CSE471 A96 Snyder

Assignment 2

Goal: Write a behavioral description for a basic 32-bit ALU.

This definition should implement the ALU in Figure 4.18 of Hennessy and Patterson. That is, there should be two 32-bit operand inputs, `a` and `b`, and a 3-bit operation input. (Recall, the last ALU separated the `Bnegate` and `Operation` bits). There should be a 32-bit `result` output, as well as `Zero` (all result bits 0), `Overflow` and `CarryOut` outputs. The operation coding is:

```
000   And
001   Or
010   Add
110   Subtract
111   Set (Result) on a<b
```

The difference between this solution and the previous solutions is that this should not implement any of the operations structurally, but only realize their behavior.

Turn In: Submit your ALU design and a listing of your tests showing that the ALU works. The code should be fully documented.

Due: The assignment is due 5:00 pm, Monday 28 October 1996 by electronic submission.