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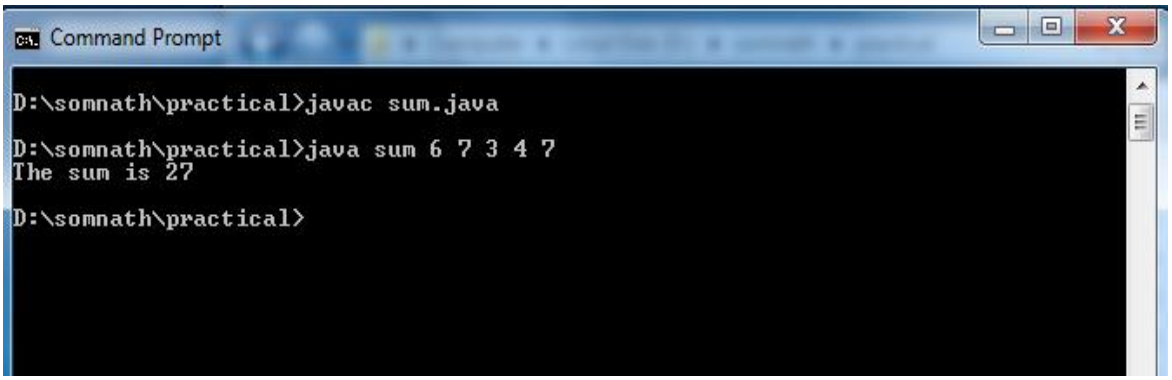
- **To find the sum of any number of integers entered as command line arguments**

  PROGRAM CODE:

```
public class sum {
public static void main( String args[] ) {
int num=0;
for(int i=0; i<args.length; i++){
  num=num+ Integer.parseInt(args[i]);
}

 System.out.println("The sum is " + num);
  }
}
```

- **OUTPUT:**



TEACHER SIGNATURE:

- **To find the factorial of a given number**

PROGRAM CODE:

```
import java.util.Scanner;
class fact{
public static void main(String args[]){
                        int n,f=1,i;
                        Scanner in= new Scanner (System.in);
                        System.out.println("Enter any numbers: ");
                        n= in.nextInt();
          for(i=1;i<=n;i++)
         {
          f=f*i;
         }
                        System.out.println("Factorial="+f);
} }
```

OUTPUT:

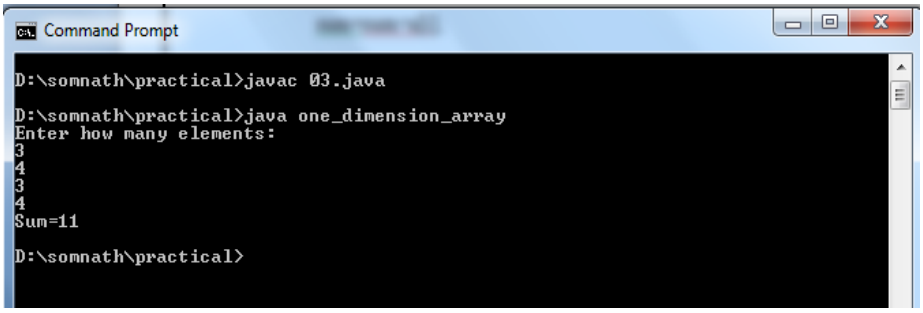
TEACHER SIGNATURE:

- **To learn use of single dimensional array by defining the array dynamically**

PROGRAM CODE:

```
import java.io.*;
class one_dimension_array  {
public static void main (String args[]) throws IOException  {
InputStreamReader read=new InputStreamReader(System.in);
BufferedReader in=new BufferedReader(read);
int i,sum=0,n;
System.out.println("Enter how many elements: ");
n=Integer.parseInt(in.readLine());
int a[]=new int[n];
for(i=0;i<n;i++)
{
a[i]=Integer.parseInt(in.readLine());
}
for(i=0;i<n;i++)
{
sum=sum+a[i];
}
System.out.println("Sum="+sum);
}}
```

OUTPUT:



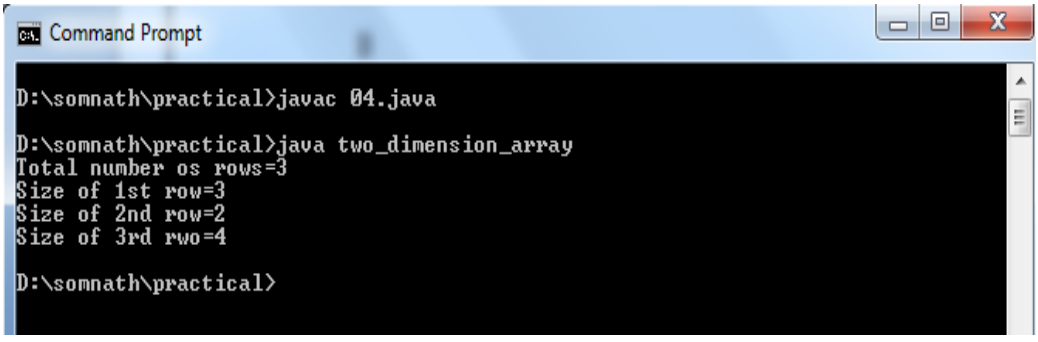
TEACHER SIGNATURE:

- **To learn use of .length in case of a two dimensional array**

PROGRAM CODE:

```
class  two_dimension_array

{

public static void main (String[] args)

{

int x[ ][ ]={{1,2,3},{4,5},{6,7,8,8}};

int l1=x.length;

int l2=x[0].length;

int l3=x[1].length;

int l4=x[2].length;

System.out.println("Total number os rows="+l1);

System.out.println("Size of 1st row="+l2);

System.out.println("Size of 2nd row="+l3);

System.out.println("Size of 3rd rwo="+l4);

}}
```

OUTPUT:



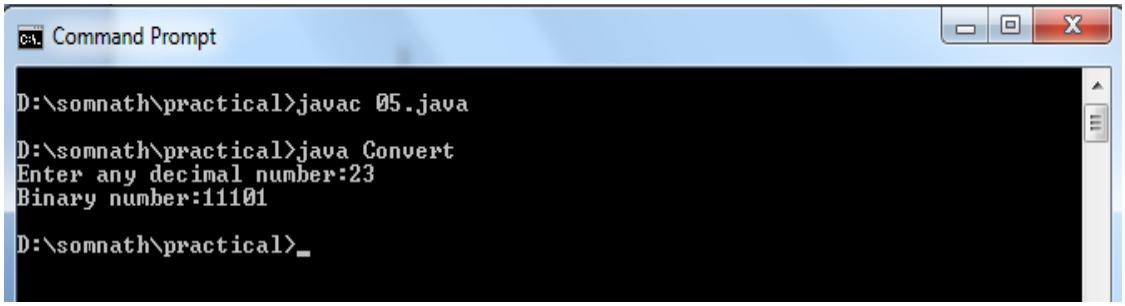
TEACHER SIGNATURE:

- **To convert a decimal to binary number**

PROGRAM CODE:

```
import java.util.Scanner;
class Convert    {
   public static void main(String args[])      {
      int n, count = 0, a;
      String x = "";
      Scanner s = new Scanner(System.in);
      System.out.print("Enter any decimal number:");
      n = s.nextInt();
      while(n > 0)
      {
         a = n % 2;
         x = x + "" + a;
         n = n / 2;
      }
      System.out.println("Binary number:"+x);
   }      }
```

OUTPUT:



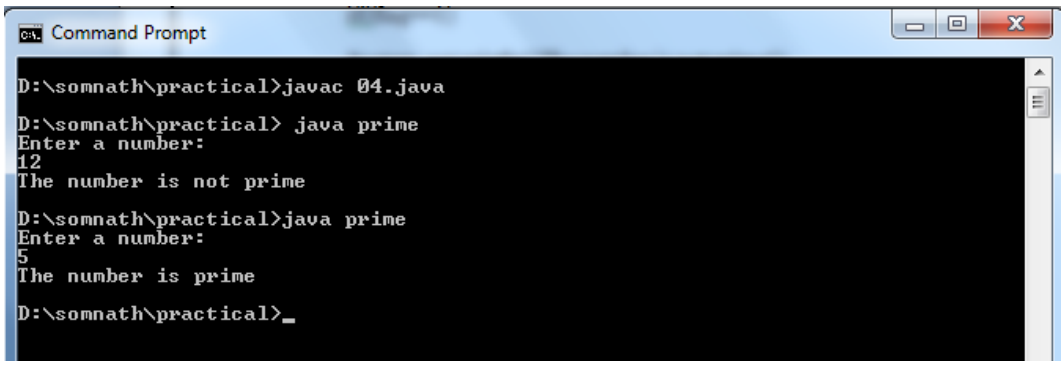
TEACHER SIGNATURE:

- **To check if a number is prime or not, by taking the number as input from the keyboard**

PROGRAM CODE:

```
import java.util.Scanner;
class prime  {
public static void main (String args[])  {
int flag=0,n;
Scanner in=new Scanner(System.in);
System.out.println("Enter a number: ");
n=in.nextInt();
for(int i=2;i<=n/2;i++)
{
if(n%i==0)
{
flag=1;
break;
}}
if(flag==1)
System.out.println("The number is not prime");
if(flag==0)
System.out.println("The number is prime");
}}
```

OUTPUT:



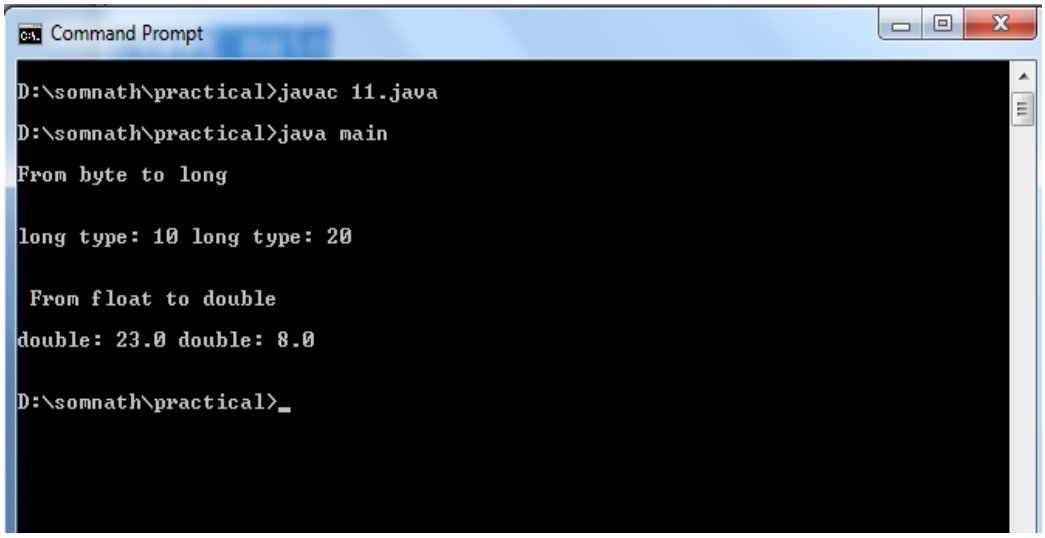
TEACHER SIGNATURE:

- **Write a program to show that during function overloading, if no matching argument is found,**
  then java will apply automatic type conversions(from lower to higher data type)

PROGRAM CODE:

```
 class typecons    {
void test(long x, long y)   {
System.out.println("\nFrom byte to long\n\n");
System.out.println("long type: " + x + " long type: " +y+"\n");
}


void test(double a, double b)
{
System.out.println("\n From float to double\n");
System.out.println("double: " +a+ " double: " +b+"\n");
}    }


class main   {
public static void main (String args[])   {
typecons obj= new typecons();
byte a=10;
byte b=20;


float x=23;
float y=8;


obj.test(a,b);
obj.test(x,y);
}      }
```

OUTPUT:



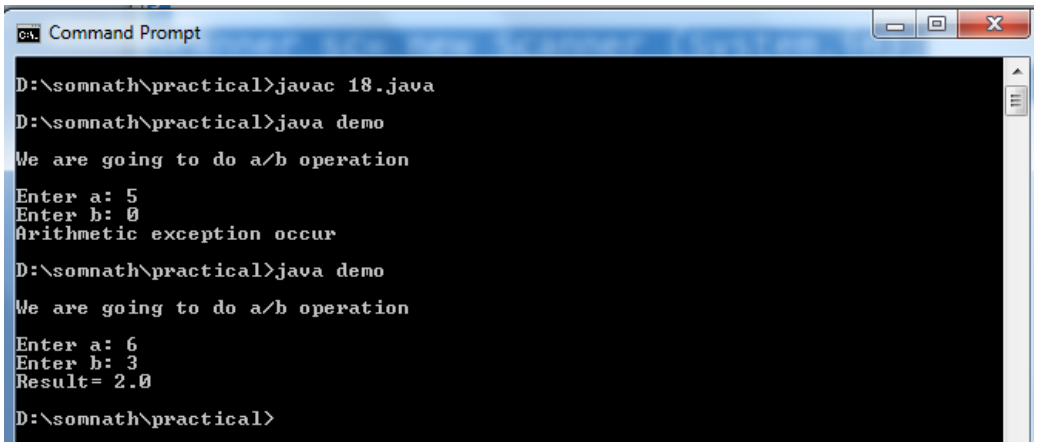
TEACHER SIGNATURE:

- **Write a program —DivideByZero‖ that takes two numbers a and b as input, computes a/b, and invokes Arithmetic Exception to generate a message when the denominator is zero**

PROGRAM CODE:

```
import  java.util.*;

class demo   {

public  static  void  main(String args[])    {

Scanner  sc= new  Scanner (System.in);

System.out.println("\n"+"We are going to do a/b operation"+"\n");

System.out.print("Enter a: ");

int a=sc.nextInt();

System.out.print("Enter b: ");

int b=sc.nextInt();

try {

double  f=a/b;

System.out.println("Result= "+f);

}

catch(ArithmeticException e)

{

System.out.println("Arithmetic exception occur");

}   }   }
```

OUTPUT:



TEACHER SIGNATURE: