

"Answer on Question#39094 - Programming, Java"

```
package convertorbindec;

import java.util.Scanner;

/**
 *
 * @author Who you are
 * @version 1.01 Program converts number from Base2 to Base2
 */
public class ConvertorBinDec {

    static final int BASE2 = 2;           //constant for base2 system
    static final int BASE10 = 10;        //constant for base10 system

    public static void main(String[] args) {

        Scanner input = new Scanner(System.in);
        System.out.print("Input number in base2: ");
        int number = input.nextInt();
        //calculate converted number
        int numberConverted = convertFromBinToDec(number);
        //output
        System.out.println("Base 2: " + number + " Base 10: " + numberConverted);
        System.out.print("Input number in base10: ");
        number = input.nextInt();
        //calculate converted number
        numberConverted = convertFromDecToBin(number);
        //output
        System.out.println("Base 10: " + number + " Base 2: " + numberConverted);
    }

    /**
     *
     * @param number number in Base3
     * @return number in Base7
     */
    public static int convertFromBinToDec(int number) {
        int length = (number + "").length();
        //calculate how many digits number contains
        int sum = 0;
        for (int i = 0; i < length; i++) { //convert
            from Base2 to Base10
            sum += (number % BASE10) * Math.pow(BASE2, i);
            number /= BASE10;
        }
        return sum;
    }

    public static int convertFromDecToBin(int number) {
        StringBuilder convertedNumberAsString = new StringBuilder(""); //create
        empty String for collecting digits
        while (number > 0) {
            //convert from Base10 to Base2
            int digit = number % BASE2;
            convertedNumberAsString.append(digit);
            number = number / BASE2;
        }
        convertedNumberAsString = convertedNumberAsString.reverse();
        //reverse digits in String after conversion
    }
}
```

```
        int convertedNumber = Integer.parseInt(convertedNumberAsString.toString());  
//parse to int  
        return convertedNumber;  
    }  
}
```