

Java OOP - Phase 1: Classes and Objects

IMPORTANT NOTES: CLASSES AND OBJECTS IN JAVA

Class:

- A class is a blueprint for creating objects.
- It defines attributes (fields) and behaviors (methods).
- Syntax:

```
class ClassName {  
  
    // fields  
  
    // methods  
  
}
```

Object:

- An object is an instance of a class.
- It occupies memory and can use the class's attributes and methods.
- Syntax: `ClassName obj = new ClassName();`

Fields (Attributes):

- Variables declared inside a class.
- Represent the state of an object.

Methods (Functions):

- Functions inside a class that define behavior.
- Can be called using an object.

Accessing Fields and Methods:

- Use the dot operator: object.field or object.method()

Example:

```
class Car {  
  
    String model;  
  
    int year;  
  
    void start() {  
  
        System.out.println(model + " is starting...");  
  
    }  
  
}
```

```
public class Main {  
  
    public static void main(String[] args) {  
  
        Car car1 = new Car();  
  
        car1.model = "Honda";  
  
        car1.year = 2023;  
  
        car1.start(); // Output: Honda is starting...  
  
    }  
  
}
```

Key Points to Remember:

- Class is not the same as Object (Class is blueprint, Object is real)
- Multiple objects can be created from one class.
- Fields are used to store object data.
- Methods operate on that data or perform actions.

Interview Tip:

- Be ready to define "class" and "object" in one line.
- Be able to code a basic class + object example on whiteboard or IDE.