

Figure 4.13 The art gallery classes *Photograph* and *Painting* have attributes and an operation in common

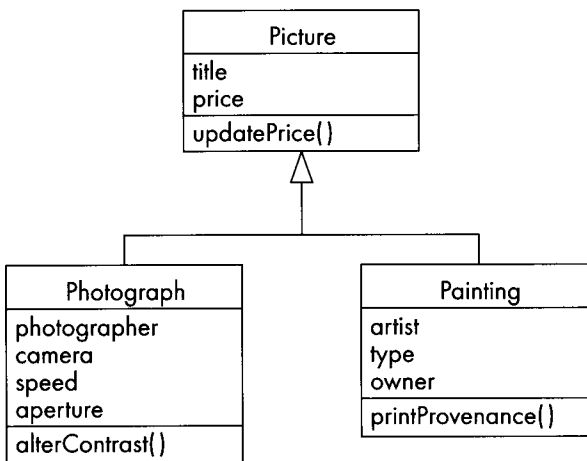


Figure 4.14 The *Picture* class stores the features common to the *Photograph* and *Painting* classes

There are various ways of describing the inheritance relationship:

- A specialized class inherits from a general class
- A subclass inherits from a superclass
- A child class inherits from a parent class
- A derived class inherits from a base class.

Looking at the process the other way round, it is also useful to be able to create new classes from existing classes; instead of starting from scratch, we can refine ones we already have. This permits the reuse of classes from another system or perhaps from a class library. The specialized class can tailor the more general class to suit the new system by adding attributes or operations. Inherited operations can be *overridden*, i.e. the inherited code can be replaced with new code that implements the operation in a different way.