MIPS Assignment 3

Bitwise Shift

Tutorial

Before attempting this assignment, navigate back to the assembly tutorial mentioned in MIPS Assignment 1.

Complete the tutorial up to Chapter 12.

Program

Write a program that lets the user input two integers, then outputs the results of logical bit-shifting in different ways.

Hard-coded Values

You will hard-code the integer 1 as a ***word*** value in your program.

The Input

As with previous assignments, the two input integers will be entered on their own lines.

The Output

For the sake of simplicity, let's refer to the first inputted integer as $1, the second inputted integer as $2, and the hard-coded ***word*** value as $H.

Your program will output the result of four operations (each as integers):

1. $1 shifted left by $2 bits
2. $1 shifted left by $H bits
3. $1 shifted right by $2 bits
4. $1 shifted right by $H bits

You should use ***logical*** shifting, not arithmetic shifting.

Each output should be followed by a newline character ('\n' aka ASCII 10 aka Hex 0x0A).

If, for example, the user entered the numbers 8 and 2, a correct program would output the following:

```
32
16
```

```
2
4
```

Special Instructions

Please also keep the following in mind:

- Do not accomplish bitwise shifting via multiplication or other workarounds; Please accomplish bit shifting by using the instructions specifically designated for bitwise shifting.

Assignment Tag

For this assignment, use the following *Assignment tag*: *Mips3BitwiseShift*