—! Shell Program !—

WAP Write a Shell Program to Store a message in a variable and display "Message of today is" then message.

```
a = "I live in India".
echo = " Message of today is $a"
```

O/P →

```
Message of today is I Live in India.
```

Write a Shell Program to display "Today's date is" then today's date & time and display "no of user in a system" then output of 'who' command.

```
echo " Todays' date is: $(date + '%Y-%m-%d')"
echo " Current date and time: $(date)"
echo " Number of users in the system: $(who | wc -l)"
```

O/P →

```
user 1 tty 1 2023-05-29: 09:30
user 2 tty 2 2023-05-29 09:43
user 3 tty 3 2023-05-29  10:15.
```

3) Write a shell Program all 4 arithmetic calculation on 2 variable where the value of this veriable are stred.

```
num1= 10
num2 = 5
Sum = $((num1 + num2))
echo = " Addition: $num1 + $num2 = $Sum"
Sub = $((num1 - num2))
echo ." Subtaction: $num1 - $num2 : $Sub"
mul = $((num1 * num2))
echo ." Multiplication: $num1* $num2 = $mul "
div = $((num1 / num2))
echo ." Divison: $num1 % $num2 = $div "
```

O/P →

```
Addition : 10+5 = 15
Subtraction : 10-5 = 5
Multiplication: 10*5 = 50
Divison : 10/5 = 2
```

write a Shell Program to Perform all 4 arithmatic Calculation on 2 variable where the value of this variable are user-defined.

```
read -p "Enter the value for variable 1:" num1
read -p "Enter the value for variable 2:" num2
Sum = $((num1 + num2))
echo " Addition : $sum"
Sub = $((num1 - num2))
echo. " Substraction : $sub "
mul = $((num1 * num2))
echo ." Multiplication : $mul"
div = $((num1 /num2))
echo ." Divison: $div"
```

O/P →

```
Enter the value for variable 1:12
Enter value for variable 2: 4
Addition : 16
Substraction: 8
Multiplication: 48
Divison : 3
```

5) write a shell Program to find no. of lines and characters in a Particular file.

```
read -p "Enter the file Path: "file_Path
if [[ ! -f "$file_Path" ]]; then
  echo "file not found!"
  exit 1

line_count = $(wc -l < "$file_Path")
char_count = $(wc -m < "$file_Path")
echo "Number of Characters in the file: $char_Count"
```

O/P →

```
Number of lines in the file : 3
Number of Characters in the file : 49.
```

write a Shell program to find greatest and smallest among 3 no.

```
read -p " Enter the first number:" num1
read- p " Enter the second number: " num2
read -p " Enter the third number: " num3
greatest = $num1
smallest = $num1
if ((num2 > greatest)); then
        greatest = $num2
fi
if ((num2 < smallest)); then
        smallest = $num2
fi
if ((num3 > greatest)); then
            greatest = $num3
fi
if ((num3 <smallest)); then
            smallest = $num3
fi
echo " Greatest number: $ greatest "
echo " Smallest number: $ smallest "
```

O/P→

```
   Enter the first number: 26
   Enter the second number : 12
   Enter the third number : 30
Greatest number: 30
Smallest number: 12.
```

7) write a shell program to find the sum of digits of a given no.

```
read -p " Enter a number:" number
sum = 0
number
while ((number > 0)). do
      digit = $((number % 10))
      sum = $((sum + digit))
done  number = $((number / 10))
```

```
echo " Sum of the digits: $ Sum"
```

O/P

```
Enter a number: 123
Sum of the digits: 6
```

write a shell Program to find factorial of a given no.

```
read -p " Enter a number: " number
if ((number <0)); then
    echo " ~~Enter~~ Error : wrong input "
    exit 1
fi
factorial=1
for((i=1; i<=number ;i++)); do
    factorial= $ (( factorial * i))
done
echo " Factorial of $ number is : $ factorial"
```

O/P →

```
Enter a number : 5
factorial of 5 is : 120
```

9) write a shell Program to find reverse of a no.

```
read -p " Enter a number : " number
reverse =0
reminder = 0
while ((number != 0)); do
    reminder = $((number % 10))
    reverse = $((reverse * 10 + remainder))
    number = $ ((number / 10))
done
echo " Reverse of the number : $ reverse "
```

O/P →

```
Enter a number: 123
Reverse of the number: 321
```

Write a Shell Program to find whether a number is palindrome or not.

```
  read -p " Enter a number:" number
  original_number = $number
  reverse = 0
  while ((number != 0)); do
    remainder = $((number % 10))
     reverse = $((reverse * 10 + remainder))
     number = $((number / 10))
done
  if ((original_number == reverse)); then
       echo " The number is a Palindrome "
else
    echo " The number is not a Palindrome "
fi
```

O/P →

```
   Enter a number: 123321
   The number is a Palindrome.
```

11) Write a Shell Program to check whether a no. is Armstrong number.

```
    read -p " Enter a number: " number
    original_number = $ number.
    num_of_digits = $ {# number}
    sum = 0
    while ((number != 0)); do
      digit = $((number % 10))
     sum = $ ((sum + digit ** num_of_digits))
     number = $((number / 10))
done
  if ((original_number == sum)); then
      echo " The number is an Armstrong number "
else
   echo " The number is not an Armstrong number "
```

O/P →

```
Enter a number: 153
The number is an Armstrong number.
```