMPI
./README

echo $HOST >> ./hostfile
echo $HOST >> ./hostfile
echo $HOST >> ./hostfile
echo $HOST >> ./hostfile
mpirun –np 4 –hostfile ./hostfile helloMPI
```