

Bansilal Ramnath Agarwal Charitable Trust's
Vishwakarma Institute of Technology, Pune-37

(Anautonomous Institute of Savitribai Phule Pune University)



Department of Multidisciplinary Engineering

Division	CS A
Batch	B1
Roll no.	86
Name	Namrata Rajendra Gaikwad

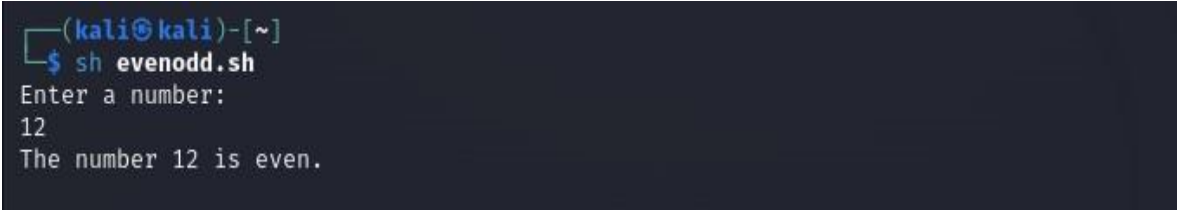
Lab Assignment No 2:

1. Even odd using conditional statements

```
#!/bin/bash

echo "Enter a number: "
read num

if [ $((num % 2)) -eq 0 ]; then
    echo "The number $num is even."
else
    echo "The number $num is odd."
fi
```



```
(kali㉿kali)-[~]
$ sh evenodd.sh
Enter a number:
12
The number 12 is even.
```

2. Array to insert values and delete values

```
#!/bin/bash

my_array[0]=10
my_array[1]=20
my_array[2]=30
my_array[3]=40
my_array[4]=50

echo "Original array: ${my_array[@]}"
index_to_insert=2
element_to_insert=25
my_array=("${my_array[@]:0:$index_to_insert}" "$element_to_insert"
"${my_array[@]:$index_to_insert}")

echo "Array after inserting at index $index_to_insert: ${my_array[@]}"

index_to_delete=3
my_array=("${my_array[@]:0:$index_to_delete}" "${my_array[@]:$((index_to_delete + 1))}")
```

```
echo "Array after deleting at index $index_to_delete: ${my_array[@]}"
```

```
(kali㉿kali)-[~]
$ vi array1.sh

(kali㉿kali)-[~]
$ chmod +x array1.sh

(kali㉿kali)-[~]
$ ./array1.sh
Original array: 10 20 30 40 50
Array after inserting at index 2: 10 20 25 30 40 50
Array after deleting at index 3: 10 20 25 40 50
```

3.print table using for loop

```
#!/bin/bash
```

```
echo "Enter a number to print its multiplication table: "
read num
```

```
echo "Multiplication table for $num:"
for ((i = 1; i <= 10; i++)); do
    result=$((num * i))
    echo "$num x $i = $result"
done
```

```
(kali㉿kali)-[~]
$ vi forloop.sh

(kali㉿kali)-[~]
$ chmod +x forloop.sh

(kali㉿kali)-[~]
$ ./forloop.sh
Enter a number to print its multiplication table:
12
Multiplication table for 12:
12 x 1 = 12
12 x 2 = 24
12 x 3 = 36
12 x 4 = 48
12 x 5 = 60
12 x 6 = 72
12 x 7 = 84
12 x 8 = 96
12 x 9 = 108
12 x 10 = 120
```

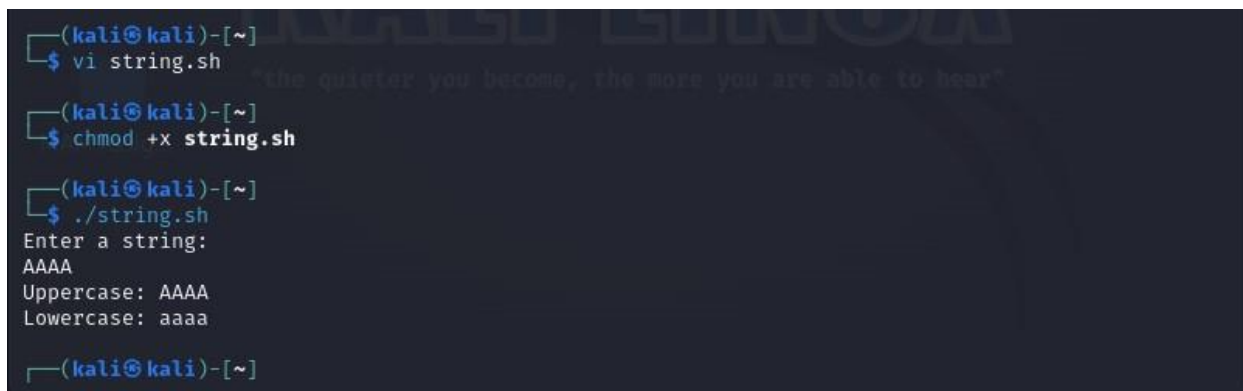
4. String to perform operations i.e uppercase ,lowercase

```
#!/bin/bash
```

```
echo "Enter a string: "  
read input_string
```

```
uppercase_string=$(echo "$input_string" | tr '[:lower:]' '[:upper:]')  
echo "Uppercase: $uppercase_string"
```

```
lowercase_string=$(echo "$input_string" | tr '[:upper:]' '[:lower:]')  
echo "Lowercase: $lowercase_string"
```

A terminal window with a dark background and light blue text. The prompt is (kali@kali)-[~]. The user enters \$ vi string.sh, then \$ chmod +x string.sh, and finally \$./string.sh. The script prompts "Enter a string:" and the user enters "AAAA". The script then outputs "Uppercase: AAAA" and "Lowercase: aaaa".

```
(kali@kali)-[~]  
$ vi string.sh  
"the quieter you become, the more you are able to hear"  
(kali@kali)-[~]  
$ chmod +x string.sh  
(kali@kali)-[~]  
$ ./string.sh  
Enter a string:  
AAAA  
Uppercase: AAAA  
Lowercase: aaaa  
(kali@kali)-[~]
```

5. Create File and insert contents

```
touch file.sh  
vi file.sh
```

```
echo "Hello"  
echo "Namrata"
```

A terminal window with a dark background and light blue text. The prompt is (kali@kali)-[~]. The user enters \$ touch file.sh, then \$ cd, then \$ vi file.sh, and finally \$ sh file.sh. The script outputs "Hello" and "Namrata".

```
(kali@kali)-[~]  
$ touch file.sh  
(kali@kali)-[~]  
$ cd  
(kali@kali)-[~]  
$ vi file.sh  
(kali@kali)-[~]  
$ sh file.sh  
Hello  
Namrata
```

6. Take Command line argument and find area of circle

```
#!/bin/bash
```

```
calculate_area() {
```

```
    radius=$1
```

```
    area=$(echo "scale=2; 3.14159 * $radius * $radius" | awk '{printf "%.2f", $1}')
```

```
    echo "The area of the circle with radius $radius is: $area"
```

```
}
```

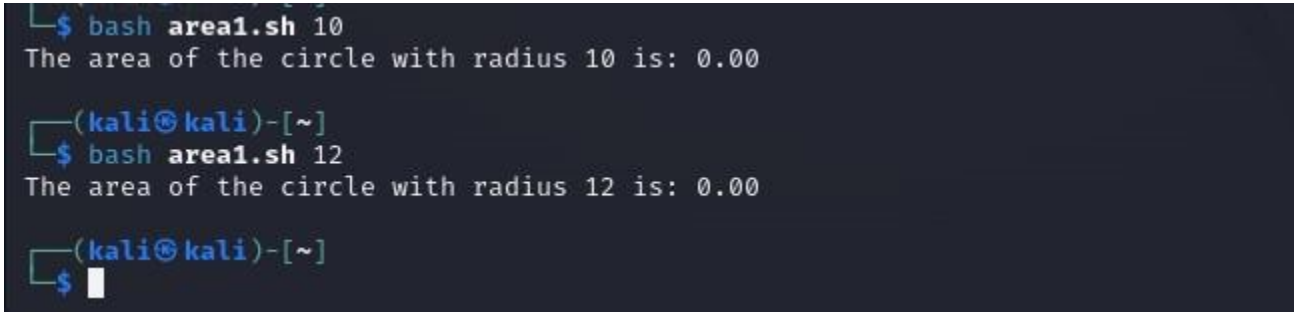
```
if [ $# -eq 0 ]; then
```

```
    echo "Usage: $0 <radius>"
```

```
    exit 1
```

```
fi
```

```
calculate_area $1
```



```
└─$ bash area1.sh 10
The area of the circle with radius 10 is: 0.00

└─(kali㉿kali)-[~]
└─$ bash area1.sh 12
The area of the circle with radius 12 is: 0.00

└─(kali㉿kali)-[~]
└─$
```