

## Assignment - 9.

Q-1 what is inheritance in Java?

- In Java Inheritance is one of the most important feature of object oriented programming language.
- It is a process that allow a class to inherit the properties and behavior of another class by using "extends" keyword.

Q-2 what is superclass and subclass?

Superclass — It is also known as parent class.

It is a class from where the properties and behavior are inherited in any class.

Subclass — It is also known as child class.

It is a class in which the properties and behaviors of parent class is inherited.

Q-3 How inheritance is achieved in Java?

Inheritance is achieved by using "extends" keyword.

Example — class people {

String ~~int~~ name = "Ram";

int age = 20;

class Man { extends people {

}



```

class launch {
    static public void main (String[] args) {
        Man m1 = new Man ();
        S.o.p (m1.name);
        S.o.p (m1.age);
    }
}

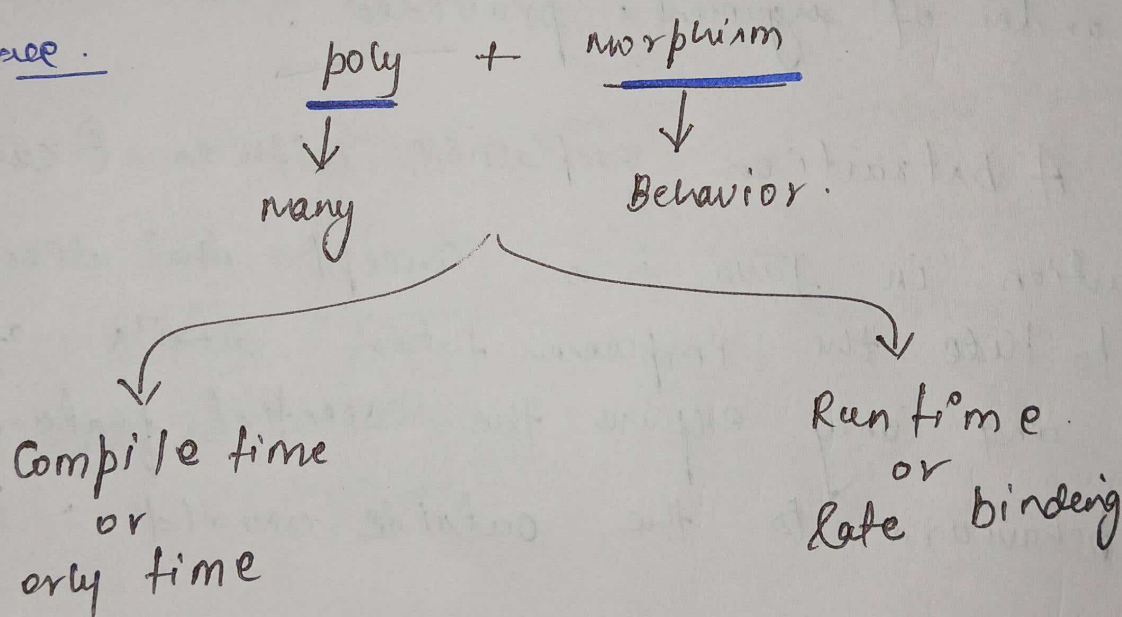
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Q-4. What is polymorphism?

In Java, polymorphism is a key feature of object-oriented programming that allows object of different classes to be treated as object of a common superclass or

Interface.



Behavior is defined at  
compile time

Behavior is defined at  
Runtime.



### Q-5 method overriding and method overloading

Method overriding — method overriding is a Runtime polymorphism. It occurs when a subclass provides its own implementation of a method that is already defined in its superclass.

Method overloading — method overloading is Compile-time polymorphism. This occurs when multiple methods in the same class have the same name but different parameters. During compilation, the appropriate method to be executed is determined based on the number, type and numbers of order of arguments provided.

### Q-6. Abstraction explained with an Example.

Abstraction in Java is a concept that allows you to hide the implementation details of an object and only expose the essential features or behaviors to the outside world.

### Q-7. Abstraction Method

Declared without an implemented (i.e. without a method body).

It is intended to be overridden by a class that extends the abstract

### Final method.

'Final' keyword is applied to a method to prevent it from being overridden in any subclass.

Q-8 final class in Java?

In Java final class is used to set any method, property to be final or to be fixed. there no change or overriden will happen in time of In heriting it into a child class.

Q-9. abstraction

Abstraction is a process of hiding the implementation details of an object and exposing only the essential characteristics or Behaviors to the outside world.

encapsulation.

Encapsulation is a process of binding data and Method that operates on the data within a single unit called class.

Q-10. Runtime polymorphism

This occurs when a subclass provides its own implementation of a method that is already defined in its superclass.

Compile time polymorphism

This occurs when a subclass provides its own implementation of a method that is already defined in its superclass.