Instance methods → Complex numbers

Medium 6 minutes

Jake wants to write a program that works with complex numbers. He created a class `Complex` that represents a complex number with its real and imaginary parts. Now he needs instance methods so that he can calculate the sum and difference of two complex numbers.

Help Jake and create two instance methods for his class:

- `add(Complex num)` that takes another complex number as an argument and adds its corresponding fields to the current instance;
- `subtract(Complex num)` that takes another complex number as an argument and subtracts its corresponding fields from the current instance;

Both methods should return nothing.

Do not make the fields and methods `private`.

Let's consider the example for `add` method. If `number = 10 + 4i` and `anotherNumber = 6 + 6i`, applying method `add` to `number` with argument `anotherNumber` changes number to `number = 16 + 10i`

```
Complex number = new Complex();
number.real = 10;
number.image = 4;
// math expression of number = 10.0 + 4.0i

Complex anotherNumber = new Complex();
anotherNumber.real = 6;
anotherNumber.image = 6;
// math expression of anotherNumber = 6.0 + 6.0i



number.add(anotherNumber); // number = 16.0 + 10.0i
```

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Write a program

Code Editor IDE

Java

```
class Complex {

    double real;
    double image;

    // write methods here
    public void add(Complex num) {
        this.real = this.real + num.real;
        this.image = this.image + num.image;
    }

    public void subtract(Complex num) {
        this.real = this.real - num.real;
        this.image = this.image - num.image;
    }

}

```

✓ Correct.

That's an awesome solution! What do you think about showing it off? Post it to Solutions so other learners can enjoy it too.

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