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Reading Assignment: Please answer three questions below:

- What are the advantages of Polymorphism?
- How is Inheritance useful to achieve Polymorphism in Java?
- What are the differences between Polymorphism and Inheritance in Java?

The advantages of Polymorphism:

- Code Reusability: Polymorphism allows the same method to perform different tasks based on the object that calls it, making code reusable and clean.
- Scalability and Flexibility: You can add new classes with minimal changes to existing code.
- Simplified Code Maintenance: It reduces the complexity of the code by allowing the same interface to be used for different underlying forms (data types).
- Improved Readability: Code is easier to understand and manage because common functionality can be handled through a shared interface or superclass.

The usefulness of Inheritance to achieve Polymorphism in Java:

- Inheritance enables a child class to inherit methods and fields from a parent class.
- With inheritance, you can use a parent class reference to refer to a child class object, enabling polymorphic behavior.
- Through method overriding, a child class can provide its own implementation of a method defined in the parent class, which allows polymorphism to work at runtime (runtime polymorphism).

The diference between Inheritence and Polymorphism:

Feature	Inheritance	Polymorphism
Definition	Mechanism where one class inherits another	Ability of an object to take many forms
Purpose	Code reuse and logical hierarchy	Interface generalization and dynamic behavior
Type	Structural relationship	Behavioral relationship
Usage	To extend class functionality	To override or overload methods
Example	class Dog extends Animal	Animal a = new Dog(); a.makeSound();