S.Y.B.Tech
Computer Engineering
Lab. : CE 2207 Operating Systems Laboratory (OSL)

Assignment # 6: (Group- 'A1')

Title: Write a menu-driven shell script for Arithmetic operations (+,-,*,/)

Objective: To implement Shell Script using shell commands.

Theory:

Link to perform Shell Script (online):

1. https://ideone.com/dxQvGC
   (give: I/P in input window and then save, run)
2. https://www.jdoodle.com/test-bash-shell-script-online/
3. https://www.onlinegdb.com/ (select language is Bash)

1. **echo** : used to display a line of text/string
   Eg: echo "Enter two nos."
   Eg: echo -n "Enter the number: " ('-n' is used to go to new line)

2. **read** : used to read input from user.
   Eg: read ch

3. '**$**' <**var-name**> - To declare/print value of variable in shell script
   Syntax : $ var-name
   Eg: $num1, $a

4. ' # '- # at beginning of the line used for single line comment.
   For multiple lines use '" ..... "' at start and end of lines.
   Eg: # This is linux
   Eg: '" This is linux.
   It is free source operating systems "'

5. **While-loop:**

Syntax: while test $choice -eq 1
do
statement-1
statement-2

:

done # end of while-do

6. **For Loop**

Syntax:

for ((initialization; condition ; increment/decrement))

do

statement-1

statement-2

:

:

done

7. **if-statement:**

Syntax:

if [condition for checking]

then

<set of commands to be executed>

fi # end of if **(fi is reverse of if)**

Eg: if [$i != "y"]

then

exit

fi

8. **if-else :**

Syntax:

if [condition for checking]

then

<set of commands to be executed>

else

<set of commands to be executed>

fi

9. **Case-control structure:**

Syntax:

case $ch in

1)echo "Addition"

:

:

;; # break statement in Shell-script

```
2)echo "Subtraction"
:
:
;;          # break statement in Shell-script
esac        # closing of case-control-structure (Reverse of case is "esac")
```

Sample scripts

1. **to print Hello world**

```
#!/bin/bash
echo "Hello world"
```

2. **To accept value from user**

```
#!/bin/bash
echo "Hello all"
echo "Enter the value"
read val
echo "Value is $val"
```

3. **To add 2 nos.**

```
#!/bin/bash
echo "Addition Program"
#Add 10 with 20 and store the value in n
((n=10+20))
#Print the value of n
echo " addition is $n"
```

4. **Script to add 2 nos. accepted from user**

```
#!/bin/bash
echo "Addition Program"
echo "Enter no1"
read no1
echo "Enter no2"
read no2
((n=no1+no2))
#Print the value of n
echo " addition is $n"
```

5. **Script to check no. Is even or odd**.

```
#!/bin/bash
```

```
echo "Enter the value"
read val
echo "Value is $val"
if (( $val % 2 == 0 ))
then
    echo "The number is even"
else

    echo "The number is odd"
fi
```

6. **Shell Script for printing 1,2,.....10**

```
#!/bin/bash
i=1
while [ $i -le 10 ]   # use of while loop
do
echo -n "$i"
((i++))
done
```

7. **Script to print 10,9,8.....1 using For-loop**

```
#!/bin/bash
for (( counter=10; counter>0; counter-- ))        # use of for-loop
do
echo -n "$counter "
done
printf "\n"
```

8. **To find bigger no. between 2 nos.**

```
#!/bin/bash
echo "Enter a number: "
read num1
echo "Enter another number: "
read num2
if [[ $num1 -gt $num2 ]]
then
echo "Number1 is greater than Number2"
else
echo "Number2 is greater than Number1"
fi
```

(NOTE: If the above scripts are done, Do menu driven script for calculator (+,-,*,/,%))