2 Boolean Arithmetic

Counting is the religion of this generation, its h
—Gertrude Stein (1874–1946)

In this chapter we build gate logic desi
arithmetic operations on them. Our start
chapter 1, and our ending point is a fully
ALU is the centerpiece chip that execute
performed by the computer. Hence, build
step toward understanding how the Centr
computer work.

As usual, we approach this task gradu
ground on how binary codes and Boolea
represent and add signed numbers. The Sp
adder chips, designed to add two bits, thr
This sets the stage for the ALU specifica
simple logic design. The Implementatio
guidelines on how to build the adder chi
using the hardware simulator supplied wit

Binary addition is a simple operation
operations performed by digital computers
binary numbers. Therefore, constructive u
key to the implementation of numerous c
way or another.