

S.No: 1

Exp. Name: ***sample programs on operator precedence and associativity***

Date: 2023-09-12

Aim:

Write a java program to demonstrate operator precedence and associativity

Source Code:

OperatorPrecedence.java

```
import java.util.Scanner;
class OperatorPrecedence{
    public static void main(String[] args){
        int x,result;
        System.out.print("Enter a num: ");
        Scanner sc=new Scanner(System.in);
        x=sc.nextInt();
        result=x++ +x++*-x/x++ - --x+3>>1|2;
        System.out.println("The operation going is x++ + x++ * --x / x++ - --x + 3
>> 1 | 2");
        System.out.println("result = "+result);
    }
}
```

Execution Results - All test cases have succeeded!

Test Case - 1

User Output

Enter a num:

4

The operation going is x++ + x++ * --x / x++ - --x + 3 >> 1 | 2

result = 3

Test Case - 2

User Output

Enter a num:

-3

The operation going is x++ + x++ * --x / x++ - --x + 3 >> 1 | 2

result = 2

S.No: 2

Exp. Name: **Sample program on java to demonstrate Control structures**

Date: 2023-09-12

Aim:

write a java program that uses if-else control statement and print the result

Source Code:

Control.java

```
import java.util.Scanner;
class Control{
    public static void main(String args[]){
        int x,y,z;
        Scanner sc = new Scanner(System.in);
        System.out.print("Enter first num : ");
        x=sc.nextInt();
        System.out.print("Enter second num : ");
        y=sc.nextInt();
        z=x+y;
        if(z<20){
            System.out.println("x + y is less than 20");
        }
        else{
            System.out.println("x + y is greater than 20");
        }
    }
}
```

Execution Results - All test cases have succeeded!

Test Case - 1

User Output

Enter first num :

13

Enter second num :

5

x + y is less than 20

Test Case - 2

User Output

Enter first num :

24

Enter second num :

10

x + y is greater than 20

Aim:

Write a Java program to print Half Pyramid pattern.

Source Code:

HalfPyramid.java

```
import java.util.Scanner;
public class HalfPyramid{
    public static void main(String args[])
    {
        Scanner sc = new Scanner(System.in);
        System.out.print("Enter no of rows : ");
        int rows=sc.nextInt();
        for(int i=1;i<=rows;i++)
        {
            for(int j=1;j<=i;j++)
            {
                System.out.print("* ");
            }
            System.out.print("\n");
        }
    }
}
```

Execution Results - All test cases have succeeded!

Test Case - 1

User Output

Enter no of rows :

5

*

* *

* * *

* * * *

* * * * *

Test Case - 2

User Output

Enter no of rows :

3

*

* *

* * *

Test Case - 3

User Output

Enter no of rows :

10

```
*  
* *  
* * *  
* * * *  
* * * * *  
* * * * * *  
* * * * * * *  
* * * * * * * *
```

S.No: 6

Exp. Name: **A program to print Inverted Half pyramid pattern**

Date: 2023-09-12

Aim:

Write a Program to Print Inverted Half Pyramid Pattern

Source Code:

HalfPyramidRev.java

```
import java.util.Scanner;
public class HalfPyramidRev{
    public static void main(String args[]){
        Scanner sc = new Scanner(System.in);
        System.out.print("Enter no of rows : ");
        int rows=sc.nextInt();
        for(int i=1;i<=rows;i++){
            for(int j=rows;j>=i;j--){
                System.out.print("* ");
            }
            System.out.print("\n");
        }
    }
}
```

Execution Results - All test cases have succeeded!

Test Case - 1

User Output

Enter no of rows :

5

* * * * *

* * * *

* * *

* *

*

Test Case - 2

User Output

Enter no of rows :

3

* * *

* *

*

S.No: 7

Exp. Name: **A program to print Hollow Inverted Half Pyramid Pattern**

Date: 2023-09-12

Aim:

Write a Program to Print Hollow Inverted half Pyramid Pattern

Source Code:

HollowHalfPyramidRev.java

```
import java.util.Scanner;
public class HollowHalfPyramidRev{
    public static void main(String args[]){
        Scanner sc = new Scanner(System.in);
        System.out.print("Enter no of rows : ");
        int n=sc.nextInt();
        for(int i=1;i<=n;i++){
            for(int j=n;j>=i;j--){
                if((j==n)|| (i==j)|| (i==1)){
                    System.out.print("* ");
                }
                else{
                    System.out.print("  ");
                }
            }
            System.out.print("\n");
        }
    }
}
```

Execution Results - All test cases have succeeded!

Test Case - 1

User Output

Enter no of rows :

5

* * * * *

* * *

* *

* *

*

Test Case - 2

User Output

Enter no of rows :

3

* * *

* *

*

Aim:

Write a Program to Print Pyramid Pattern

Source Code:

Pyramid.java

```
import java.util.Scanner;
public class Pyramid{
    public static void main(String args[]){
        Scanner sc = new Scanner(System.in);
        System.out.print("Enter no of rows : ");
        int rows = sc.nextInt();
        for(int i=1;i<=rows;i++){
            for(int k=1;k<=rows-i;k++){
                System.out.print(" ");
            }
            for(int j=1;j<=i;j++){
                System.out.print("*"+" ");
            }
            System.out.print("\n");
        }
    }
}
```

Execution Results - All test cases have succeeded!

Test Case - 1

User Output

Enter no of rows :

5

*

* *

* * *

* * * *

* * * * *

Test Case - 2

User Output

Enter no of rows :

6

*

* *

* * *

* * * *

* * * * *

* * * * * *

Aim:

Write a Program to Print inverted Pyramid Pattern

Source Code:**PyramidRev.java**

```
import java.util.Scanner;
public class PyramidRev{
    public static void main(String args[]){
        Scanner sc = new Scanner(System.in);
        System.out.print("Enter no of rows : ");
        int rows=sc.nextInt();
        for(int i=rows;i>=1;i--){
            for(int k=1;k<=rows-i;k++){
                System.out.print(" ");
            }
            for(int j=1;j<=i;j++){
                System.out.print("*"+" ");
            }
            System.out.print("\n");
        }
    }
}
```

Execution Results - All test cases have succeeded!**Test Case - 1****User Output**

Enter no of rows :

5

* * * * *

* * * *

* * *

* *

*

Test Case - 2**User Output**

Enter no of rows :

6

* * * * * *

* * * * *

* * * *

* * *

* *

*

Aim:

Write a Program to print the Hollow pyramid pattern

Source Code:**PyramidGap.java**

```
import java.util.Scanner;
public class PyramidGap{
    public static void main(String args[]){
        int i,n,j;
        Scanner input = new Scanner(System.in);
        System.out.print("Enter no of rows : ");
        n = input.nextInt();
        for(i=1;i<=n;i++){
            for(j=1;j<=n-i;j++){
                System.out.print(" ");
            }
            for(j=1;j<=i;j++){
                if(j==1||j==i||i==n){
                    System.out.print("* ");
                }
                else{
                    System.out.print("  ");
                }
            }
            System.out.println();
        }
    }
}
```

Execution Results - All test cases have succeeded!**Test Case - 1****User Output**

Enter no of rows :

5

*

* *

* * *

* * * *

* * * * *

Test Case - 2**User Output**

Enter no of rows :

6

*

*	*	*
*	*	*
*	*	*
*	*	*
*	*	*