**Binary Calculator.**

**Design and implement a GUI based application to perform as a binary calculator which can do addition, subtraction, multiplication, division(for positive numbers, negative numbers, and zero). Integer division is used, that is, division result is also an integer. Attached is a class which provides methods to convert decimal to binary and binary to decimal.**

**You calculator should be able to do continuous calculations such as**

**the input is 110+10-1\*10=+1=, the result should be 1111 (continuous calculation just executes from left to right, no operator precedence needs to be considered)**

**Continuous calculation weights 10% of project grading.**

**Submit all source code (one zipped file) on the blackboard.**

BinaryDecimal.txt below \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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\* To change this template, choose Tools | Templates

\* and open the template in the editor.

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\* @author aic

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public class BinaryDecimal {

//Convert from Binary number (String) to integer

public static int BinaryToDecimal(String bin)

{

int flag=0; //0 positive number 1 negative

flag = (bin.charAt(0) != '-' ? 0:1);

if (bin.charAt(0) == '+' || bin.charAt(0) == '-')

bin = bin.substring(1);

int decimal = 0;

int digit;

for (int i=bin.length()-1;i>=0;i--)

{

if (bin.charAt(i) == '0')

digit = 0;

else if (bin.charAt(i) == '1')

digit = 1;

else

{

System.out.println("Invalid input");

return -1;

}

decimal += digit\*Math.pow(2.0,bin.length()-1-i);

}

if (flag == 1)

return -decimal;

return decimal;

}

//Convert from integer to Binary number

public static String DecimalToBinary(int decimal)

{

String bin = "";

String result = "";

if (decimal<0)

{

result += "-";

decimal = 0-decimal;

}

if (decimal == 0)

{

result = "0";

return result;

}

while (decimal/2 != 0)

{

bin += (decimal%2==1)? "1":"0";

decimal /= 2;

}

bin += "1";

for (int i=bin.length()-1;i>=0;i--)

result += bin.charAt(i);

return result;

}

}