

2.7

Methods

The **TicketMachine** class has four methods: **getPrice**, **getBalance**, **insertMoney**, and **printTicket**. You can see them in the class's source code (Code 2.1) as yellow boxes. We shall start our look at the source code of methods by considering **getPrice** (Code 2.5).

Code 2.5

The **getPrice** method

```
public class TicketMachine
{
    Fields omitted.
    Constructor omitted.

    /**
     * Return the price of a ticket.
     */
    public int getPrice()
    {
        return price;
    }

    Remaining methods omitted.
}
```

Concept

Methods consist of two parts: a header and a body.

Methods have two parts: a *header* and a *body*. Here is the method header for **getPrice**, preceded by a descriptive comment:

```
/**
 * Return the price of a ticket.
 */
public int getPrice()
```

It is important to distinguish between method headers and field declarations, because they can look quite similar. We can tell that **getPrice** is a method and not a field because method headers always include a pair of parentheses—“(” and “)” —and no semicolon at the end of the header.

The method body is the remainder of the method after the header. It is always enclosed by a matching pair of curly brackets: “{” and “}”. Method bodies contain the *declarations* and *statements* that define what an object does when that method is called. Declarations are used to create additional, temporary variable space, while statements describe the actions of the method. In **getPrice**, the method body contains a single statement, but we shall soon see examples where the method body consists of many lines of both declarations and statements.

Any set of declarations and statements between a pair of matching curly brackets is known as a *block*. So the body of the **TicketMachine** class, the bodies of the constructor, and all of the methods within the class are blocks.