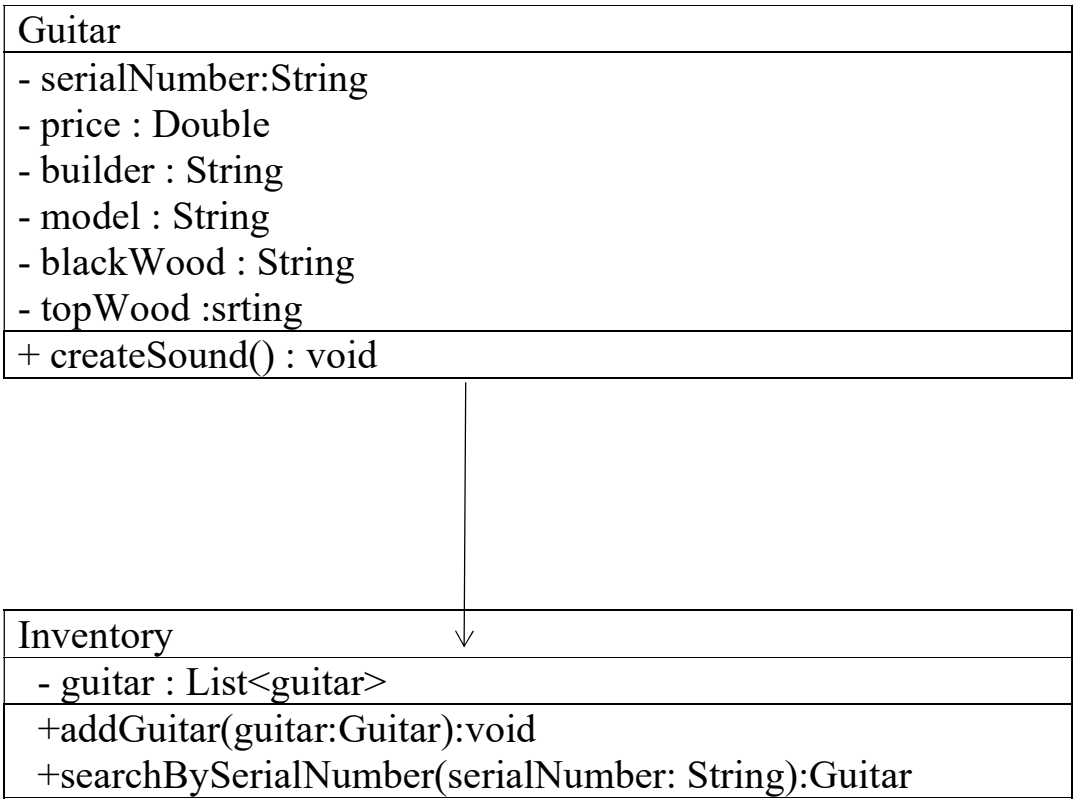
Part 2 .
- Classes:
1. Guitar:
- Fields: serialNumber, price, builder, model, backWood, topWood
- Methods: createSound
2. Inventory:
- Fields: list of guitars
- Methods: addGuitar, searchBySerialNumber
- UML:



Part 4.

What is stored in the static heap, stack, dynamic heap?
- Static heap, the class objects and static variables are stored.
- Stack, the method calls, local variables, and object

references are stored.
- Dynamic heap, the objects are stored.

What are objects in the program?

- The objects in the program are *obj1* and *obj2*.

What is the state of obj1, obj2?

- The state of obj1 is empty values for all fields.
- The state of obj2 is the values assigned during its constructor.

Do you access all fields of obj1 in the class Tester.java? Why?

- No.
- Because *obj1*'s fields are private and we can access all fields of *obj1* in its class.

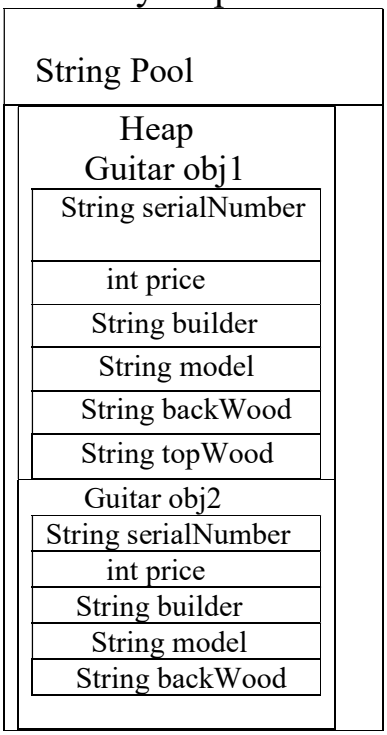
What is the current object when the program runs to the line "obj2.createSound();"?

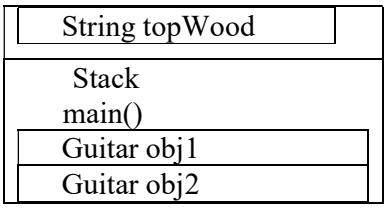
- It's *obj2*.

In the method main, can you use the keyword "this" to access all fields of obj2? Why?

- No.
- Reason 1: main is a static method.
- Reason 2: main is in Tester class, not in Guitar class.

Memory map :




String topWood
Stack
main()
Guitar obj1
Guitar obj2