Object-oriented programming allows you to define new classes from existing classes.

This is called inheritance.

*Inheritance* is an important and powerful feature for reusing software. Suppose you need

to define classes to model circles, rectangles, and triangles. These classes have many common

features. What is the best way to design these classes so as to avoid redundancy and make the

system easy to comprehend and easy to maintain? The answer is to use inheritance.

11.2 Superclasses and Subclasses

*Inheritance enables you to define a general class (i.e., a superclass) and later extend it*

*to more specialized classes (i.e., subclasses).*

You use a class to model objects of the same type. Different classes may have some common

properties and behaviors, which can be generalized in a class that can be shared by other

classes. You can define a specialized class that extends the generalized class. The specialized

classes inherit the properties and methods from the general class.

Consider geometric objects. Suppose you want to design the classes