

### 1. Write a shell script to reverse a given integer.

```
#!/bin/bash

read -p "Enter a integer: " num

rev_num=0

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

echo "Reversed integer: $rev_num"
```

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

```
#!/bin/bash

read -p "Enter string: " str

rev_str=$(echo $str | rev)

if [[ $rev_str == $str ]]
then
    echo "$str is a palindrome."
else
    echo "$str is not a palindrome."
fi
```

### 3. Write a shell script to find the following

1. Home directory 2. Bash version 3. Host name 4. current directory 5. exit

```
#!/bin/bash

echo "Home directory: $HOME"

echo "Bash version: $(bash --version | awk '{printf $4}')"

echo "Host name: $(hostname)"

echo "Current directory: $(pwd)"

exit 0
```

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

- i. If the first argument/last result (a) is divisible by send argument (b) then new result=a/b
- ii. Else If (a%b != 0) and b is divisible by 5 then new result=a\*b
- iii. Else if (a>b) then new result=a-b
- iv. Else new result=a+b

```
#!/bin/bash

if [[ $# -gt 8 ]]
then
    echo "Max 8 args allowed!"
    exit 1
fi

result=${1}

for (( i=1; i<=$#; i++ ))
do
    a=$result
    b=${!i}

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

echo "Final result: $result"
```