PRATHEEK U B
289226

BASH SCRIPT ASSIGNMENT

Script 1: Arithmetic Operations

MINGW64:/c/Users/289226/Desktop

GNU nano 5.9 bash1.sh

```
#!/bin/bash
x=8
y=2
echo "x=8, y=2"
echo "Addition of x & y"
echo $(( $x + $y ))
echo "Subtraction of x & y"
echo $(( $x - $y ))
echo "Multiplication of x & y"
echo $(( $x * $y ))
echo "Division of x by y"
echo $(( $x / $y ))
echo "Exponentiation of x,y"
echo $(( $x ** $y ))
echo "Modular Division of x,y"
echo $(( $x % $y ))
echo "Incrementing x by 5, then x= "
(( x += 5 ))
echo $x
echo "Decrementing x by 5, then x= "
(( x -= 5 ))
echo $x
echo "Multiply of x by 5, then x="
(( x *= 5 ))
echo $x
echo "Dividing x by 5, x= "
(( x /= 5 ))
echo $x
echo "Remainder of Dividing x by 5, x="
(( x %= 5 ))
echo $x
```

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```
USTR+289226@J4DR353 MINGW64 ~/Desktop
$ chmod 777 bash1.sh

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$ . bash1.sh
x=8, y=2
Addition of x & y
10
Subtraction of x & y
6
Multiplication of x & y
16
Division of x by y
4
Exponentiation of x,y
64
Modular Division of x,y
0
Incrementing x by 5, then x=
13
Decrementing x by 5, then x=
8
Multiply of x by 5, then x=
40
Dividing x by 5, x=
8
Remainder of Dividing x by 5, x=
3
```

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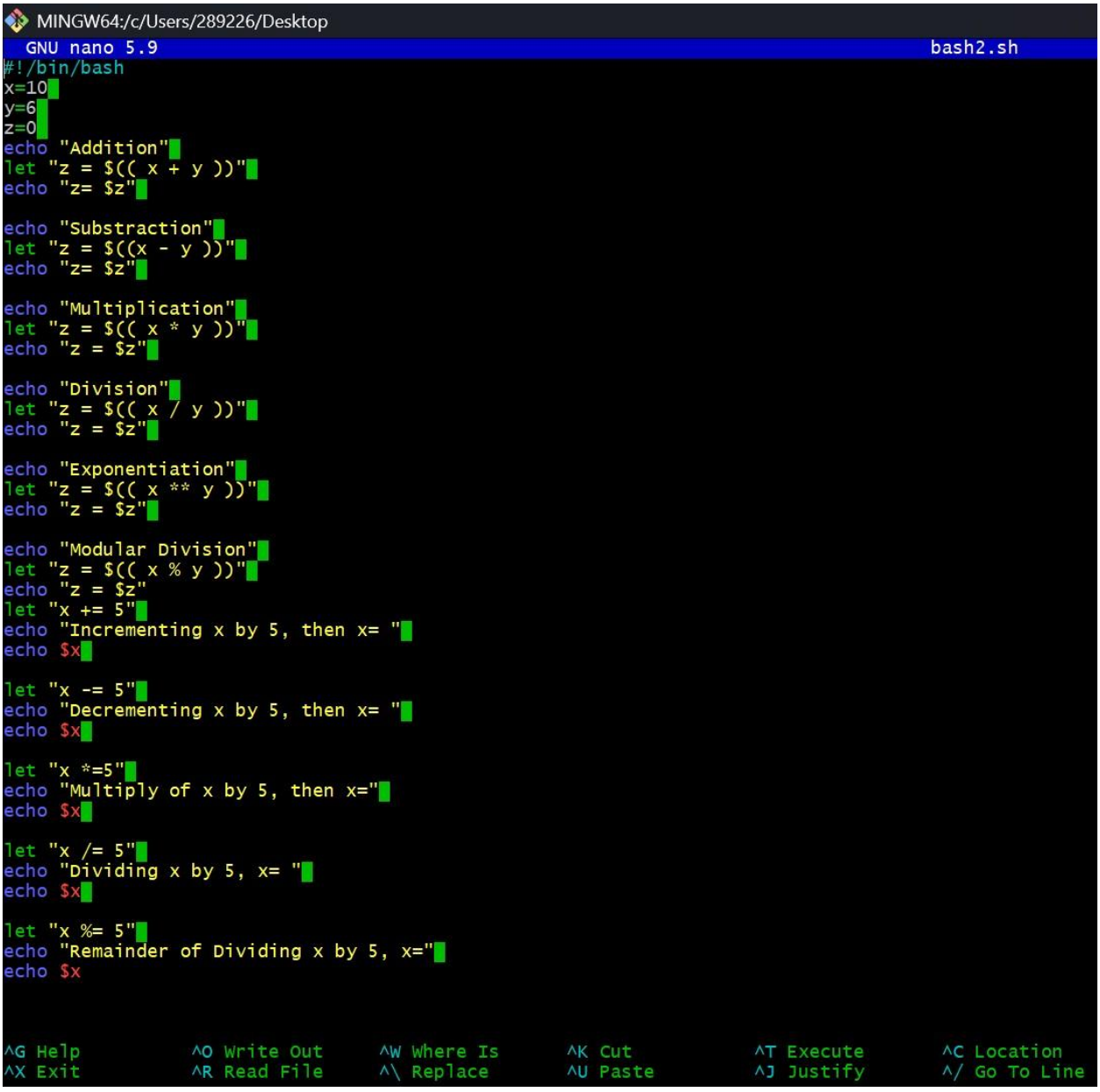
Script 2: Let Command



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```
USTR+289226@J4DR353 MINGW64 ~/Desktop
$ nano bash2.sh

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$ . bash2.sh
Addition
z= 16
Substraction
z= 4
Multiplication
z = 60
Division
z = 1
Exponentiation
z = 1000000
Modular Division
z = 4
Incrementing x by 5, then x=
15
Decrementing x by 5, then x=
10
Multiply of x by 5, then x=
50
Dividing x by 5, x=
10
Remainder of Dividing x by 5, x=
0

USTR+289226@J4DR353 MINGW64 ~/Desktop
$
```

Script 3: Expr Command

```
MINGW64:/c/Users/289226/Desktop
  GNU nano 5.9                                                    bash3.sh
#!/bin/bash
#Basic arithmetic using expr

echo "a=10, b=3"
echo "c is the value of addition c=a+b"
a=10
b=3
echo "c= `expr $a + $b`"
```

```
USTR+289226@J4DR353 MINGW64 ~/Desktop
$ nano bash3.sh

USTR+289226@J4DR353 MINGW64 ~/Desktop
$ chmod 777 bash3.sh

USTR+289226@J4DR353 MINGW64 ~/Desktop
$ . bash3.sh
a=10, b=3
c is the value of addition c=a+b
c= 13

USTR+289226@J4DR353 MINGW64 ~/Desktop
$
```

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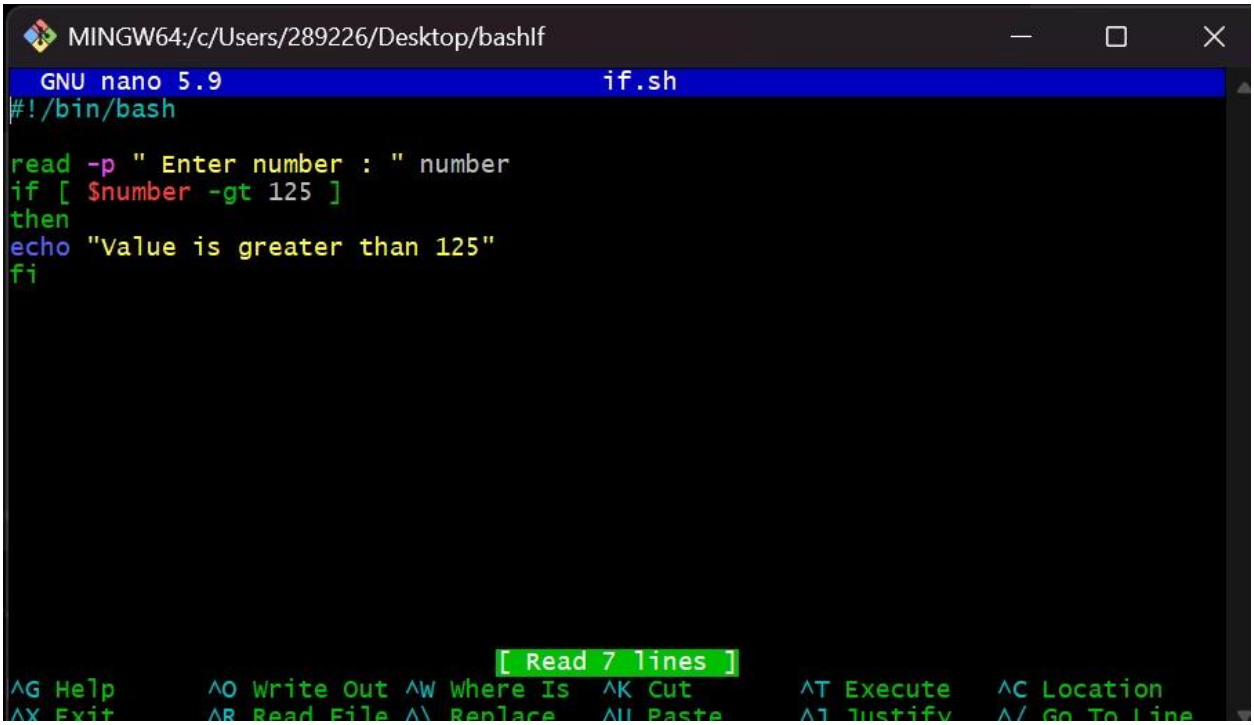
Bash IF Statement

Script 1: If Statement



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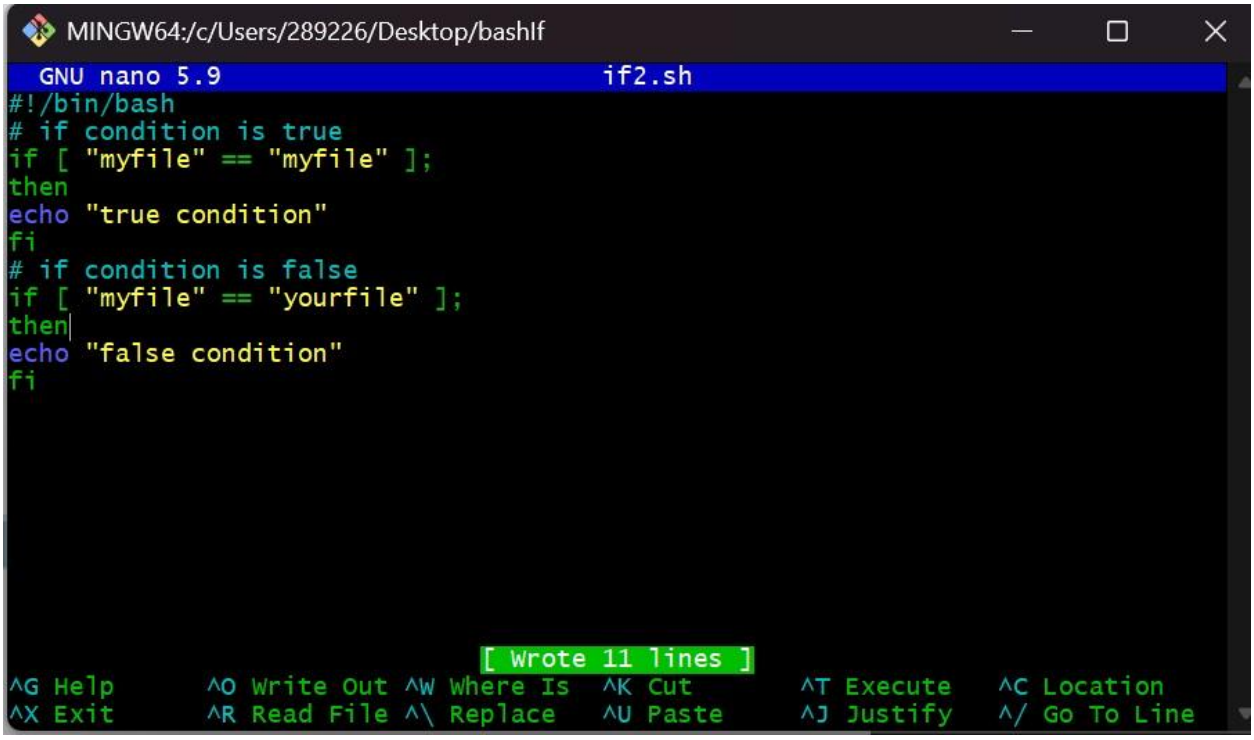
Script 2: If Statement



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Script 3:

```
  GNU nano 5.9                          if3.sh                          Modified
#!/bin/bash

#if condition (greater than) is true
if [ 10 -gt 3 ];
then
echo "10 is greater than 3."
fi

#if condition (greater than) is false
if [ 3 -gt 10 ];
then
echo "3 is not greater than 10."
fi

#if condition (lesser than) is true
if [ 3 -lt 10 ];
then
echo "3 is less than 10."
fi

#if condition (lesser than) is false
if [ 10 -lt 3 ];
then
echo "10 is not less than 3."
fi

#if condition (equal to) is true
if [ 10 -eq 10 ];
then
echo "10 is equal to 10."
fi

#if condition (equal to) is false
if [ 10 -eq 9 ];
then
echo "10 is not equal to 9"
fi
```

```
USTR+289226@J4DR353 MINGW64 ~/Desktop/bashIf
$ . if3.sh
10 is greater than 3.
3 is less than 10.
10 is equal to 10.

USTR+289226@J4DR353 MINGW64 ~/Desktop/bashIf
$
```

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Script 4: AND

```
  GNU nano 5.9                          if4.sh
#!/bin/bash

# TRUE && TRUE
if [ 8 -gt 6 ] && [ 10 -eq 10 ];
then
echo "Conditions are true"
fi

# TRUE && FALSE
if [ "mylife" == "mylife" ] && [ 3 -gt 10 ];
then
echo "Conditions are false"
fi
```

```
USTR+289226@J4DR353 MINGW64 ~/Desktop/bashIf
$ . and.sh
Conditions are true
```

Script 5: OR

```
  GNU nano 5.9                          if5.sh                          Modified
 #!/bin/bash

# TRUE || FALSE
if [ 8 -gt 7 ] || [ 10 -eq 3 ];
then
echo " Condition is true. "
fi

# FALSE || FALSE
if [ "mylife" == "yourlife" ] || [ 3 -gt 10 ];
then
echo " Condition is false. "
fi
```

```
USTR+289226@J4DR353 MINGW64 ~/Desktop/bashIf
$ . or.sh
 Condition is true.
```

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Script 6: AND and OR

```
  GNU nano 5.9                          AndOr.sh
#!/bin/bash

# TRUE && FALSE || FALSE || TRUE
if [[ 10 -eq 10 && 5 -gt 4 || 3 -eq 4 || 3 -lt 6 ]];
then
echo "Condition is true."
fi

# TRUE && FALSE || FALSE
if [[ 8 -eq 8 && 8 -gt 10 || 9 -lt 5 ]];
then
echo "Condition is false"
fi
```

```
USTR+289226@J4DR353 MINGW64 ~/Desktop/bashIf
$ . AndOr.sh
Condition is true.
```

Script 7: Nested If

```
  GNU nano 5.9                        nestedIf.sh                          Modified
#!/bin/bash
#Nested if statement

if [ $1 -gt 50 ]
then
echo "Number is greater than 50."

if (( $1 % 2 == 0 ))
then
echo "and it is an even number."
fi
fi
```

```
USTR+289226@J4DR353 MINGW64 ~/Desktop/bashIf
$ . nestedIf.sh
Number is greater than 50.
and it is an even number.
```

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Bash IF ELSE

Script 1: If Else

```
  GNU nano 5.9                          ifElse.sh                          Modified
#!/bin/bash
#when the condition is true
if [ 10 -gt 3 ];
then
echo "10 is greater than 3."
else
echo "10 is not greater than 3."
fi
#when the condition is false
if [ 3 -gt 10 ];
then
echo "3 is greater than 10."
else
echo "3 is not greater than 10."
fi
```

```
USTR+289226@J4DR353 MINGW64 ~/Desktop/bashIfElse
$ . ifElse.sh
10 is greater than 3.
3 is not greater than 10.

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$
```

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Script 2: If else

```
  GNU nano 5.9                          ifElse2.sh                          Modified
#!/bin/bash
# When condition is true
# TRUE && FALSE || FALSE || TRUE
if [[ 10 -gt 9 && 10 == 9 || 2 -lt 1 || 25 -gt 20 ]];
then
echo "Given condition is true."
else
echo "Given condition is false."
fi
# When condition is false
#TRUE && FALSE || FALSE || TRUE
if [[ 10 -gt 9 && 10 == 8 || 3 -gt 4 || 8 -gt 8 ]];
then
echo "Given condition is true."
else
echo "Given condition is not true."
fi
```

```
USTR+289226@J4DR353 MINGW64 ~/Desktop/bashIfElse
$ . ifElse2.sh
Given condition is true.
Given condition is not true.

USTR+289226@J4DR353 MINGW64 ~/Desktop/bashIfElse
$
```

Script 3: If else single line

```
  GNU nano 5.9                                                    ifElse3.sh
#!/bin/bash
read -p "Enter a value:" value
if [ $value -gt 9 ]; then echo "The value you typed is greater than 9."; else echo "The value you typed is not greater than 9."; fi
```

```
USTR+289226@J4DR353 MINGW64 ~/Desktop/bashIfElse
$ . ifElse3.sh
Enter a value:25
The value you typed is greater than 9.
```

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Script 4: Nested If Else

```
  GNU nano 5.9                                                    nestedIfElse.sh
#!/bin/bash
read -p "Enter a value:" value
if [ $value -gt 9 ];
then
if [ $value -lt 11 ];
then
echo "$value>9, $value<11"
else
echo "The value you typed is greater than 9."
fi
else echo "The value you typed is not greater than 9."
fi
```

```
USTR+289226@J4DR353 MINGW64 ~/Desktop/bashIfElse
$ . nestedIfElse.sh
Enter a value:10
10>9, 10<11

USTR+289226@J4DR353 MINGW64 ~/Desktop/bashIfElse
$
```

Script 5: ELIF

```
  GNU nano 5.9                                                          elif.sh
#!/bin/bash

read -p "Enter a number of quantity:" num

if [ $num -gt 100 ];
then
echo "Eligible for 10% discount"
elif [ $num -lt 100 ];
then
echo "Eligible for 5% discount"
else
echo "Lucky Draw Winner"
echo "Eligible to get the item for free"
fi
```

```
USTR+289226@J4DR353 MINGW64 ~/Desktop/bashIfElse
$ . elif.sh
Enter a number of quantity:110
Eligible for 10% discount
```

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Script 6:

```
  GNU nano 5.9                                                    elif2.sh
#!/bin/bash

read -p "Enter a number of quantity:" num

if [ $num -gt 200 ];
then
echo "Eligible for 20% discount"

elif [[ $num == 200 || $num == 100 ]];
then
echo "Lucky Draw Winner"
echo "Eligible to get the item for free"

elif [[ $num -gt 100 && $num -lt 200 ]];
then
echo "Eligible for 10% discount"

elif [ $num -lt 100 ];
then
echo "No discount"
fi
```

```
USTR+289226@J4DR353 MINGW64 ~/Desktop/bashIfElse
$ . elif2.sh
Enter a number of quantity:100
Lucky Draw Winner
Eligible to get the item for free
```