Common problems

1 When I look at objects that seem to be the same sort of thing but have quite different values, how do I know whether they should be modelled as different classes or as different objects of the same class? For example, if I have a father, mother and several children, should I create a new class for each or are they all of objects of a general class like Person?

It depends on what your system needs to record about these objects and what it wants them to do. In a library system they would all just be objects of a class such as FamilyMember. In a school system the children would all be objects of the Student class and the parents might just feature as attributes. However, if you were writing a system that simulates the behaviour of families you might model them as separate classes. For entities to warrant being modelled as different classes, they must have distinguishing features, i.e. distinctive behaviour or attributes, not just different values for their attributes.

2 I have two classes, Customer and Employee. Both Customer and Employee need to record title, forename and surname; can I make them subclasses of a class Name so that they inherit name details, as in Figure 4.33.

This would be a totally incorrect use of inheritance. Customer and Employee should not be modelled as specializations of Name as there is not an is-a relationship between them; neither customers nor employees are kinds of name. A better way to model this would be to use an association relationship as shown in Figure 4.34.

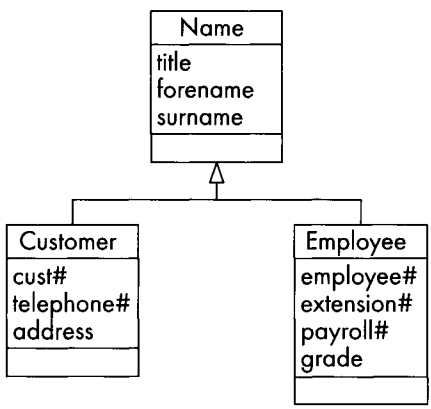

Figure 4.33 Incorrect inheritance from Name class