

OS Lab03

Author: Dipankar Das

Date: 17-2-2022

Roll: 20051554

Question 1

Write a shell script to reverse a given integer.

Solution

```
#!/bin/bash

echo enter the number

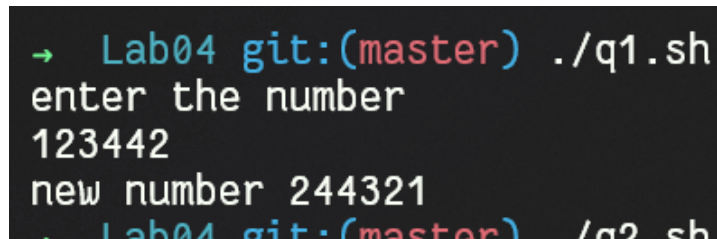
read num

newNum=0

while [ $num -gt 0 ]
do
    newNum=$(( $newNum * 10 + $num % 10 ))
    num=$(( $num / 10 ))
done

echo new number $newNum
```

Output



```
→ Lab04 git:(master) ./q1.sh
enter the number
123442
new number 244321
→ Lab04 git:(master) ./q2.sh
```

Question 2

Write a shell script to verify whether the given string is a palindrome or not.

Solution

```
#!/bin/bash

echo Enter the string

read str

left=0
right=$(( ${#str} - 1 ))

#echo left $left right $right

# echo ${str:4:1}

while [ $left -lt $right ]
do
    if [ ${str:left:1} != ${str:right:1} ]; then
        echo Not a palnidrome
        exit 0
    fi

    left=$(( $left + 1))
    right=$(( $right - 1 ))
done

echo it is palindrome
```

Output

```
new number 211021
→ Lab04 git:(master) ./q2.sh
Enter the string
diapapa
Not a palnidrome
→ Lab04 git:(master) ./q2.sh
Enter the string
adcdef
Not a palnidrome
→ Lab04 git:(master) ./q2.sh
Enter the string
adda
it is palindrome
→ Lab04 git:(master) ./q2.sh
Enter the string
a
it is palindrome
```

Question 3

Write a shell program which takes maximum 8 integer type arguments through command line and do the following operation:

- If the first argument/last result (a) is divisible by second argument (b) then new result = a/b
- else If (a%b != 0) and b is divisible by 5 then new result=a*b
- else if (a>b) then new result = a-b
- else new result = a+b

Solution

```
#!/bin/bash

a=$1
b=$2

res=0

if [ $(( $a % $b )) -eq 0 ]; then
    res=$(( $a / $b ))
elif [ $(( $b % 5 )) -eq 0 ]; then
    res=$(( $a * $b ))
elif [ $a -gt $b ]; then
    res=$(( $a - $b ))
else
    res=$(( $a + $b ))
fi

echo res: $res
```

Output

```
→ Lab04 git:(master) ./q3.sh 4 2
res: 2
→ Lab04 git:(master) ./q3.sh 2 5
res: 10
→ Lab04 git:(master) ./q3.sh 2 6
res: 8
→ Lab04 git:(master) ./q3.sh 11 6
res: 5
→ Lab04 git:(master) █
```