

Experiment - 7

7. Shell Programming – Print Shapes

Write a shell script to print different shapes- Diamond, triangle, square, rectangle, hollow square etc.

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

```
#Print Diamond
```

```
echo "enter value of n "
```

```
read num
```

```
for (( i=1;i<=$num ;i++))
```

```
do
```

```
    for (( j=$num;j>=i;j-- ))
```

```
    do
```

```
        echo -n " "
```

```
    done
```

```
    for (( c=1;c<=i;c++ ))
```

```
    do
```

```
        echo -n " *"
```

```
        sum=`expr $sum + 1`
```

```
    done
```

```
echo ""
```

```
done
```

```
d_max=`expr $num - 1`
```

```
for (( i=$d_max;i>=1;i--))
```

```
do
```

```
    for (( j=i;j<=$d_max;j++ ))
```

```
    do
```

```
        if [ $j -eq $d_max ]
```

```
        then
```

```
            echo -n " "
```

```
        fi
```

```
        echo -n " "
```

```
    done
```

```
    for (( c=1;c<=i;c++ ))
```

```
    do
```

```
        echo -n " *"
```

```
        sum=`expr $sum + 1`
```

```
    done
```

```
echo ""
```

```
done
```

Print Triangle

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

```
echo "Enter the value of n"
```

```
read num
```

```
For ((i=1;i<=num;i++))
```

```
do
```

```
For ((j=1;j<=i;j++))
```

```
do
```

```
echo -n " *"
```

```
done
```

```
echo " "
```

```
done
```

Print Square

```
#!/bin/bash
echo "Enter the value of n"
read num
clear
for (( i=0; i<$num; i++ ));
do
    for (( j=0; j<$num; j++ ));
do
    printf " *"
done
    printf "\n"
done
```

Print Rectangle

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

```
echo "Enter the length of the rectangle:"
```

```
read length
```

```
echo "Enter the breadth of the rectangle:"
```

```
read breadth
```

```
for ((i=1; i<= breadth; i++))
```

```
do
```

```
    for ((j=1; j<= length; j++))
```

```
    do
```

```
        echo -n " *"
```

```
    done
```

```
    echo " "
```

```
done
```

Print Hollow Square

```
#!/bin/bash

echo "enter the number of blocks for the square"

read num

for (( i = 1; i <= num; i++ ));do
    for (( j = 1; j <= num; j++ ));do

        if [ "$i" == 1 ] || [ "$i" == "$num" ] || [ "$j" == 1 ] || [ "$j" == "$num" ]
        then
            echo -n " *"
        else
            echo -n "  "
        fi
    done
    echo ""
done
```