Lab Assignment 3

Basic Shell Programming

1. Write a shell script program to execute ls, date and echo commands repeatedly.

Code:

```
i=1

while (($i>0))

do

ls

date

echo hi

done
```

```
arr.sh            capitals1.txt  lab3a.sh  mycapitals  mynewdir  outputfile.txt
caloperations     capitals2.txt  list      mydate.txt  mystates  pn.sh
caloperations.sh  capitals3.txt  medir     mydir       oe.sh     pn.sh.save
capitals.txt      gn.sh          minedir   mynewdate   ourdate   ppl.txt
Thu Sep 15 23:32:10 IST 2022
hi
arr.sh            capitals1.txt  lab3a.sh  mycapitals  mynewdir  outputfile.txt
caloperations     capitals2.txt  list      mydate.txt  mystates  pn.sh
caloperations.sh  capitals3.txt  medir     mydir       oe.sh     pn.sh.save
capitals.txt      gn.sh          minedir   mynewdate   ourdate   ppl.txt
Thu Sep 15 23:32:10 IST 2022
hi
arr.sh            capitals1.txt  lab3a.sh  mycapitals  mynewdir  outputfile.txt
caloperations     capitals2.txt  list      mydate.txt  mystates  pn.sh
caloperations.sh  capitals3.txt  medir     mydir       oe.sh     pn.sh.save
capitals.txt      gn.sh          minedir   mynewdate   ourdate   ppl.txt
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caloperations.sh  capitals3.txt  medir     mydir       oe.sh     pn.sh.save
capitals.txt      gn.sh          minedir   mynewdate   ourdate   ppl.txt
Thu Sep 15 23:32:10 IST 2022
hi
```

2. Write a shell script program to show the details related to shell, path and home directories of the user.

Code:

echo SHELL : echo $SHELL

echo PATH : echo $PATH

echo HOME Directory : echo $HOME

```
tanmaypol@Tanmay-laptop:~$ nano assgn3ps2.sh
tanmaypol@Tanmay-laptop:~$ bash assgn3ps2.sh
SHELL : echo /bin/bash
PATH : echo /usr/local/sbin:/usr/local/bin:/usr/sbin:/usr/bin:/sbin:/bin:/usr/games:
/usr/local/games:/usr/lib/wsl/lib:/mnt/c/Program Files (x86)/Common Files/Oracle/Jav
a/javapath:/mnt/c/Users/Dell_owner/Desktop/Softwares/bin:/mnt/c/WINDOWS/system32:/mn
t/c/WINDOWS:/mnt/c/WINDOWS/System32/Wbem:/mnt/c/WINDOWS/System32/WindowsPowerShell/v
1.0/:/mnt/c/WINDOWS/System32/OpenSSH/:/mnt/c/Program Files (x86)/mingw-w64/i686-8.1.
0-posix-dwarf-rt_v6-rev0/mingw32/bin:/mnt/c/Program Files/Git/cmd:/mnt/c/Program Fil
es (x86)/GnuWin32/bin:/mnt/c/Users/Dell_owner/AppData/Local/Programs/Python/Python36
/Scripts/:/mnt/c/Users/Dell_owner/AppData/Local/Programs/Python/Python36/:/mnt/c/Use
rs/Dell_owner/AppData/Local/Programs/Python/Python39/Scripts/:/mnt/c/Users/Dell_owne
r/AppData/Local/Programs/Python/Python39/:/mnt/c/Users/Dell_owner/AppData/Local/Micr
osoft/WindowsApps:/mnt/c/Users/Dell_owner/AppData/Local/Programs/Microsoft VS Code/b
in:/mnt/c/Program Files/Java/jdk1.8.0_321/bin:/mnt/c/src/flutter/flutter/bin:/snap/b
in
HOME Directory : echo /home/tanmaypol
```

3. Write a shell script program to create two files. The name of the files will be passed by user using read function.

Code:

echo enter name for 1st file

read n1

echo enter name for 2nd file

read n2

touch $n1

touch $n2

```
tanmaypol@Tanmay-laptop:~$ nano lab3c.sh
tanmaypol@Tanmay-laptop:~$ ls
arr.sh            capitals.txt   lab3a.sh  mycapitals  mystates        pn.sh.save
assgn3ps2.sh      capitals1.txt  lab3c.sh  mydate.txt  oe.sh           ppl.txt
assgn3q2.sh       capitals2.txt  list      mydir       ourdate
caloperations     capitals3.txt  medir     mynewdate   outputfile.txt
caloperations.sh  gn.sh          minedir   mynewdir    pn.sh
tanmaypol@Tanmay-laptop:~$ chmod +x lab3c.sh
tanmaypol@Tanmay-laptop:~$ bash lab3c.sh
enter name for 1st file
G1
enter name for 2nd file
G2
tanmaypol@Tanmay-laptop:~$ ls
G1             caloperations.sh  lab3a.sh    mydate.txt  ourdate
G2             capitals.txt      lab3c.sh    mydir       outputfile.txt
arr.sh         capitals1.txt     list        mynewdate   pn.sh
assgn3ps2.sh   capitals2.txt     medir       mynewdir    pn.sh.save
assgn3q2.sh    capitals3.txt     minedir     mystates    ppl.txt
caloperations  gn.sh             mycapitals  oe.sh
```

4. Write a shell script program to create two files. The name of the files will be passed by user using command line arguments.

Code:

touch $1

touch $2

```
tanmaypol@Tanmay-laptop:~$ nano lab3d.sh
tanmaypol@Tanmay-laptop:~$ chmod +x lab3d.sh
tanmaypol@Tanmay-laptop:~$ bash lab3c.sh G3 G4
enter name for 1st file

enter name for 2nd file

touch: missing file operand
Try 'touch --help' for more information.
touch: missing file operand
Try 'touch --help' for more information.
tanmaypol@Tanmay-laptop:~$ bash lab3d.sh G3 G4
tanmaypol@Tanmay-laptop:~$ ls
G1             caloperations     lab3a.sh    mydate.txt  outputfile.txt
G2             caloperations.sh  lab3c.sh    mydir       pn.sh
G3             capitals.txt      lab3d.sh    mynewdate   pn.sh.save
G4             capitals1.txt     list        mynewdir    ppl.txt
arr.sh         capitals2.txt     medir       mystates
assgn3ps2.sh   capitals3.txt     minedir     oe.sh
assgn3q2.sh    gn.sh             mycapitals  ourdate
```

5. Write a shell script program to create two directories. The name of the files will be passed by user using read function.

Code:

```
echo enter 1st dir name

read d1

echo enter 2nd dir name

read d2

mkdir $di $d2
```

```
tanmaypol@Tanmay-laptop:~$ nano lab3e.sh
tanmaypol@Tanmay-laptop:~$ chmod +x lab3e.sh
tanmaypol@Tanmay-laptop:~$ ls
G1            caloperations     lab3a.sh  mycapitals  ourdate
G2            caloperations.sh  lab3c.sh  mydate.txt  outputfile.txt
G3            capitals.txt      lab3d.sh  mydir       pn.sh
G4            capitals1.txt     lab3e.sh  mynewdate   pn.sh.save
arr.sh        capitals2.txt     list      mynewdir    ppl.txt
assgn3ps2.sh  capitals3.txt     medir     mystates
assgn3q2.sh   gn.sh             minedir   oe.sh
tanmaypol@Tanmay-laptop:~$ bash lab3e.sh
enter 1st dir name
dir18
enter 2nd dir name
dir7
tanmaypol@Tanmay-laptop:~$ ls
G1            caloperations     gn.sh     minedir     oe.sh
G2            caloperations.sh  lab3a.sh  mycapitals  ourdate
G3            capitals.txt      lab3c.sh  mydate.txt  outputfile.txt
G4            capitals1.txt     lab3d.sh  mydir       pn.sh
arr.sh        capitals2.txt     lab3e.sh  mynewdate   pn.sh.save
assgn3ps2.sh  capitals3.txt     list      mynewdir    ppl.txt
assgn3q2.sh   dir7              medir     mystates
```

6. Write a shell script program to create two directories. The name of the files will be passed by user using command line arguments.

Code: mkdir $1 $2

```
tanmaypol@Tanmay-laptop:~$ nano lab3f.sh
tanmaypol@Tanmay-laptop:~$ chmod +x lab3f.sh
tanmaypol@Tanmay-laptop:~$ bash lab3f.sh
mkdir: missing operand
Try 'mkdir --help' for more information.
tanmaypol@Tanmay-laptop:~$ bash lab3f.sh dir9 dir 19
tanmaypol@Tanmay-laptop:~$ ls
G1            caloperations     dir7      lab3f.sh    mynewdate       pn.sh.save
G2            caloperations.sh  dir9      list        mynewdir        ppl.txt
G3            capitals.txt      gn.sh     medir       mystates
G4            capitals1.txt     lab3a.sh  minedir     oe.sh
arr.sh        capitals2.txt     lab3c.sh  mycapitals  ourdate
assgn3ps2.sh  capitals3.txt     lab3d.sh  mydate.txt  outputfile.txt
assgn3q2.sh   dir               lab3e.sh  mydir       pn.sh
```

7. Write shell script to change the name of a file .Ask from user old filename and new filename.

Code:

```
read -p "enter oridinal filename" org

read -p "enter renamed filename" ren

mv $org $ren
```

```
tanmaypol@Tanmay-laptop:~$ nano lab3g.sh
tanmaypol@Tanmay-laptop:~$ bash lab3g.sh
enter oridinal filenameG1
enter renamed filenameG2
tanmaypol@Tanmay-laptop:~$ ls
G2            caloperations.sh  dir9      lab3g.sh    mynewdate       pn.sh.save
G3            capitals.txt      gn.sh     list        mynewdir        ppl.txt
G4            capitals1.txt     lab3a.sh  medir       mystates
arr.sh        capitals2.txt     lab3c.sh  minedir     oe.sh
assgn3ps2.sh  capitals3.txt     lab3d.sh  mycapitals  ourdate
assgn3q2.sh   dir               lab3e.sh  mydate.txt  outputfile.txt
caloperations dir7              lab3f.sh  mydir       pn.sh
```

8. Write a shell script to find the largest number among three numbers.

Code:

```
if (($1>$2&&$1>$3))

then

echo $1 is greater

elif (($2>$1&&$2>$3))

then

echo $2 is greater

elif (($3>$1&&$3>$2))

then
```

echo $3 is greater

else

echo all are same

fi

```
tanmaypol@Tanmay-laptop:~$ nano lab3h.sh
tanmaypol@Tanmay-laptop:~$ bash kab3h.sh  4 5 6
bash: kab3h.sh: No such file or directory
tanmaypol@Tanmay-laptop:~$ bash lab3h.sh 4 5 6
6 is greater
```

9. Write shell script to create three files f1, f2, f3 using for loop

Code:

i=3

c=1

while((i>0))

do

touch "f$i"

echo f$i

i=$((i-c))

done

```
tanmaypol@Tanmay-laptop:~$ nano lab3i.sh
tanmaypol@Tanmay-laptop:~$ bash lab3i.sh
f3
f2
f1
tanmaypol@Tanmay-laptop:~$
```

10. Write a shell script to display date and time. Assume 1 sec delay.

Code:

watch –n 1 date

```
Fri Sep 16 00:26:27 IST 2022
```