**ASSIGNMENT – 9**

**Shell Script**

**1. Write a menu-driven shell script to implement a simple calculator with simple operations (Add,Subtract,Multiply and Divide) using select and case statements. Use command line arguments to provide input to the calculator.**

shivanirudh@shiva-ideapad:~/Desktop/UNIX/ShellScript2$ nano Calc.sh

#!/bin/bash

echo " Choose operation "

select op in "+" "-" "\*" "/"

do

case $op in

"+") let sum=$1+$2

echo "Sum is " $sum;;

"-") let diff=$1-$2

echo "Difference is " $diff;;

"\*") let pdt=$1\*$2

echo "Product is " $pdt;;

"/") let qt=$1/$2

echo "Quotient is " $qt;;

esac

done

shivanirudh@shiva-ideapad:~/Desktop/UNIX/ShellScript2$ ./Calc.sh 5 6

Choose operation

1) +

2) -

3) \*

4) /

#? 2

Difference is -1

#? 1

Sum is 11

#? 3

Product is 30

#? 4

Quotient is 0

#?

**2. Write a shell script to print the name of the script, number of arguments and the number of arguments that are passed.**

shivanirudh@shiva-ideapad:~/Desktop/UNIX/ShellScript2$ nano Sample.sh

#!/bin/bash

echo "Name of script " $0

echo "Number of arguments " $#

echo "The arguments are :"

for parm

do

echo $parm

done

shivanirudh@shiva-ideapad:~/Desktop/UNIX/ShellScript2$ ./Sample.sh 1 2 3 4 5

Name of script ./Sample.sh

Number of arguments 5

The arguments are :

1

2

3

4

5

**3. Write a shell script to read a text file name and count the number of lines using function. Pass the file name as an argument to the function. Return the count and print it.**

shivanirudh@shiva-ideapad:~/Desktop/UNIX/ShellScript2$ nano lineCount.sh

#!/bin/bash

function count(){

echo $(wc -l < $1)

}

count $1

shivanirudh@shiva-ideapad:~/Desktop/UNIX/ShellScript2$ ./lineCount.sh Sample.sh

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**4. Write a shell function string-compare that takes two strings s1 and s2 as arguments and returns 1 if s1 comes before s2 by ASCII order, 0 if s1 is the same as s2, and 2 if s1 comes after s2.**

shivanirudh@shiva-ideapad:~/Desktop/UNIX/ShellScript2$ nano StrCmp.sh

#!/bin/bash

function cmp(){

if [[ $1 < $2 ]]; then

echo "$1 is lesser"

elif [[ $1 > $2 ]]; then

echo "$1 is greater"

else

echo "Both are same"

fi

}

cmp $1 $2

shivanirudh@shiva-ideapad:~/Desktop/UNIX/ShellScript2$ ./StrCmp.sh hi bye

hi is greater

shivanirudh@shiva-ideapad:~/Desktop/UNIX/ShellScript2$ ./StrCmp.sh bye hi

bye is lesser

shivanirudh@shiva-ideapad:~/Desktop/UNIX/ShellScript2$ ./StrCmp.sh bye bye

Both are same

**5. Develop an interactive script to maintain a database of employees. The database is in the format employee\_name rate\_per\_hour hours\_worked as illustrated below**

**Beth 4.00 0**

**Dan 3.75 0**

**Kathy 4.00 10**

**Mark 5.00 20**

**Mary 5.50 22**

**Susie 4.25 18**

**The script should allow users to**

**1. List the records**

**2. Search for an employee**

**3. Modify the rate\_per\_hour or hours\_worked of an employee**

**4. Delete an employee**

**5. Quit**

#!/bin/bash

f=$1

tmp="tmp.txt"

select option in "List" "Search" "Modify rate" "Modify hours" "Delete" "Exit”

do

if [[ $option == "Exit" ]];

then

break

elif [[ $option == "List" ]];

then

cat $f

elif [[ $option == "Search" ]];

then

read -p "Enter name" name

grep $name $f

elif [[ $option == "Modify rate" ]]

then

read -p "Enter name and new rate " name rate

awk -v n="$name" -v r="$rate" '{if($1 ~ n)$2=r;print $0}'$

elif [[ $option == "Modify hours" ]]

then

read -p "Enter name and new hours " name hours

awk -v n="$name" -v h="$hours" '{if($1 ~ n)$3=h;print $0}$

elif [[ $option == "Delete" ]];

then

read -p "Enter name to delete" name

cat $f|awk -v n="$name" '{if($1 !~ n)print $0}' > $tmp

fi

done

cp $tmp $f

cat $f

shivanirudh@shiva-ideapad:~/Desktop/UNIX/ShellScript2$ ./database.sh file.txt

1) List 3) Modify rate 5) Delete

2) Search 4) Modify hours 6) Exit

#? 1

Beth 4.00 0

Dan 3.75 0

Kathy 4.00 10

Mark 5.00 25

Mary 5.50 22

Susie 4.25 18

#? 2

Enter nameSusie

Susie 4.25 18

#? 3

Enter name and new rate Mary 6.00

#? 4

Enter name and new hours Mark 20

#? 5

Enter name to deleteKathy

#? 6

Beth 4.00 0

Dan 3.75 0

Mark 5.00 25

Mary 5.50 22

Susie 4.25 18