## ASSIGNMENT 1 ITW LAB

**Name - ARTH TANDAN**

**BT - BT23ECE052**

**QUESTION 1-**

#!/bin/bash

echo "arth tandan "

echo "Calculator"

echo "Enter num1:"

read a

echo "Enter num2:"

read b

echo "Enter the operation want to perform"

echo "1 for Addition”

echo "2 for Subtraction"

echo "3. for Multiplication”

echo "4 for Division"

read op

case $op in

1)result=$(echo "$a+$b" | bc);;

2)result=$(echo "$a-$b" | bc);;

3)result=$(echo "$a\*$b" | bc);;

4)result=$(echo "scale=2; $a / $b" | bc);;

esac

echo "RESULT: $result"

#**OUTPUT ->**

2 + 3 is: 5

2 - 3 is: -1

2 \* 3 is: 6

9 / 3 is:3

**QUESTION 2 -**

**CODE -**

array=(10 34 87 98 106)

sum=0

for num in "${array[@]}"; do

sum=$(($sum + $num))

done

echo "Sum of array elements: $sum"

# Output ->

Sum of array elements: 335

Q3]

Code ->

array\_string=("ARTH ” "studies" "in" "IIIT")

echo "Original array: ${array\_string[@]}"

array\_string+=("No " "yes" "IIIT" "Nagpur")

echo "Modified(concatinated) array: ${array\_string[@]}"

**OUTPUT ->**Original array: ARTH studies in IIIT

Modified(concatinated) array: ARTH studies in IIIT

No yes IIIT Nagpur

**Question -4**

**CODE**

count\_lines() {

local file="$1"

local flag=0

if [[ -f "$file" ]]; then

while IFS= read -r line; do

flag=$((flag + 1))

done < "$file"

echo "The number of lines in $file is: $flag"

else

echo "File does not exist: $file"

fi

}

echo "Enter the name of the file : "

read file\_name

count\_lines "$file\_name"

**OUTPUT** -Enter the name of the file :

abc.sh

The number of lines in abc.sh is: 27

**QUESTION 5**

Code =>

count\_lines() {

local file="$1"

local flag=0

if [[ -f "$file" ]]; then

while IFS= read -r line; do

flag=$((flag + 1))

done < "$file"

else

echo "File does not exist: $file"

fi

echo "$flag"

}

echo "Enter number of files:"

read N

Files=()

for ((i=0; i<N; i++)); do

echo "Enter the name of file $((i + 1)):"

read f

Files+=("$f")

done

total\_count=0

for f in "${Files[@]}"; do

flag=$(count\_lines "$f")

total\_count=$((total\_count + flag))

done

echo "Total number of lines in all the files are: $total\_count"

Output=>

Enter number of files:

2

Enter file name 1:

abc.sh

Enter file name 2:

sum.sh

Total number of lines in all the files is: 35

**Question 6**

Code =>

echo "Enter the directory path:"

read directory

if [[ ! -d "$directory" ]]; then

echo "Directory does not exist: $directory"

exit 1

fi

for item in "$directory"/\*; do

if [[ -f "$item" ]]; then

echo "File: $item"

elif [[ -d "$item" ]]; then

echo "Directory: $item"

else

echo "Other: $item"

fi

done

**Output**>Enter the directory path:

/root

File: /root/abc.sh

File: /root/abc1.sh

File: /root/abc4.sh

File: /root/abc5.sh

File: /root/abc6.sh

File: /root/stringsum.sh

File: /root/sum.sh