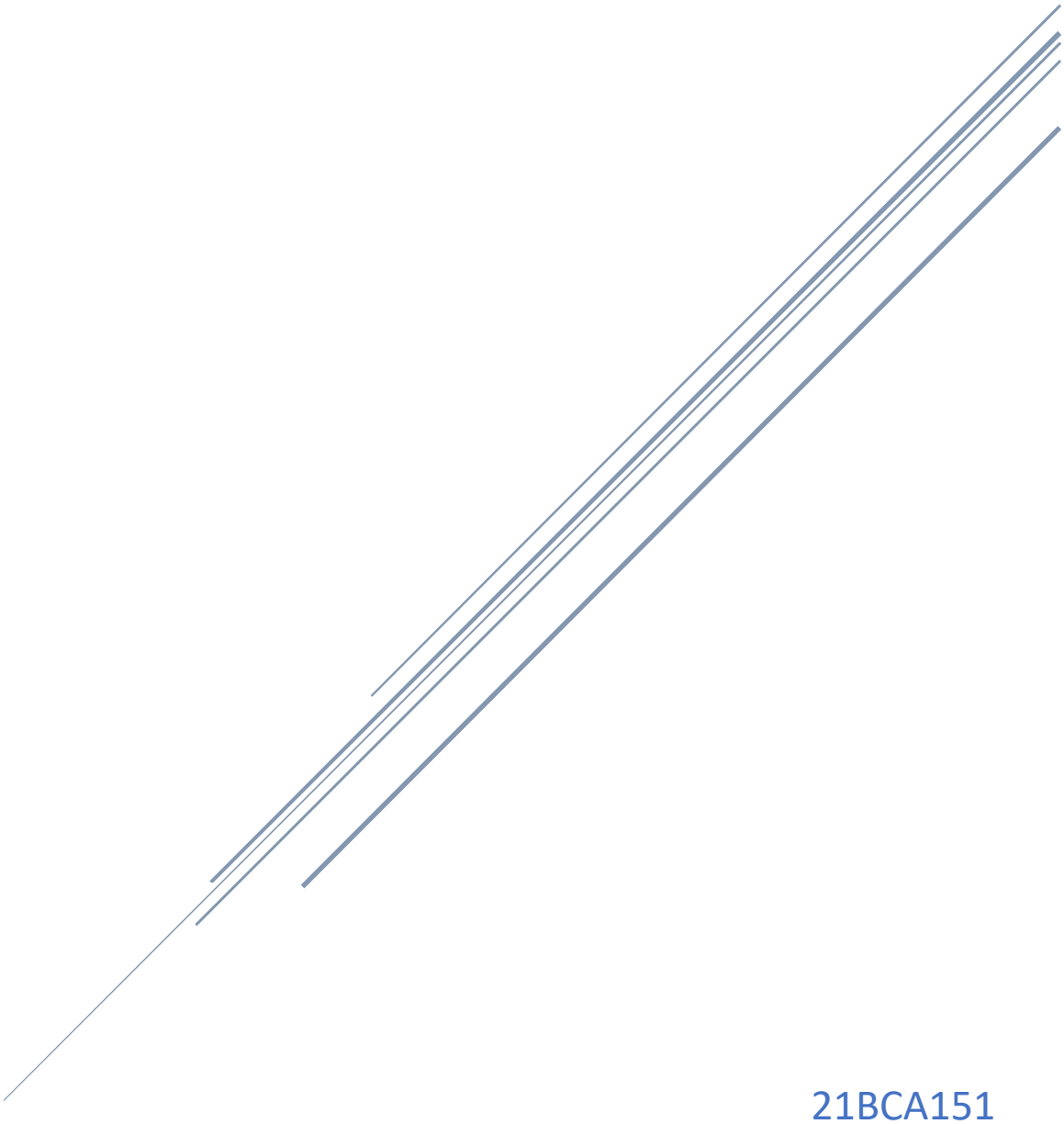
JAVA PROGRAMMING



21BCA151

1. Write a program to take command line input and check number is odd or even.

```
import java.util.Scanner;
class PRG_01
{
	public static void main(String [] args)
	{
		int A;
		Scanner sc = new Scanner(System.in);
		System.out.print("Enter any No. : ");
		A = sc.nextInt();
		if(A%2==0)
		System.out.println("The value "+A+" is even.");
		else
		System.out.println("The value "+A+" is odd.");

	}
}
```

Output :

```
D:\21BCA151\JOURNAL-1>javac PRG_01.java

D:\21BCA151\JOURNAL-1>java PRG_01
Enter any No. : 10
The value 10 is even.
```

2. Write a program to take command line input and sum of 2 number.

```
import java.util.Scanner;
class PRG_02
{
	public static void main(String args[])
	{
		int x, y, sum;
		Scanner sc = new Scanner(System.in);
		System.out.print("Enter the first No. : ");
		x = sc.nextInt();
		System.out.print("Enter the second No. : ");
		y = sc.nextInt();
		sum = sum(x, y);
		System.out.println("The sum of two numbers x and y is: " + sum);
	}
	public static int sum(int a, int b)
	{
		int sum = a + b;
```

```
            return sum;
        }
}
```

Output :

```
D:\21BCA151\JOURNAL-1>javac PRG_02.java

D:\21BCA151\JOURNAL-1>java PRG_02
Enter the first No. : 50
Enter the second No. : 40
The sum of two numbers x and y is: 90
```

3. Write a program to take command line input and calculate a Simple Interest.

```
import java.util.Scanner;
class PRG_03
 {
   public static void main (String args[])
    {
            float p, r,  n,  si;
            Scanner s=new Scanner(System.in);
            System.out.print("Enter Value For Princip Amount :");
            p=s.nextFloat();
            System.out.print("Enter Value For Number Of Month :");
            n=s.nextFloat();
            System.out.print("Enter Value For Rate :");
```

```
            r=s.nextFloat();
            si  = (p*r*n)/100;
            System.out.println("Simple Interest is : " +si);
    }
}
```

Output :

```
D:\21BCA151\JOURNAL-1>javac PRG_03.java

D:\21BCA151\JOURNAL-1>java PRG_03
Enter Value For Princip Amount :500
Enter Value For Number Of Month :5
Enter Value For Rate :5
Simple Interest is : 125.0
```

4. Write a Program to take command line input and Check Number is Positive or Negative.

```
import java.util.Scanner;
class PRG_04
{
    public static void main(String [] a)
    {
        int b;
        Scanner sc = new Scanner(System.in);
        System.out.print("Enter any No. : ");
        b = sc.nextInt();
        if(b>0)
```

```
            {
                System.out.println(b+" is Positive.");
            }
            else
            {
                System.out.println(b+" is Nagetive.");
            }
        }
}
```

Output :

```
D:\21BCA151\JOURNAL-1>javac PRG_04.java

D:\21BCA151\JOURNAL-1>java PRG_04
Enter any No. : -20
-20 is Nagetive.
```

5. Write a Program to take command line input and Check Year is Leap Year or Not.

```
import java.util.Scanner;
class PRG_05
{
    public static void main(String[] args)
    {
        int year;
        boolean leap = false;
```

```
        Scanner s=new Scanner(System.in);
        System.out.print("Enter any year : ");
        year=s.nextInt();
        if (year % 4 == 0)
        {
            if (year % 100 == 0)
            {
                if (year % 400 == 0)
                    leap = true;
                else
                    leap = false;
            }
            else
            leap = true;
        }
        else
        leap = false;
        if (leap)
        System.out.println(year + " is a leap year.");
        else
        System.out.println(year + " is not a leap year.");
    }
}
```

Output :

```
D:\21BCA151\JOURNAL-1>javac PRG_05.java

D:\21BCA151\JOURNAL-1>java PRG_05
Enter any year : 2003
2003 is not a leap year.
```

6. Write a program to take command line input and find the Character Is Vowel or Not.

```
import java.util.Scanner;
class PRG_06
{
        public static void main(String [] args)
        {
                char a;
                Scanner sc=new Scanner(System.in);
                System.out.print("Enter any  Character :");
                a = sc.next().charAt(0);
                if(a == 'a' || a == 'e' || a == 'i' || a == 'o' || a == 'u' || a == 'A' || a == 'E' || a == 'I' || a == 'O' || a == 'U' )
                        System.out.println(a +" is vowel");
      else
         System.out.println(a+ " is consonant");
        }
}
```

Output :

```
D:\21BCA151\JOURNAL-1>javac PRG_06.java

D:\21BCA151\JOURNAL-1>java PRG_06
Enter any  Character :n
n is consonant
```

7. Write a program to reverse a given number using while loop.

```
import java.util.Scanner;
class PRG_07
{
	public static void main(String[] args)
	{
		int n , r = 0;
		System.out.print("Enter any No. to reverse : ");
		Scanner sc = new Scanner(System.in);
		n = sc.nextInt();
		while(n != 0)
		{
			int re = n % 10;
			r = r * 10 + re;
			n = n/10;
		}
		System.out.println("The reverse of the given number is : " + r);
	}
}
```

Output :

```
D:\21BCA151\JOURNAL-1>javac PRG_07.java

D:\21BCA151\JOURNAL-1>java PRG_07
Enter any No. to reverse : 567
The reverse of the given number is : 765
```

8. Write a program to reverse a given number using for loop.

```
import java.util.Scanner;
class PRG_08
{
	public static void main(String[] args)
	{
		int n,i,r = 0;
		System.out.print("Enter any No. to reverse : ");
		Scanner sc = new Scanner(System.in);
		n = sc.nextInt();
		for(i=1;n!=0;i++)
		{
			int re = n % 10;
			r = r * 10 + re;
			n = n/10;
		}
		System.out.println("The reverse of the given number is : " + r);
	}
}
```

Output :

```
D:\21BCA151\JOURNAL-1>javac PRG_08.java

D:\21BCA151\JOURNAL-1>java PRG_08
Enter any No. to reverse : 890
The reverse of the given number is : 98
```

9. Write a program to check number is Armstrong or Not

```
import java.util.Scanner;
class PRG_09
{
   public static void main(String[] args)
        {
      int n, oN, r, re = 0;
                Scanner sc = new Scanner(System.in);
                System.out.print("Enter the No. : ");
                n = sc.nextInt();
      oN = n;
      while (oN != 0)
      {
         r = oN % 10;
         re += Math.pow(r, 3);
         oN /= 10;
      }
      if(re == n)
         System.out.println(n + " is an Armstrong number.");
      else
```

```
        System.out.println(n + " is not an Armstrong number.");
    }
}
```

Output :

```
D:\21BCA151\JOURNAL-1>javac PRG_09.java

D:\21BCA151\JOURNAL-1>java PRG_09
Enter the No. : 151
151 is not an Armstrong number.
```

10. Write a to check number is Prime number or not.

```
import java.util.Scanner;
public class PRG_10
{
        public static void main(String args[])
        {
                int i,n,m=0,flag=0;
                Scanner sc = new Scanner(System.in);
                System.out.print("Enter any No. : ");
                n = sc.nextInt();
                m=n/2;
                if(n==0||n==1)
                {
                        System.out.println(n+" is not prime number");
                }
                else
```

```
        {
            for(i=2;i<=m;i++)
            {
                if(n%i==0)
                {
                    System.out.println(n+" is not prime number");
                    flag=1;
                    break;
                }
            }
            if(flag==0)
            {
                System.out.println(n+" is prime number");
            }
        }
    }
}
```

Output :

```
D:\21BCA151\JOURNAL-1>javac PRG_10.java

D:\21BCA151\JOURNAL-1>java PRG_10
Enter any No. : 151
151 is prime number
```

11. Write a program to check given string is Palindrome or not

```
import java.util.Scanner;
```

```
class PRG_11
{
	public static void main(String[] args)
	{
		Scanner sc=new Scanner(System.in);
		String str, reverseStr = "";
		System.out.print("Enter any  string :");
		str = sc.nextLine();
		int strLength = str.length();
		for (int i = (strLength - 1); i >=0; --i)
		{
			reverseStr = reverseStr + str.charAt(i);
		}
		if (str.toLowerCase().equals(reverseStr.toLowerCase()))
		{
			System.out.println(str + " is a Palindrome String.");
		}
		else
		{
			System.out.println(str + " is not a Palindrome String.");
		}
	}
}
```

Output :

```
D:\21BCA151\JOURNAL-1>javac PRG_11.java

D:\21BCA151\JOURNAL-1>java PRG_11
Enter any  string :narayan
narayan is not a Palindrome String.
```

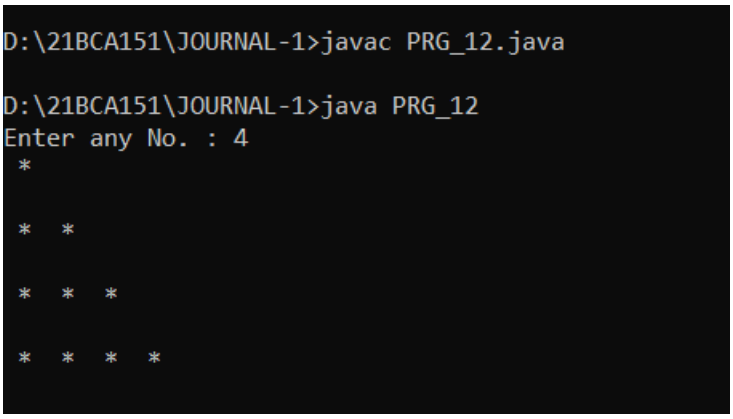
12. Write a program in java to display the pattern like right angle triangle using an asterisk.

```
*

*  *

*  *  *

*  *  *  *

*  *  *  *  *
```

```
import java.util.Scanner;
class PRG_12
{
	public static void main(String [] args)
	{
		int i,a,b=0;
		Scanner sc=new Scanner(System.in);
		System.out.print("Enter any No. : ");
		a = sc.nextInt();
		for(b=1;b<=a;b++)
		{
			for(i=1;i<=b;i++)
			{
```

```
                    System.out.print(" * ");
                }
                System.out.println("\n");
            }

        }
}
```

Output :



13. Write a program in java to make such a pattern like a pyramid with numbers increased by 1.

```
        1
      2   3
    4   5   6
  7   8   9   10
```

```
import java.util.Scanner;
class PRG_13
```

```
{
	public static void main(String [] args)
	{
		int i,a,b,n=1;
		Scanner sc=new Scanner(System.in);
		System.out.print("Enter any No. : ");
		a = sc.nextInt();
		for(b=1;b<=a;b++)
		{
			for(i=1;i<=a;i++)
			{
				if((b+i)<=a)
				{
					System.out.print(" ");
				}
				else
				{
					System.out.print(n+" ");
					n++;
				}
			}
			System.out.println("\n");
		}

	}
}
```

Output :

```
D:\21BCA151\JOURNAL-1>javac PRG_13.java

D:\21BCA151\JOURNAL-1>java PRG_13
Enter any No. : 4
   1

  2 3

 4 5 6

7 8 9 10
```

14. Write a C Program to display the pattern using the alphabet.

A B C D E

A B C D

A B C

A B

A

```
import java.util.Scanner;
class PRG_14
{
        public static void main(String [] args)
```

```
    {
        int i,a,b=0;
        char c;
        Scanner sc=new Scanner(System.in);
        System.out.print("Enter any No. : ");
        a = sc.nextInt();
        for(b=a;b>=1;b--)
        {
            c='A';
            for(i=1;i<=b;i++)
            {
                System.out.print(c+" ");
                c++;
            }
            System.out.println("\n");
        }
    }
}
```

Output :

```
D:\21BCA151\JOURNAL-1>javac PRG_14.java

D:\21BCA151\JOURNAL-1>java PRG_14
Enter any No. : 5
A B C D E

A B C D

A B C

A B

A
```

15. Write a program to take command line input and print factorial of given number.

```
import java.util.Scanner;
class PRG_15
{
        public static void main(String args[])
      {
            int n, c, f = 1;
            System.out.print("Enter an integer to calculate its factorial : ");
            Scanner in = new Scanner(System.in);
            n = in.nextInt();
            if (n < 0)
                  System.out.println("Number should be non-negative.");
            else
            {
```

```
                for (c = 1; c <= n; c++)
                        f = f*c;
                System.out.println("Factorial of "+n+" is = "+f);
        }
    }
}
```

Output :

```
D:\21BCA151\JOURNAL-1>javac PRG_15.java

D:\21BCA151\JOURNAL-1>java PRG_15
Enter an integer to calculate its factorial : 5
Factorial of 5 is = 120
```

16. Write a program to display Fibonacci series.

```
import java.util.Scanner;
public class PRG_16
{
    public static void main(String[] args)
    {
        int n, a = 0, b = 0, c = 1;
        Scanner s = new Scanner(System.in);
        System.out.print("Enter value of n : ");
        n = s.nextInt();
        System.out.print("Fibonacci Series : ");
        for(int i = 1; i <= n; i++)
        {
```

```
                a = b;
                b = c;
                c = a + b;
                System.out.print(a+",");
            }
            System.out.print("\b.");
        }
}
```

Output :