Reading 8

# Exercise 1: Summarize

Polymorphism is a key programming concept that allows functions, methods, or operators to operate on different types of data, including overloading, parameter coercion, parametric polymorphism, and subtype polymorphism, thereby enabling code flexibility and reuse.

# Exercise 2: Read & Code

| Ad Hoc Polymorphism | Universal Polymorphism |
| --- | --- |
| Overloading:  fun add(x: int, y: int) = x + y  | add(x: real, y: real) = x + y; | Parametric Polymorphism:  fun identity(x: 'a) = x; |
| Parameter Coercion:  fun printReal(x: real) = print (Real.toString x); | Subtype Polymorphism:  datatype animal = Dog | Cat  fun makeSound(Dog) = "Bark"  | makeSound(Cat) = "Meow"; |

# Exercise 3: Inquire

At what point is a function considered polymorphic? Polymorphism allows a function to operate on different types of inputs. Is a function that accepts multiple parameters of different types considered polymorphic, or does polymorphism specifically refer to functions that can operate on different types through mechanisms like overloading, parameter coercion, parametric polymorphism, or subtype polymorphism?