HW#5

Hafsa Chaudhry

1. A) Explain the SRL instruction ?

SRL = Shift Right Logical // Unsigned integer divide by 2n

SRL $4, $1, 2 so unsigned integer is $1 and we divide by 22 = 4

$4 = $1 / 4 unsigned integer divide

4 = 18 / 4

B) Explain the SLL instruction?

SLL = Shift Left Logical // Integer Multiply by 2

SLL $5, $2, 4 so $2 \* 24

$5 = $2 \* 16

768 = 48 \* 16

C) Explain the SRA instruction?

SRA = Shift Right Arithmetic // Signed integer divide by 2n

SRA $6, $3, 3 so $3 divided by 23

$6 = $3 / 8

-155 = -1234 / 8

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1. A) What are the base memory addresses for input[] and output[]? Input: 0053FCF0 and output: 0053FC68

B) Explain that the right shift operator, >>, is being used to calculate: from the powerpoint, it looks like it is used for SRA or SRL (divide by 2n). Online it explains how for unsigned numbers, the bit positions that were vacated by the shift operation are zero-filled (if positive, then 0 is used). For signed numbers the sign bit is used to fill the vacated bit positions (if negative, then 1 is used).

3., 4., 5.,: done

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