**package** substraction\_with\_any\_base;

**import** java.util.Scanner;

**public** **class** Substraction {

**public** **static** **void** main(String[] args) {

lable1:

System.***out***.println("Enter the two number :");

Scanner scan = **new** Scanner(System.***in***);

**int** num1 = scan.nextInt();

**int** num2 = scan.nextInt();

System.***out***.println("Enter their base value :");

**int** base = scan.nextInt();

**if**(base <2 || base>10)

{

System.***out***.println("Invalid base !!!");

}

**int** result;

**if**(num1>num2)

result = *substraction*(num1,num2,base);

**else**

result = *substraction*(num2,num1,base);

System.***out***.println("Substraction of "+num1+" and "+num2+" with base "+base+" is = "+result);

}

**public** **static** **int** substraction(**int** no1,**int** no2, **int** b)

{

**int** i,j,res=0;

**int** [] num1 = *split*(no1);

**int** [] num2 = *split*(no2);

**int** [] result = **new** **int**[num1.length];

String value = "";

// System.out.print("num1 is :");

// for(int c : num1)

// {

// System.out.print(c + " ");

// }

**for**(i=num1.length-1,j=num2.length-1;i>=0;i--,j--)

{

**if**(j>=0) //If second number is less in length than first

{

**if**(num1[i]<num2[j])

{

**if**(num1[i-1]==0)

{

**int** k=i-1;

**do**

{

num1[k]=b-1;

k--;

}**while**(num1[k]==0);

num1[k] -= 1;

}

**else**

{

num1[i-1] -=1;

}

num1[i]+=b;

}

result[i]=num1[i]-num2[j];

}

**else**

{

result[i]=num1[i];

}

}

//System.out.println("Final result is :");

**for**(**int** c : result)

{

System.***out***.print(c + " ");

//if(c!=0)

value +=c;

}

res=Integer.*parseInt*(value);

//System.out.println("res ="+res);

**return** res;

}

**public** **static** **int**[] split(**int** no)

{

**int**[] arr = **new** **int**[String.*valueOf*(no).length()];

**int** i = arr.length-1;

**while**(no>0)

{

**int** digit = no%10;

arr[i]=digit;

i--;

no=no/10;

}

**return** arr;

}

}