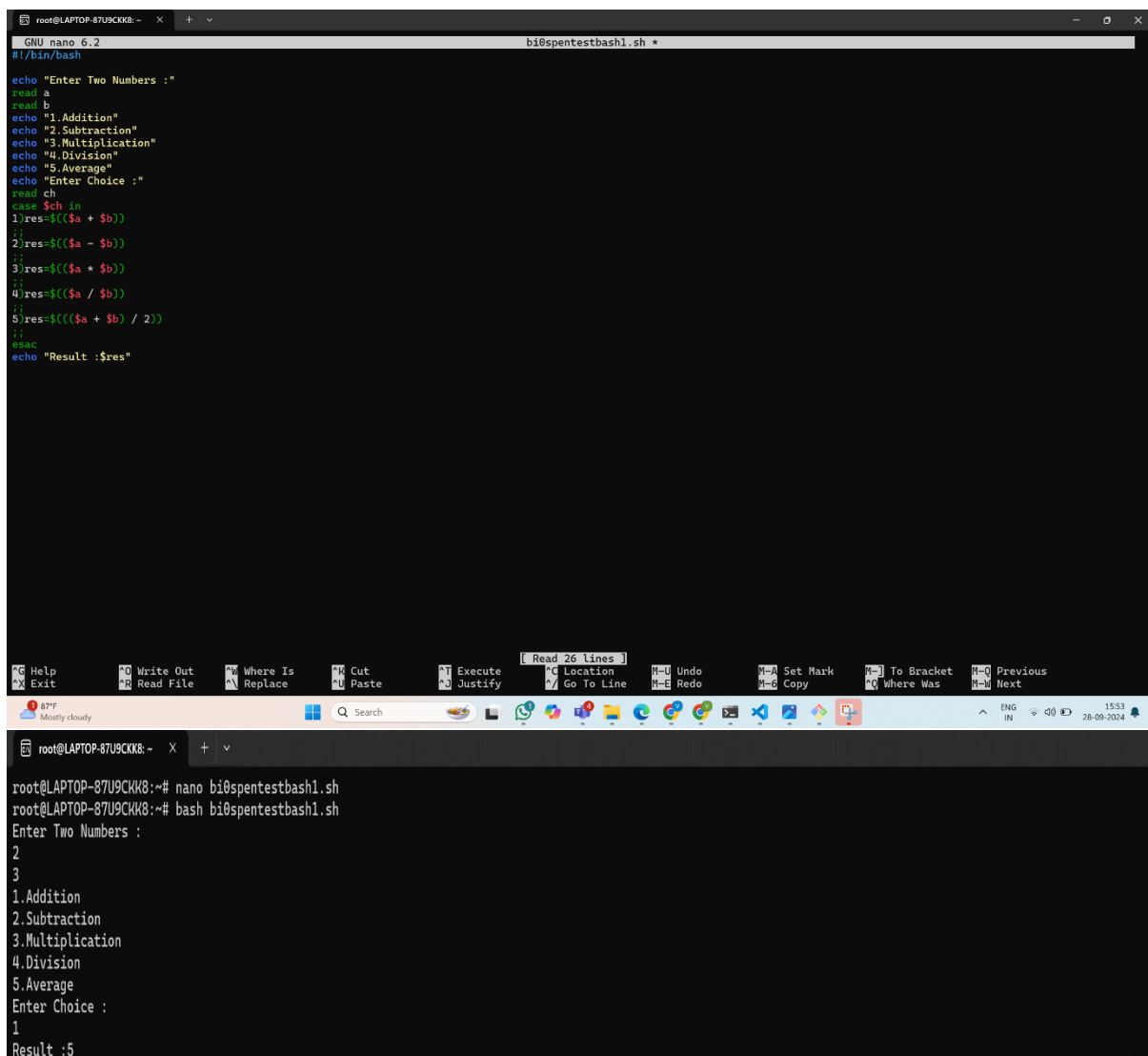


BASH SCRIPTING

TASK -1 :

Write a shell script to run the following operations by reading 2 numbers and one choice from the user: 1)Addition 2)Subtraction 3)Multiplication 4)Division 5)Average

It should be a choice based program i.e. if the input is 1, Addition should be a choice based program i.e. if the input is 1, Addition should be performed



```
GNU nano 6.2 bi0spen0testbash1.sh
#!/bin/bash

echo "Enter Two Numbers :"
read a
read b
echo "1.Addition"
echo "2.Subtraction"
echo "3.Multiplication"
echo "4.Division"
echo "5.Average"
echo "Enter Choice : "
read ch
case $ch in
1)res=$((a + b))
2)res=$((a - b))
3)res=$((a * b))
4)res=$((a / b))
5)res=$((a + b) / 2))
*)
esac
echo "Result :$res"
```

```
root@LAPTOP-87U9CKK8:~# nano bi0spen0testbash1.sh
root@LAPTOP-87U9CKK8:~# bash bi0spen0testbash1.sh
Enter Two Numbers :
2
3
1.Addition
2.Subtraction
3.Multiplication
4.Division
5.Average
Enter Choice :
1
Result :5
```

TASK-2:

Write a shell script to check whether a number is a palindrome or not.

```
GNU nano 6.2                                bi0spenestbash2.sh
#!/bin/bash

echo "Enter a number: "
read number

reverse=0
original=$number

while [ $number -ne 0 ]
do
    remainder=$(( $number % 10 ))
    reverse=$(( $reverse * 10 + $remainder ))
    number=$(( $number / 10 ))
done

if [ $original -eq $reverse ];
then
    echo "$original is a palindrome"
else
    echo "$original is not a palindrome"
fi

[ Read 21 lines ]
^G Help      ^O Write Out  ^W Where Is   ^K Cut        ^T Execute    ^C Location
^X Exit      ^R Read File  ^\ Replace    ^U Paste      ^J Justify    ^_ Go To Line
```

```
root@LAPTOP-87U9CKK8: ~  ×  +  ▾
root@LAPTOP-87U9CKK8:~# nano bi0spenestbash2.sh
root@LAPTOP-87U9CKK8:~# bash bi0spenestbash2.sh
Enter a number:
12321
12321 is a palindrome
root@LAPTOP-87U9CKK8:~# bash bi0spenestbash2.sh
Enter a number:
123431
123431 is not a palindrome
root@LAPTOP-87U9CKK8:~# |
```

TASK-3:

- Write a script to run the following operations by reading an input and a choice from the user:
 - ROT13 Encode
 - ROT13 Decode

```
root@LAPTOP-87U9CKK8: ~ × + v
root@LAPTOP-87U9CKK8:~# nano bashscript3.sh
root@LAPTOP-87U9CKK8:~# ./bashscript3.sh
Choose an operation:
1. ROT13 Encode
2. ROT13 Decode
Enter 1 or 2: 1
Enter the text: Hello, How are you
Encoded text: Uryyb, Ubj ner lbh
root@LAPTOP-87U9CKK8:~# ./bashscript3.sh
Choose an operation:
1. ROT13 Encode
2. ROT13 Decode
Enter 1 or 2: 2
Enter the text: Uryyb, Ubj ner lbh
Decoded text: Hello, How are you
root@LAPTOP-87U9CKK8:~# |

GNU nano 7.2 bashscript3.sh
#!/bin/bash

# Function to perform ROT13 encoding/decoding
rot13() {
    echo "$1" | tr 'A-Za-z' 'N-ZA-Mn-za-m'
}

# Display choices to the user
echo "Choose an operation:"
echo "1. ROT13 Encode"
echo "2. ROT13 Decode"

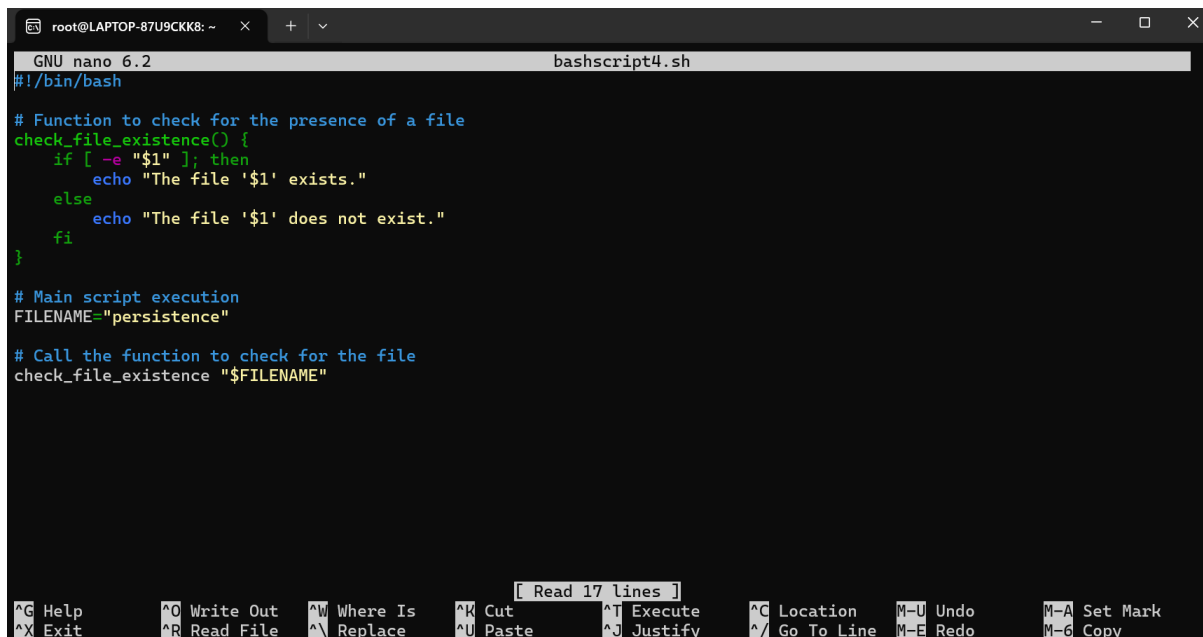
# Read the user choice
read -p "Enter 1 or 2: " choice

# Read the input string from the user
read -p "Enter the text: " input_text

# Perform the chosen operation
if [[ $choice -eq 1 ]]; then
    # ROT13 Encode
    echo "Encoded text: $(rot13 "$input_text")"
elif [[ $choice -eq 2 ]]; then
    # ROT13 Decode
    echo "Decoded text: $(rot13 "$input_text")"
else
    echo "Invalid choice. Please enter 1 or 2."
fi
```

TASK -4:

- Using functions, write a shell script program to check whether a file named “persistence” is present in your system.



```
GNU nano 6.2 bashscript4.sh
#!/bin/bash

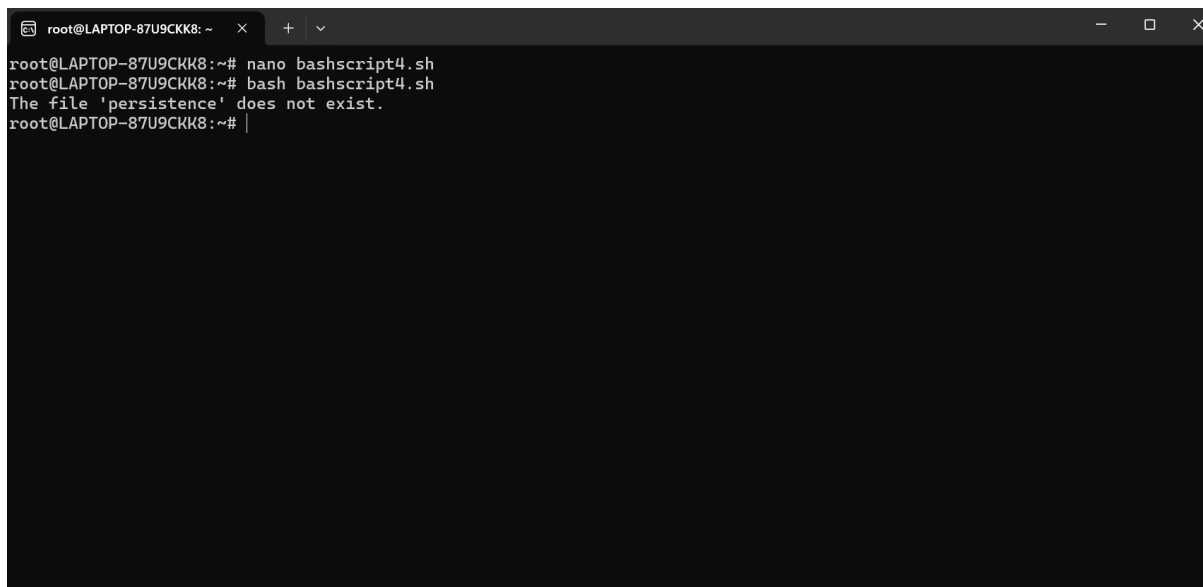
# Function to check for the presence of a file
check_file_existence() {
    if [ -e "$1" ]; then
        echo "The file '$1' exists."
    else
        echo "The file '$1' does not exist."
    fi
}

# Main script execution
FILENAME="persistence"

# Call the function to check for the file
check_file_existence "$FILENAME"
```

[Read 17 lines]

^G Help ^O Write Out ^W Where Is ^K Cut ^T Execute ^C Location M-U Undo M-A Set Mark
^X Exit ^R Read File ^\ Replace ^U Paste ^J Justify ^_ Go To Line M-E Redo M-C Copy



```
root@LAPTOP-87U9CKK8:~# nano bashscript4.sh
root@LAPTOP-87U9CKK8:~# bash bashscript4.sh
The file 'persistence' does not exist.
root@LAPTOP-87U9CKK8:~#
```