

**Exercise 2.46** Check that the behavior we have discussed here is accurate by creating a **TicketMachine** instance and calling **insertMoney** with various actual parameter values. Check the balance both before and after calling **insertMoney**. Does the balance ever change in the cases when an error message is printed? Try to predict what will happen if you enter the value zero as the parameter, and then see if you are right.

**Exercise 2.47** Predict what you think will happen if you change the test in **insertMoney** to use the *greater-than or equal-to operator*:

```
if (amount >= 0)
```

Check your predictions by running some tests. What is the one situation in which it makes a difference to the behavior of the method?

**Exercise 2.48** Rewrite the if-else statement so that the method still behaves correctly but the error message is printed if the boolean expression is true but the balance is increased if the expression is false. You will obviously have to rewrite the condition to make things happen this way around.

**Exercise 2.49** In the *figures* project we looked at in Chapter 1 we used a **boolean** field to control a feature of the circle objects. What was that feature? Was it well suited to being controlled by a type with only two different values?

## 2.14

## A further conditional-statement example

The **printTicket** method contains a further example of a conditional statement. Here it is in outline:

```
if (balance >= price) {
    Printing details omitted.
    // Update the total collected with the price.
    total = total + price;
    // Reduce the balance by the price.
    balance = balance - price;
}
else {
    System.out.println("You must insert at least: " +
        (price - balance) + " more cents.");
}
```

With this if-statement, we fix the problem that the naïve version makes no check that a customer has inserted enough money for a ticket before printing. This version checks that the value in the **balance** field is at least as large as the value in the **price** field. If it is, then it is okay to print a ticket. If it is not, then we print an error message instead.