

## 8.1 Introduction

We now take a deeper look at building classes, controlling access to members of a class and creating constructors. We show how to **throw** an exception to indicate that a problem has occurred—[Section 7.5](#) discussed **catching** exceptions.

We use the **this** keyword to enable one constructor to conveniently call another constructor of the same class. We discuss *composition*—a capability that allows a class to have references to objects of other classes as members. We reexamine the use of *set* and *get* methods. Recall that [Section 6.10](#) introduced the basic **enum** type to declare a set of constants. In this chapter, we discuss the relationship between **enum** types and classes, demonstrating that an **enum** type, like a class, can be declared in its own file with constructors, methods and fields. The chapter also discusses **static** class members and **final** instance variables in detail. We show a special relationship between classes in the same package. Finally, we demonstrate how to use class **BigDecimal** to perform precise monetary calculations. Two additional types of classes—nested classes and anonymous inner classes—are discussed in detail in our later chapters on GUI, graphics and multimedia.