

Experiment no :9

Sum of digits

Aim : Shell script to find sum of digits of a number

```
# Prompt user for input
echo "Enter a number:"
read num

sum=0

# Loop to extract and sum digits
while [ $num -gt 0 ]
do
    digit=$((num % 10)) # Extract last digit
    sum=$((sum + digit)) # Add to sum
    num=$((num / 10)) # Remove last digit
done

# Display result
echo "Sum of digits is: $sum"
```

Experiment no :10

Armstrong number

Aim : Shell script to check if a number is an Armstrong number

Example:

If `num=153`,

```
sh
```



```
n=${#num}
```

will set `n=3` because `153` has 3 digits.

```
1  #!/bin/bash
2
3  echo -n "Enter a number: "
4  read num
5
6  sum=0
7  temp=$num
8
9  # Count the number of digits
10 n=${#num}
11
12 while [ $temp -gt 0 ]
13 do
14     digit=$((temp % 10))
15     sum=$((sum + digit ** n))
16     temp=$((temp / 10))
17 done
18
19 if [ $sum -eq $num ]; then
20     echo "$num is an Armstrong number"
21 else
22     echo "$num is not an Armstrong number"
23 fi
24
```

How to Run:

sh

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```
$ chmod +x armstrong.sh
$ ./armstrong.sh
Enter a number: 153
153 is an Armstrong number.
```

Experiment no :11

Array

Aim : Shell script to demonstrate a simple array in shell scripting

```
1  #!/bin/bash
2
3  # Define an array with names
4  names=("Ali" "Melvi" "Govind")
5
6  # Print length of the array
7  echo "Number of names: ${#names[@]}"
8
9  # Print a specific element (index starts from 0)
10 echo "Name at index 2: ${names[2]}"
11
12 # Loop through array elements
13 echo "List of names:"
14 for name in "${names[@]"; do
15     echo $name
16 done
17
```

OUTPUT

Number of names: 3

Name at index 2: Govind

List of names:

Ali

Melvi

Govind