**8.6- Exercise - Cat-Static Variable**

**Exercise**

Understand and Fix Static Variable Behavior in the Cat Class

**Task**

1. Identify the issue with the use of the static keyword for the name variable in the Cat class.
2. Modify the Cat class to use an instance variable for name instead of a static variable, ensuring each Cat object can have its own name.
3. Verify that each instance prints its own name when printName() is called in MainClass.

**Hints**

* Remove the static keyword from private static String name; so that name is an instance variable.
* Ensure the constructor assigns the name correctly to the instance variable.
* Update the printName() method if necessary to use the instance variable.

**Explanation**

This exercise helps you understand the difference between static and instance variables. static variables are shared across all instances of a class, which can lead to unexpected behavior when different objects need their own distinct values. By changing name to an instance variable, you ensure that each Cat object maintains its unique name. This reinforces your understanding of object-oriented programming principles in Java.