21BCA145

JOURNAL-01

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 :

```
Enter any No. : 15
The value 15 is odd.
```

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 :

```
Enter the first No. : 12
```

Enter the second No. : 12

The sum of two numbers x and y is: 24

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 :

Enter Value For Princip Amount :100000

Enter Value For Number Of Month :12

```
Enter Value For Rate :2

Simple Interest is : 24000.0
```

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 :

Enter any No. : 5

5 is Positive.

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 :

```
Enter any year : 2015
2015 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 :

```
Enter any  Character :o
o is vowel
```

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 :

```
Enter any No. to reverse : 123
The reverse of the given number is : 321
```

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 :

```
Enter any No. to reverse : 456
The reverse of the given number is : 654
```

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 :

```
Enter the No. : 153
153 is 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 :

```
Enter any No. : 17
17 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 :

```
Enter any  string :naman
naman is 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 :

```
Enter any No. : 5
 *
```

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

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 :

```
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 :

```
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 :

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 :

Enter value of n : 5

Fibonacci Series : 0,1,1,2,3.