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Polymorphism



From a theoretical perspective, object orientation may be characterized as combining *abstract data types* and *polymorphism*. These notions may be considered as the theoretical counterparts of the more operational notions of *encapsulation* and *inheritance*.

Polymorphism	9
<ul style="list-style-type: none">• abstract inheritance• subtypes• type abstraction• self-reference	
Additional keywords and phrases: <i>exceptions, type calculi, parametric types, coercion, ad hoc polymorphism, universal types, existential types, unfolding, intersection types</i>	

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Slide 1-1: Polymorphism

In this chapter we will study the notion of polymorphism. We start our exploration by looking at the role of inheritance in knowledge representation. Then we will formally characterize the (signature) subtype relation and explain the *contravariance* rule for function subtypes. To better understand polymorphism and its relation to inheritance, we will develop a type calculus, allowing