

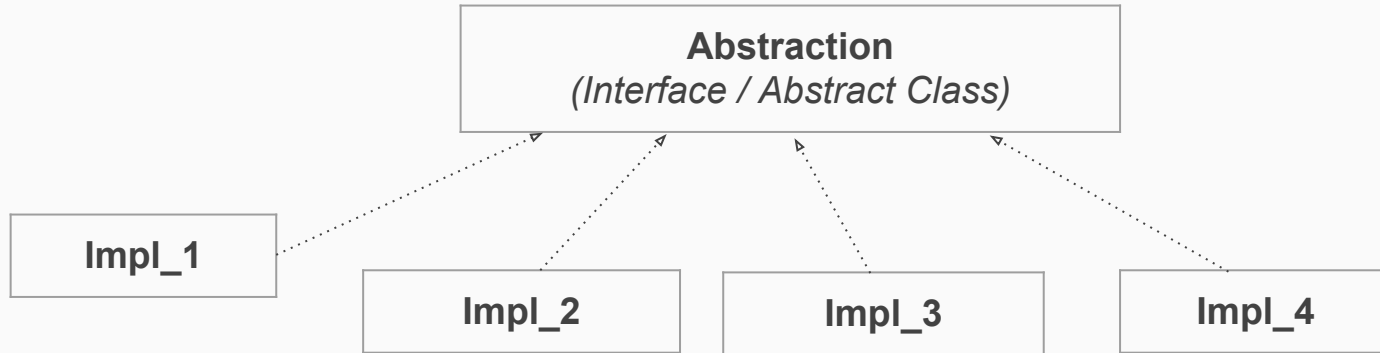
Bismillahir Rahmanir Rahim

In the name of Allah, the most gracious the most merciful

Welcome to the 'ADDA' on

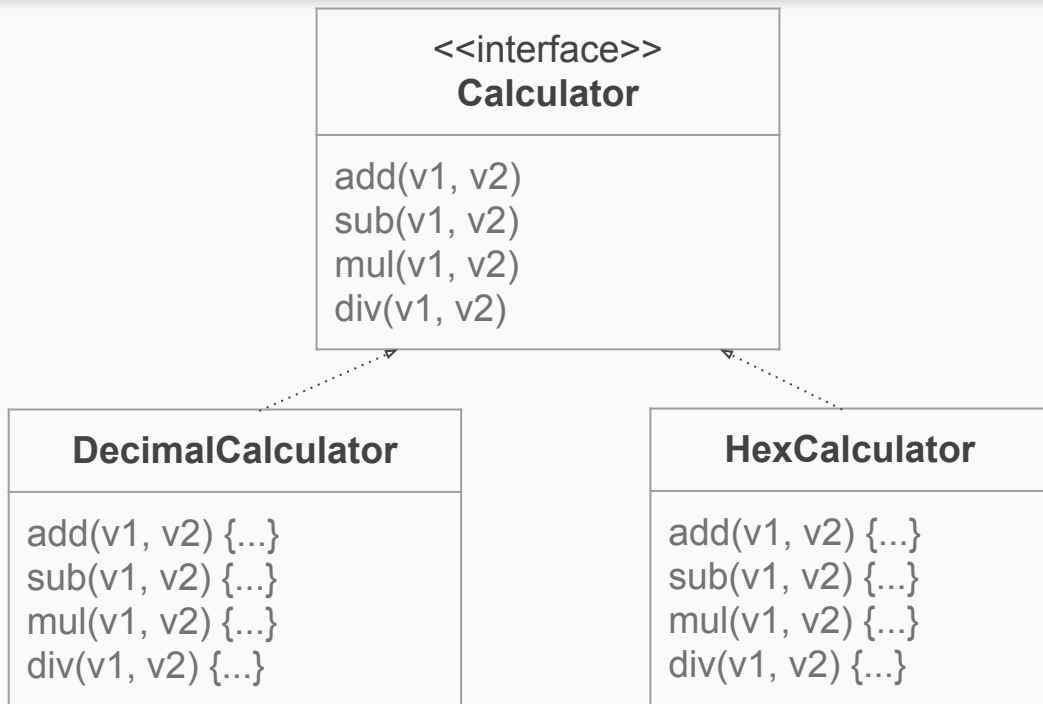
Bridge Pattern

Typical OOD



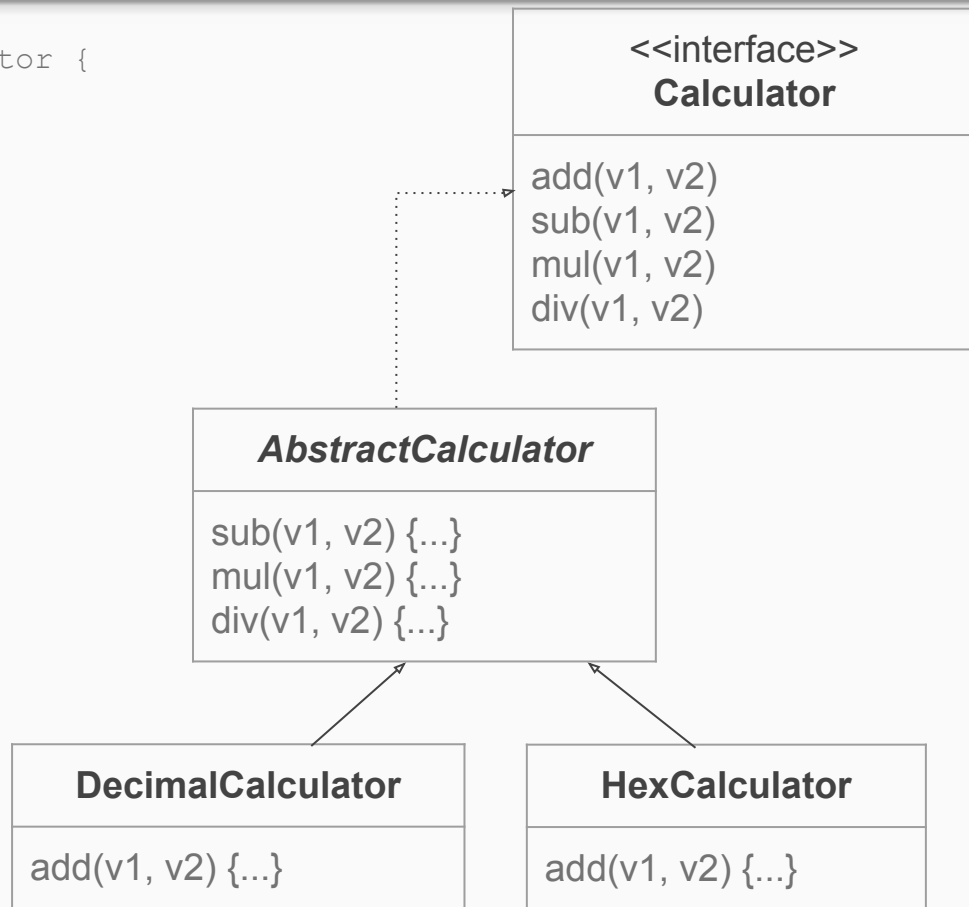
IS THIS DESIGN FLEXIBLE ENOUGH? CAN WE REPLACE THE ABSTRACTION?

Let's design a calculator



Implement others methods with add()

```
class AbstractCalculator() implements Calculator {  
  
    sub(v1, v2) { return add(v1, negative(v2))}  
  
    mul(v1, v2) {  
        result = 0;  
        loop v2 times{result = add(result, v1)}  
        return result  
    }  
  
    div(v1, v2) {  
        result = 0;  
        loop until v1 turn 0 {  
            v1 = sub(v1, v2)  
            result = sub(result, 1)  
        }  
        return result  
    }  
  
    private negative(x) {return -x}  
}
```



We also support complex numbers

So we need four implementations-

- ❑ DecimalRealCalculator
- ❑ HexRealCalculator
- ❑ DecimalComplexCalculator
- ❑ HexComplexCalculator

**<<interface>>
Calculator**

add(v1, v2)
sub(v1, v2)
mul(v1, v2)
div(v1, v2)

Let's scale it with bridge pattern

