

Write a program to find the sum, difference, product, quotient and remainder of two numbers passed as command line argument.

```
import java.util.*;
class command
{
public static void main(String args[])
{int a,b;
a=Integer.parseInt(args[0]);
b=Integer.parseInt(args[1]);
System.out.println("sum : "+(a+b));
System.out.println("Difference : "+(a-b));
System.out.println("Product : "+(a*b));
System.out.println("Quotient : "+(a/b));
System.out.println("Remainder : "+(a%b));
}
}
javac command.java
java command 20,10
```

2. Write java program to display Fibonacci series up to a limit.

```
import java.util.*;
class fibanocci
{
public static void main(String args[])
{int n,a=0,b=1,c=0;
Scanner sc=new Scanner(System.in);
System.out.println("enter the limit:");
n=sc.nextInt();
System.out.println("Fibonacci series upto"+n);
while(c<=n)
{
System.out.println(c);
a=b;
b=c;
c=a+b;
}
}
}
```

Write java program to display Armstrong numbers within a range.

```
import java.util.*;
class armstrong
{
public static void main(String args[])
{int l,u,num,x;
double len,rem,s;
Scanner sc=new Scanner(System.in);
System.out.println("Enter the lower limit:");
l=sc.nextInt();
System.out.println("Enter the upper limit:");
u=sc.nextInt();
System.out.println("Armstrong numbers");
for(num=l;num<=u;num++)
{s=0;
x=num;
len=Integer.toString(num).length();
while(x!=0)
{
```

```

rem=x%10;
s=s+Math.pow(rem,len);
x=x/10;
}
if(num==s)
System.out.println(num);
}
}
}
}
}
}
}

```

Given the sides of a triangle, write a program to check whether the triangle is equilateral, isosceles or scalene and find its area.

```

import java.util.*;
class triangle
{
public static void main(String args[])
{
float a, b, c;
double area,s;
Scanner sc=new Scanner(System.in);
System.out.println("First side");
a=sc.nextFloat();
System.out.println("Second side");
b=sc.nextFloat();
System.out.println("Third side ");
c=sc.nextFloat();
if(a>=(b+c) || b>=(c+a) || c>=(a+b))
System.out.println("cannot form a triangle");
else
{
if(a==b && b==c && a==c)
System.out.println("equilator");
else if(a==b || b==c || c==a)
System.out.println("isoceles");
else
System.out.println("scelene");
s=(a+b+c)/2;
area=Math.sqrt(s*(s-a)*(s-b)*(s-c));
System.out.println("Area: "+area);
}
}
}
}

```

Read an array of 10 or more numbers and write a program to find the

- Smallest element in the array
- Largest element in the array
- Second largest element in the array

```

import java.util.*;
class array
{
public static void main(String args[])
{
int n,i,j,temp;
int a[]=new int[100];

```

```

Scanner sc=new Scanner(System.in);
System.out.println("Enter the size of the array");
n=sc.nextInt();
System.out.println("Enter the elements");
for(i=0;i<n;i++)
{a[i]=sc.nextInt();
}
for(i=0;i<n-1;i++)
for(j=0;j<n-1;j++)
if(a[j]>a[j+1])
{temp=a[j];
a[j]=a[j+1];
a[j+1]=temp;
}
System.out.println("largest element:"+a[n-1]);
System.out.println("Second largest element:"+a[n-2]);
System.out.println("smallest element:"+a[0]);
}
}

```

Write a program to perform base conversion

```

a) Integer to binary
b) Integer to Octal
c) Integer to Hexadecimal
import java.util.*;
class number
{
public static void main(String args[])
{
int n;
String binary,octal,hex;
Scanner sc=new Scanner(System.in);
System.out.println("Enter the integer");
n=sc.nextInt();
binary=Integer.toString(n,2);
octal=Integer.toString(n,8);
hex=Integer.toString(n,16);
System.out.println("binary of "+n+" is :"+binary);
System.out.println("octal of "+n+" is :"+octal);
System.out.println("Hexadecimal of "+n+" is :"+hex);
}
}

```

Write a program to merge two arrays.

```

import java.util.*;
class merge
{public static void main(String args[])
{int n,m,i,k,size;
int a[]=new int[100];
int b[]=new int[100];
int c[]=new int[100];
Scanner sc=new Scanner(System.in);
System.out.println("Enter the size of the first array");
m=sc.nextInt();
System.out.println("Enter the elements");
for(i=0;i<m;i++)

```

```

a[i]=sc.nextInt();
System.out.println("Enter the size of the second array");
n=sc.nextInt();
System.out.println("Enter the elements");
for(i=0;i<n;i++)
b[i]=sc.nextInt();
for(i=0;i<m;i++)
c[i]=a[i];
size=m+n;
for(k=m,i=0;k<size && i<n;k++,i++)
c[k]=b[i];
System.out.println("Merged array");
for(i=0;i<size;i++)
System.out.print(c[i]+" ");
}}

```

Java Programming Code to Find HCF LCM of Two Numbers

```

import java.util.*;
class hcflcm
{
public static void main(String args[])
{
int a,b,x,y,t,hcf,lcm;
Scanner sc=new Scanner(System.in);
System.out.println("Enter two numbers");
a=sc.nextInt();
b=sc.nextInt();
x=a;
y=b;
while(y!=0)
{t=y;
y=x%y;
x=t;
}
hcf=x;
lcm=(a*b)/hcf;
System.out.println("HCF="+hcf);
System.out.println("LCM="+lcm);
}}

```

Write java program to find the sum of the digits and reverse of a given number using class

and objects.

```

import java.util.*;
class SumRev
{
int rem,sum=0,rev=0;
void sumAndRev(int n)
{
while(n!=0)
{rem=n%10;
sum=sum+rem;
rev=rev*10+rem;
n=n/10;
}
System.out.println("Sum="+sum);
}
}

```

```

System.out.println("Reverse="+rev);
}
}
class SumRevMain
{
public static void main(String args[])
{int n;
Scanner sc=new Scanner(System.in);
System.out.println("Enter the number");
n=sc.nextInt();
SumRev ob=new SumRev();
ob.sumAndRev(n);
}
}

```

Write a Java Programming Code to Check given string Anagram or Not. If the two strings are anagram to each other, then one string can be rearranged to form the other string. For Example: abc and cba are anagram.

```

import java.util.*;
class anagram
{
public static void main(String args[])
{
String s1,s2;
boolean status=true;
Scanner sc=new Scanner(System.in);
System.out.println("Enter the first string");
s1=sc.next();
System.out.println("Enter the second string");
s2=sc.next();
if(s1.length()!=s2.length())
status=false;
else
{
char ArrayS1[]=s1.toCharArray();
char ArrayS2[]=s2.toCharArray();
Arrays.sort(ArrayS1);
Arrays.sort(ArrayS2);
status=Arrays.equals(ArrayS1,ArrayS2);
}
if(status==true)
System.out.println(s1+" and "+ s2 +" are Anagram");
else
System.out.println(s1+" and "+ s2 +" are Not Anagram");
}}

```

Write a Java Program to remove all vowels from a string

```

import java.util.*;
class vowel
{
void removeVowel(String str)
{
System.out.println(str.replaceAll("[aeiouAEIOU]",""));
}
}

```

```
class vowelMain
{
public static void main(String args[])
{String str;
Scanner sc=new Scanner(System.in);
System.out.println("Enter the string");
str=sc.next();
vowel ob=new vowel();
ob.removeVowel(str);
}}
```

Using class and objects, Write a java program to find the sum of two complex numbers
(Hint: Use object as parameter to function).

```
import java.util.*;
class complex
{
int real,img;
complex(int r,int i)
{
real=r;
img=i;
}
void add(complex c1,complex c2)
{
real=c1.real+c2.real;
img=c1.img+c2.img;
System.out.println("sum="+real+"i"+img);
}
}
class ComplexMain
{
public static void main(String args[])
{
int r,i;
Scanner sc=new Scanner(System.in);
System.out.println("Enter the real part of the first complex number");
r=sc.nextInt();
System.out.println("Enter the imaginary part of the first complex number");
i=sc.nextInt();
complex c1=new complex(r,i);
System.out.println("Enter the real part of the second complex number");
r=sc.nextInt();
System.out.println("Enter the imaginary part of the second complex number");
i=sc.nextInt();
complex c2=new complex(r,i);
c2.add(c1,c2);
}
}
```

Write a java program to find the volume of cube, rectangular box, cylinder using function overloading.

```
import java.util.*;
class shape
{
```

```

double v;
void volume(double a)
{
v=a*a*a;
System.out.println("The volume of cube is"+v);
}
void volume(double l,double b,double h)
11
M
D
C
{
v=l*b*h;
System.out.println("The volume of rectangular box is"+v);
}
void volume(double r,double h)
{
v=3.14*r*r*h;
System.out.println("The volume of cylinder is"+v);
}
}
class shapemain
{
public static void main(String args[])
{
double a,l,b,h,r;
shape ob=new shape();
Scanner sc=new Scanner(System.in);
System.out.println("The volume of cube is");
System.out.println("Enter the side of cube");
a=sc.nextInt();
ob.volume(a);
System.out.println("The volume of rectangular box");
System.out.println("Enter length,breadth and height of rectangular box");
l=sc.nextInt();
b=sc.nextInt();
h=sc.nextInt();
ob.volume(l,b,h);
System.out.println("The volume of cylinder is");
System.out.println("Enter radius and height of cylinder");
r=sc.nextInt();
h=sc.nextInt();
ob.volume(r,h);
}
}

```

Write a multi thread java program for displaying odd numbers and even numbers up to a limit (Hint : Implement thread using Runnable interface).

```

import java.util.*;
class oddthread implements Runnable
{int n;
oddthread(int x)
{n=x;
}
public void run()
{
for(int i=1;i<=n;i+=2)

```

```

{
System.out.println("oddthread:"+i);
}
}
}
class eventhread implements Runnable
{int n;
eventhread(int x)
{n=x;
}
public void run()
{
for(int i=2;i<=n;i+=2)
{
System.out.println("eventhread:"+i);
}
}}
class MainThread
{
public static void main(String args[])
{
Scanner sc=new Scanner(System.in);
System.out.println("Enter the limit");
int n=sc.nextInt();
oddthread o=new oddthread(n);
eventhread e=new eventhread(n);
Thread t1=new Thread(o);Thread t2=new Thread(e);
t1.start();
t2.start();
}}

```

Write a program to count and display total number of objects created to a class (Hint: static members).

```

class countobj
{
static int count=0;
countobj()
{count++;
}
static void show()
{System.out.println("Total number of object="+count);
}
}
class CountMain
{
public static void main(String args[])
{countobj ob1=new countobj();
countobj ob2=new countobj();
countobj ob3=new countobj();
countobj.show();
}
}

```

Write java program to display Fibonacci series up to a limit.

```

import java.util.*;
class fibanocci

```



```
{
public static void main(String args[])
{int n,a=0,b=1,c=0;
Scanner sc=new Scanner(System.in);
System.out.println("enter the limit:");
n=sc.nextInt();
System.out.println("Fibonacci series upto"+n);
while(c<=n)
{
System.out.println(c);
a=b;
b=c;
c=a+b;
}
}
}
```