

ABHISHEK SHARMA

CS THIRD YEAR

SECTION : "I"

ROLL NO.: 01

ENROLLMENT NO.: 12019009001127

OPERATING SYSTEMS LABORATORY

ASSIGNMENT 7

DATE : 13.09.2021

**UNIVERSITY OF ENGINEERING & MANAGEMENT, KOLKATA
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING**

Q1. Write a shell Script to print half pyramid using *.

```
# Triangle Pyramid pattern printing
# Abhishek S
echo "Enter the no. of rows: "
read n
for((i=1;i<=n;i++))
do
    for((j=1;j<=i;j++))
    do
        echo -ne "*"
    done
    echo;
done
```

Output :

```
abhisheks008@LAPTOP-9RGGUF05:~$ ./a7q3.sh
Enter the number of rows :
5
1
1 2
1 2 3
1 2 3 4
1 2 3 4 5
```

Q2. Write a shell script to display full pyramid using * with 8 rows.

```
# Printing the pattern full pyramid
p=8
for((m=1;m<=p;m++))
do
    for((a=m;a<=p;a++))
    do
        echo -ne " "
    done
    for((n=1;n<=m;n++))
    do
        echo -ne "*"
    done
    for((i=1;i<=m;i++))
    do
        echo -ne "*"
    done
    echo;
done
```

Output :

```
abhisheks008@LAPTOP-9RGGUF05:~$ vim a7l2.sh
abhisheks008@LAPTOP-9RGGUF05:~$ ./a7l2.sh
      *
     ***
    *****
   *********
  ***********
 *****
*****
*****
*****
*****
```

Q3. Write a shell script that displays half pyramid using numbers.

```
# Shell script to print half pyramid using numbers
# Abhishek S

echo "Enter the number of rows : "
read rows
number=1
for((i=1;i<=rows;i++))
do
    for((j=1;j<=i;j++))
    do
        echo -n "$number "
        number=$((number + 1))
    done
    number=1
    echo
done
```

Output :

```
abhisheks008@LAPTOP-9RGGUF05:~$ ./a7q3.sh
Enter the number of rows :
5
1
1 2
1 2 3
1 2 3 4
1 2 3 4 5
```

Q4. Write a shell Script to print full pyramid using numbers.

```
# Shell script for printing pyramid using numbers
# Abhishek S

echo "Enter the number of rows: "
read rows
number=1
for((i=1;i<=rows;i++))
do
    for((j=1;j<=rows-i;j++))
    do
        echo -n "  "
    done
    number=$i
    k=1
    for((j=1;j<=2*i-1;j++))
    do
        if [ $j -lt $i ];
        then
            echo -n "$number "
            number=$((number+1))
        elif [ $j -eq $i ];
        then
            echo -n "$number "
            number=$((number-1))
        else
            echo -n "$number "
            number=$((number-1))
        fi
    done
    echo
done
```

Output :

```
abhisheks008@LAPTOP-9RGGUF05:~$ ./a7q4.sh
Enter the number of rows:
5
      1
     2 3 2
    3 4 5 4 3
   4 5 6 7 6 5 4
  5 6 7 8 9 8 7 6 5
```

Q5. Write a shell Script to print inverted half pyramid using numbers.

```
# Shell script for printing inverted pyramid
# Abhishek S

number=1
echo "Enter the number of rows: "
read rows
for((i=rows;i>=1;i--))
do
    for((j=1;j<=i;j++))
    do
        echo -n "$number "
        number=$((number+1))
    done
    number=1
    echo
done
```

Output :

```
abhisheks008@LAPTOP-9RGGUF05:~$ ./a7q5.sh
Enter the number of rows:
5
1 2 3 4 5
1 2 3 4
1 2 3
1 2
1
```

---- O ----