1. Write a java program to check whether given number is Armstrong number or not

```
package nikki.com;
import java.util.Scanner;
public class Armstrong1 {
	public static void main(String[] args) {

		int n,arm=0,rem,a;
		System.out.println("Enter a number");
		Scanner sc = new Scanner(System.in);
		n=sc.nextInt();
		a=n;
		while(n>0)
		{
		rem=n%10;
		arm=(rem*rem*rem)+arm;
		n=n/10;
		}
		if(a==arm)

		System.out.print("It is Armstrong number");

		else

		System.out.print("It is Not a Armstrong number");
	}
	}
```

Output: Enter a number

153

It is a Armstrong number

2. Write a Program to display all the Armstrong number between 10 to 1000

```
package nikitha.com;

public class Armstrong_1{

        public static void main(String[] args) {

                int i=10,arm,a,n;
                System.out.println("Armstrong number between 10 to 1000");
                while(i<1000)
                {
                        n=i;
                        arm=0;
                        while(n>0)
                        {
                                a=n%10;
                                arm=arm+(a*a*a);
                                n=n/10;
                        }
                           if(arm==i)
                           System.out.println(i);
                          i++;
                  }
                    }
                   }
```

Output :

```
Armstrong number between 10 to 1000
153
370
371
407
```

3. Write a program to find sum of the following series

a. Sum = x-1/x+2/x-3/x….n/x

```
package nikitha.com;
import java.util.Scanner;
public class Sumofseries {

	public static void main(String[] args) {
		Scanner obj= new Scanner(System.in);

			int i,n;
			 float x;
			 float sum=0;
			 System.out.println("To find x-1/x+2/x-3/x...n/x");
			 System.out.println("Enter x value");
			 x= obj.nextFloat();
			 System.out.println("Enter n value");
			 n=obj.nextInt();
			 for(i=1;i<=n;i++)
			 {
			 if(i%2==0)
			 sum=sum-(float)i/x;
			 else
			 sum=sum+(float)i/x;
			 }
			 System.out.println("sum of series" + sum );
			   }
		}
```

Output:

```
To find x-1/x+2/x-3/x...n/x
Enter x value
3
Enter n value
7
sum of series1.3333331
```

b. 1!+2!+3!+…..n!

```
package nikki.com;
import java.util.Scanner;
public class Factorial {
	public static void main(String[] args) {
		int fact=1,sum=0;
		int i,j,n;
		for(i=1;i<10;i++)
		{
			fact=1;
			for(j=1;j<=10;j++)
			{
				fact=fact*j;
			}
			sum=sum+fact;
			System.out.println(fact +" ! ");
		}
		System.out.println("Sum of the series" +sum);
		}

	}
```

Output :

```
3628800 !
3628800 !
3628800 !
Sum of the series32659200
```

4.Write a java program to check given number is perfect number or not

```
package nikitha.com;
import java.util.Scanner;
public class Perfectnum {
	public static void main(String[] args) {

		int n,i,sum=0;
		System.out.println("Enter any number");
		Scanner sc = new Scanner(System.in);
		n = sc.nextInt();
		for(i=1;i<n;i++)
		{
		if(n%i==0)
		{
		sum=sum+i;
		}
		}
		if(n==sum)
		{
		System.out.println("It is a perfect number");
		}
		else
		{
		System.out.println("It is not a perfect number");
		 }
		   }
		    }
```

Output:

Enter any number
6
It is a perfect number

5. Display all perfect numbers between 1 to 100000

```
package nikitha.com;
import java.util.Scanner;
public class Perfect_num {
	public static void main(String[] args) {

		int i,j,num,sum;
		for(i=1;i<=100000;i++)
		{
		num=i;
		sum=0;
		for(j=1;j<num;j++)
		{
		if(num%j==0)
		sum=sum+j;
		}
		if(sum==num)
		System.out.println(i);
		}
	}
}
```

Output:

6

28

496

8128

6.Write a program to extract only character from a string.

Eg: Af02284khff -> Afkhff

```
package nikki.com;
import java.util.Scanner;
public class String1 {
	public static void main(String[] args) {
		String text ,string="";
		char ch;
		int i;
		Scanner key = new Scanner(System.in);
		System.out.println("Enter your text ");
		text = key.next();
		System.out.println("length of the string "+text.length());
		for(i=0;i<text.length();i++)
		{
		ch = text.charAt(i);
		if(ch>='a' & ch<='z' | ch>='A' & ch<='Z')
		string=string + ch;
		}
		System.out.println("extracted string "+ string);
}
}
```

Output:

```
Enter your text
Af02284khff
length of the string 11
extracted string Afkhff
```

7. Write a program to find reverse of digits

```
package nikitha.com;
import java.util.*;
public class Reverse {

	public static void main(String[] args) {
		int reverse=0,rem;
		System.out.println("Enter a number");

		Scanner obj= new Scanner(System.in);
		int num= obj.nextInt();

  while(num!= 0)
  {
	rem=num%10;
	reverse=reverse*10+rem;
	num=num/10;
  }
	System.out.println("Reverse of given num :" + reverse);
  }
	}
```

Output:

```
Enter a number
658
Reverse of given num :856
```

8. Write a program to find power value of given base and exponent number

```
package nikki.com;
import java.util.Scanner;
public class Power {
public static void main(String[] args) {
        int n,p,result=1;
        System.out.println("Enter a number:");
        Scanner r=new Scanner(System.in);
        n=r.nextInt();
        System.out.println("Enter Power");
        p=r.nextInt();
        for(int i=1;i<=p;i++)
        {
        result=n*result; //4*1=4, 4*8=32
        }
        System.out.println("Power " + result);
}
}
```

Output:

```
Enter a number:
4
Enter Power
5
Power 1024
```

9. Write a program to convert every first letter of string to capital letter

a. eg: the Hindu -> The Hindu

```
package nikki.com;
public class Caps {
        String[] str, str2;
        int size;
        Caps(String[] s, int n)
        {
        str=s;
        str2=s;
        size=n;
        }
        void Converto()
        {
        int i;
        for(i=0;i<size;i++)
        {
        String res = str[i].substring(0, 1).toUpperCase() + str[i].substring(1);
        str2[i]=res;
        }
        }
        void display()
        {
        for(int i=0;i<size;i++)
        System.out.println(str2[i]);
        }
        public static void main(String[] args) {
        String[] text = {"the Hindu"};
        Caps obj = new Caps(text, text.length);
        obj.Converto();
        obj.display();
}
}
```

Output: The Hindu

10. Write a program to count no. of digits present in a string

```
package nikki.com;

public class Counting_digits {


	public static void main(String[] args) {
	String s="Python is a programming Language556699";
	int count=0;
	for(int i=0;i<s.length();i++)
	{
	if(Character.isDigit(s.charAt(i)))
	count++;
	}
	System.out.println("The no. of digits in the given string:" +count);
}
}
```

Output:

The no. of digits in the given string : 6