Assignment 1(b)

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CS-A Batch 3

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1. Basic Arithmetic Calculations

```
  GNU nano 6.2                          myfile.sh
a=10
b=20
val=`expr $a + $b`
echo "a + b : $val"
val=`expr $a - $b`
echo "a - b : $val"
val=`expr $a \* $b`
echo "a * b : $val"
val=`expr $b / $a`
echo "b / a : $val"
val=`expr $b % $a`
echo "b % a : $val"
```

OUTPUT:

```
disha21@disha21:~$ ./myfile.sh
a + b : 30
a - b : -10
a * b : 200
b / a : 2
b % a : 0
disha21@disha21:~$
```

2. Conditional statements

If-else

```
disha21@disha21: ~
  GNU nano 6.2                       conditional.sh
a=10
b=10
if [ $a == $b ]
then
echo " a is equal to b"
fi
if [ $a != $b ]
then
echo "a is not equal to b"
fi
```

OUTPUT:

```
disha21@disha21:~$ ./conditional.sh
 a is equal to b
disha21@disha21:~$
```

Switch case

```
disha21@disha21: ~
  GNU nano 6.2                          switch.sh
colour="blue";
case $colour in
#case 1
"red") echo "My favorite colour is red";;
#case 2
"blue") echo "My favorite colour is blue";;
#case 3
"green") echo "My favorite colour is green";;
esac
```

OUTPUT:

```
disha21@disha21:~$ nano switch.sh
disha21@disha21:~$ ./switch.sh
My favorite colour is blue
disha21@disha21:~$
```

3. Loops

```
disha21@disha21: ~
  GNU nano 6.2                          loops.sh
for a in 1 2 3 4 5 6 7 8 9 10
do
if [ $a == 5 ]
then
break
fi
echo "Iteration no $a"
done

a=0
while [ $a -lt 10 ]
do
echo $a
a=`expr $a + 1`
done

b=0
until [ $b -gt 10 ]
do
echo $b
b=`expr $b + 1`
done
```

OUTPUT:

```
disha21@disha21:~$ nano loops.sh
disha21@disha21:~$ ./loops.sh
Iteration no 1
Iteration no 2
Iteration no 3
Iteration no 4
0
1
2
3
4
5
6
7
8
9
0
1
2
3
4
5
6
7
8
9
10
disha21@disha21:~$
```

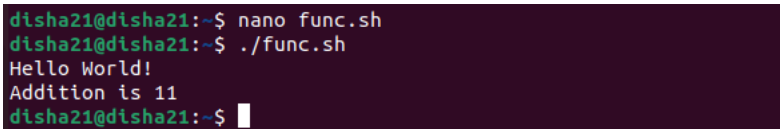
4. Command Line Argument

OUTPUT:

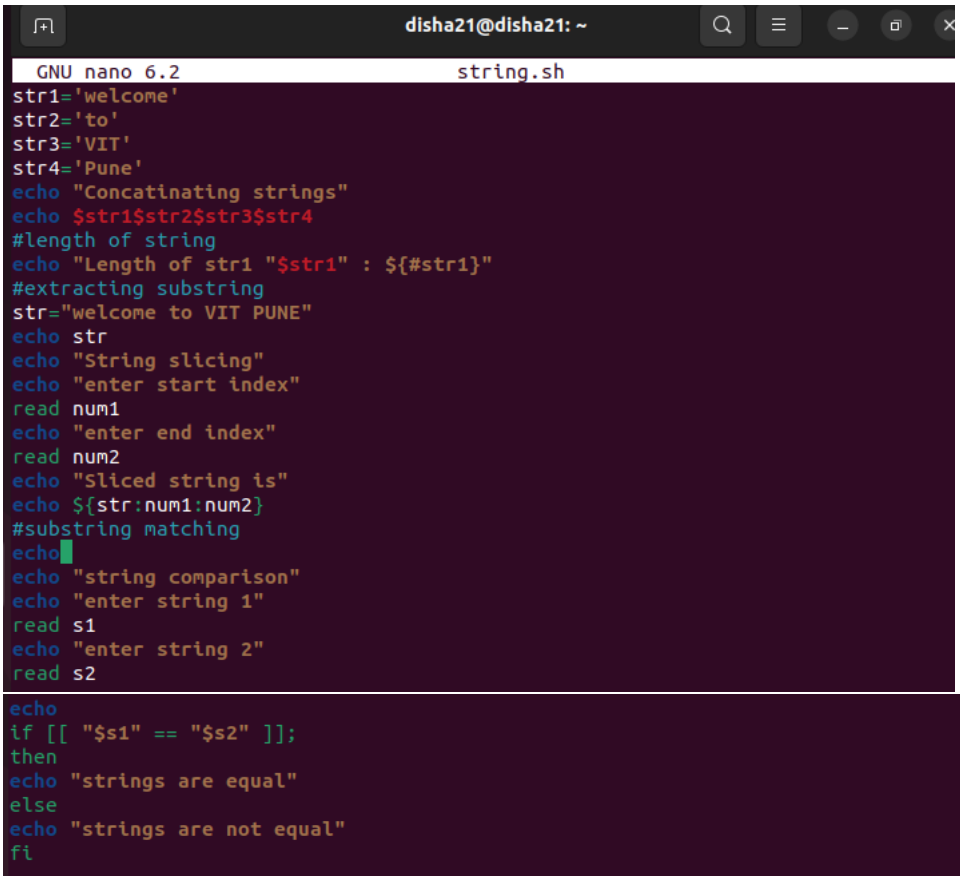
```
disha21@disha21:~$ nano linearg.sh
disha21@disha21:~$ chmod +x linearg.sh
disha21@disha21:~$ ./linearg.sh
disha21@disha21:~$ ./linearg.sh 1 2 3 4 5 6
the value of variable is 1
the value of variable is 2
the value of variable is 3
the value of variable is 4
the value of variable is 5
the value of variable is 6
disha21@disha21:~$ nano linearg.sh
disha21@disha21:~$
```

5. Functions

OUTPUT:



6. String operations



OUTPUT:

```
disha21@disha21:~$ chmod +x string.sh
disha21@disha21:~$ ./string.sh
Concatinating strings
welcometoVITPune
Length of str1 welcome : 7
str
String slicing
enter start index
2
enter end index
11
Sliced string is
lcome to VI

string comparison
enter string 1
disha
enter string 2
disha

strings are equal
disha21@disha21:~$
```

7. Arrays

```
disha21@disha21: ~
  GNU nano 6.2                          arrays.sh
#1 /bin/bash
echo "enter array size"
read n
echo "enter array elements: "
for (( i=0 ; i<n ; i++ ))
do
read arr[$i]
done

for (( i=0 ; i<n ; i++ ))
do
for (( j=$i ; j<n ; j++ ))
do
if [ ${arr[$i]} -gt ${arr[$j]} ];
then
t=${arr[$i]}
arr[$i]=${arr[$j]}
arr[$j]=$t
fi
done
done
echo "sorted array: "

for (( i=0 ; i<n ; i++ ))
do
echo ${arr[$i]}
done
```

OUTPUT:

```
disha21@disha21:~$ nano arrays.sh
disha21@disha21:~$ ./arrays.sh
enter array size
5
enter array elements:
33
67
22
1
89
sorted array:
1
22
33
67
89
```