

- You are asked to add the datapath parts and control signals needed to implement the *addiu* instruction in the multi-cycle datapath and control. Instruction *addiu* adds an immediate unsigned value. For example:

```
addiu $1, $2, 100
```

means:

$$\$1 = \$2 + 100$$

- Show the additions to the datapath and control lines of Figure 5.28 on page 323 in the textbook that are needed to implement this instruction in the multi-cycle datapath.
  - Show the steps in executing the *addiu* instruction in the multi-cycle datapath, using the same breakdown of steps as used in this chapter of the textbook.
  - Show the additions in the finite state machine of Figure 5.37 on page 338 in the textbook that are needed to implement the *addiu* instruction.
- Problems 5.30 and 5.31 (page 357 of the textbook)
  - Problem 6.3 (page 455 of the textbook)