

Java always passes arguments by value NOT by reference.
*A correct statement would be **Object references(pointers) are passed by value.***

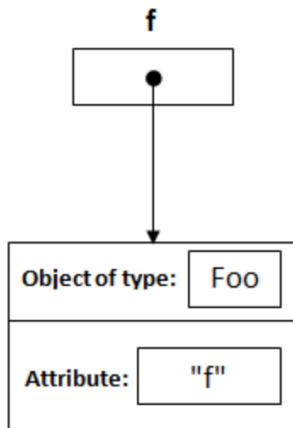
Let me explain this through an [example](#):

```
public class Main{
    public static void main(String[] args){
        Foo f = new Foo("f");
        changeReference(f); // It won't change the reference!
        modifyReference(f); // It will modify the object that the reference variable "f" r
    }
    public static void changeReference(Foo a){
        Foo b = new Foo("b");
        a = b;
    }
    public static void modifyReference(Foo c){
        c.setAttribute("c");
    }
}
```

I will explain this in steps:

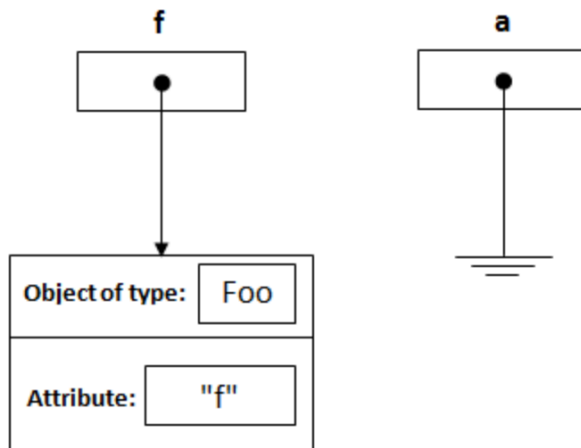
1. Declaring a reference named `f` of type `Foo` and assign it to a new object of type `Foo` with an attribute `"f"`.

```
Foo f = new Foo("f");
```



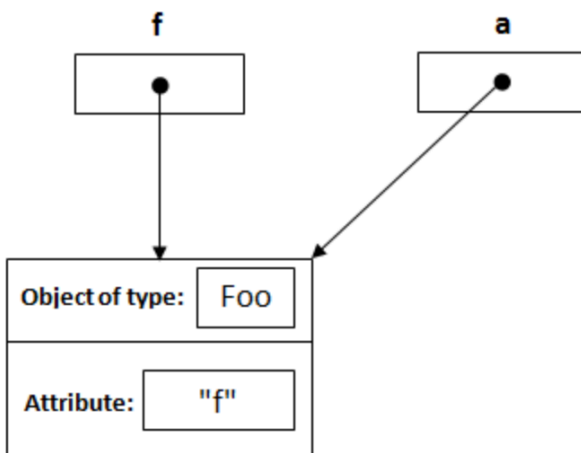
2. From the method side, a reference of type `Foo` with a name `a` is declared and it's initially assigned to `null`.

```
public static void changeReference(Foo a)
```



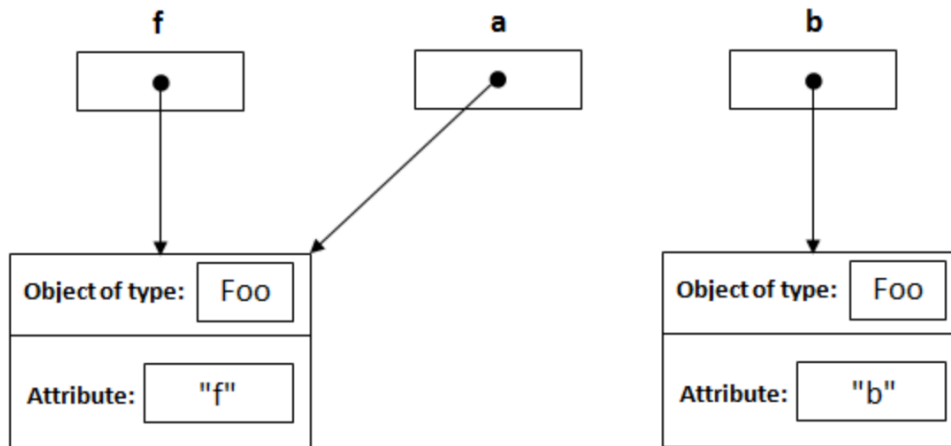
3. As you call the method `changeReference`, the reference `a` will be assigned to the object which is passed as an argument.

```
changeReference(f);
```

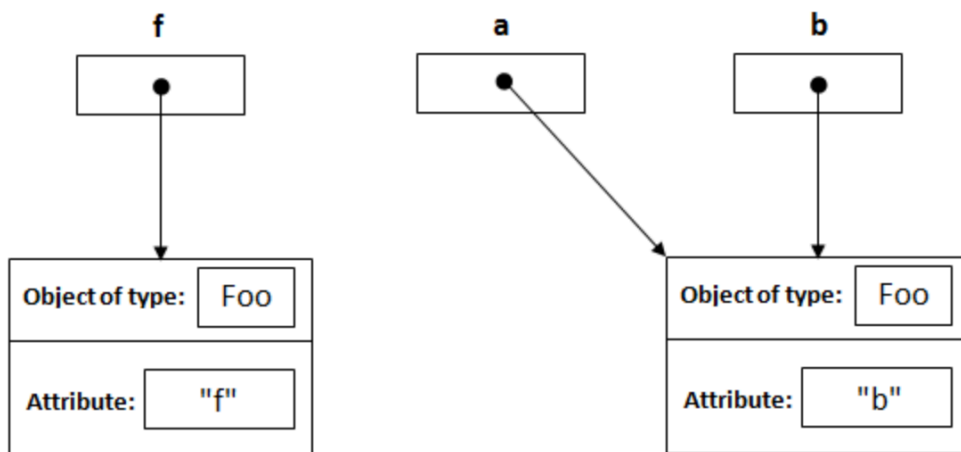


4. Declaring a reference named `b` of type `Foo` and assign it to a new object of type `Foo` with an attribute `"b"`.

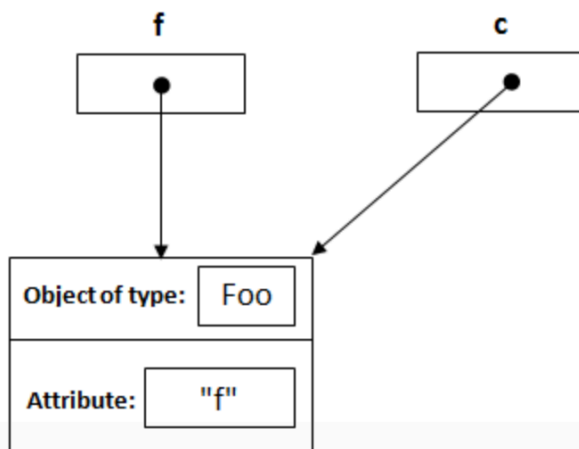
```
Foo b = new Foo("b");
```



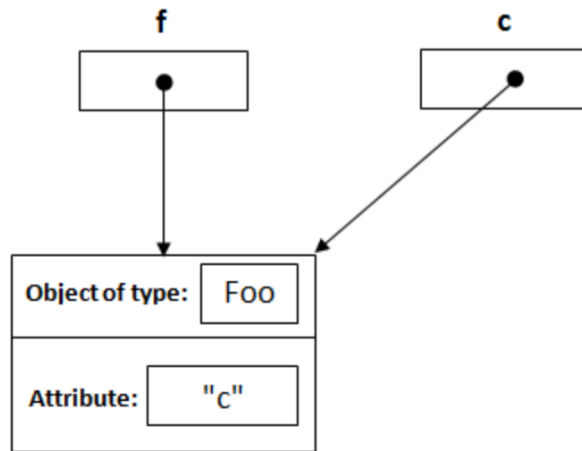
5. `a = b` is re-assigning the reference `a` NOT `f` to the object whose its attribute is `"b"`.



6. As you call `modifyReference(Foo c)` method, a reference `c` is created and assigned to the object with attribute `"f"`.



7. `c.setAttribute("c");` will change the attribute of the object that reference `c` points to it, and it's same object that reference `f` points to it.



I hope you understand now how passing objects as arguments works in Java :)