*Report: Week 2: Assignment 1 – BinarySum.java*

Take two binary numbers as inputs for the program

Check whether the inputted numbers of the correct binary format.

Print an error message and prompt the user to input the correct number format.

Pass the numbers to the function which converts the binary to decimal number

Calculate the sum of the two decimal numbers.

Convert the summation result to binary and hexadecimal number format.

Print the sum result in decimal, binary and hexadecimal formats.

NO

YES

(1)

(2)

(3)

(4)

(5)

(6)

The problem we have to implement a program that acts as a calculator for adding of two numbers, these numbers should be in the binary number format. The basic idea we have adopted – which we feel is less complicated – is, by converting the inputted binary numbers into a decimal number and then adding those numbers to get the sum. The flowchart above gives a brief outline of how the program has been instrumented. As shown in the step (1), exactly two binary numbers are taken as an input, if there are more than or less than two command line arguments given the program prints out a message saying to input the correct number of arguments. These binary numbers are then check – as shown in step (2) - for their correct number format and are passed to the function which converts them to decimal number format [step (3)]. The sum of these numbers is calculated [step (4)] and then the final sum is converted to a binary and hexadecimal number format – as shown in step (5). Ultimately the desired output of the sum in all the number format is printed.

The initial idea was to implement the code by directly calculating the sum of the two binary numbers and then converting it into the desired number format. But this method would have required additional computations and methods for it.