

Philip Pesic

Week 9

March 19 2023

Week 9 Prog 1

Prog 1 - Modify the following code to:

- * Create a Driver Class

- * Create a GDC class.

Find GCD of two numbers.

The HCF or GCD of two integers is the largest integer that can exactly divide both numbers (without a remainder).

```
package Prog1;

class prog1 {
    public static void main(String[] args) {
        GCD calculator = new GCD(256, 126);
        calculator.findFactors();
        System.out.println("Philip Pesic 3/19/23");
    }
}

package Prog1;

public class GCD {
    int n1, n2, gcd;

    public GCD(int n1, int n2) {
        this.n1 = n1;
        this.n2 = n2;
    }

    public void findFactors() {
        for(int i = 1; i <= n1 && i <= n2; ++i) {
            if(n1 % i==0 && n2 % i==0) {
                gcd = i;
            }
        }
        System.out.printf("G.C.D. of %d and %d is %d", n1, n2, gcd);
        System.out.println("");
    }
}
```

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```
}  
}  
}
```

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The screenshot shows an IDE with a Java project named 'prog1'. The main file is 'GCD.java', which contains the following code:

```

1 package Prog1;
2
3 public class GCD {
4     int n1, n2, gcd;
5
6     public GCD(int n1, int n2) {
7         this.n1 = n1;
8         this.n2 = n2;
9     }
10
11     public void findFactors() {
12         for(int i = 1; i <= n1 && i <= n2; ++i) {
13             if(n1 % i == 0 && n2 % i == 0) {
14                 gcd = i;
15             }
16             System.out.printf(formats "G.C.D. of %d and %d is %d", n1, n2, gcd);
17             System.out.println(xs "");
18         }
19     }
20 }
21

```

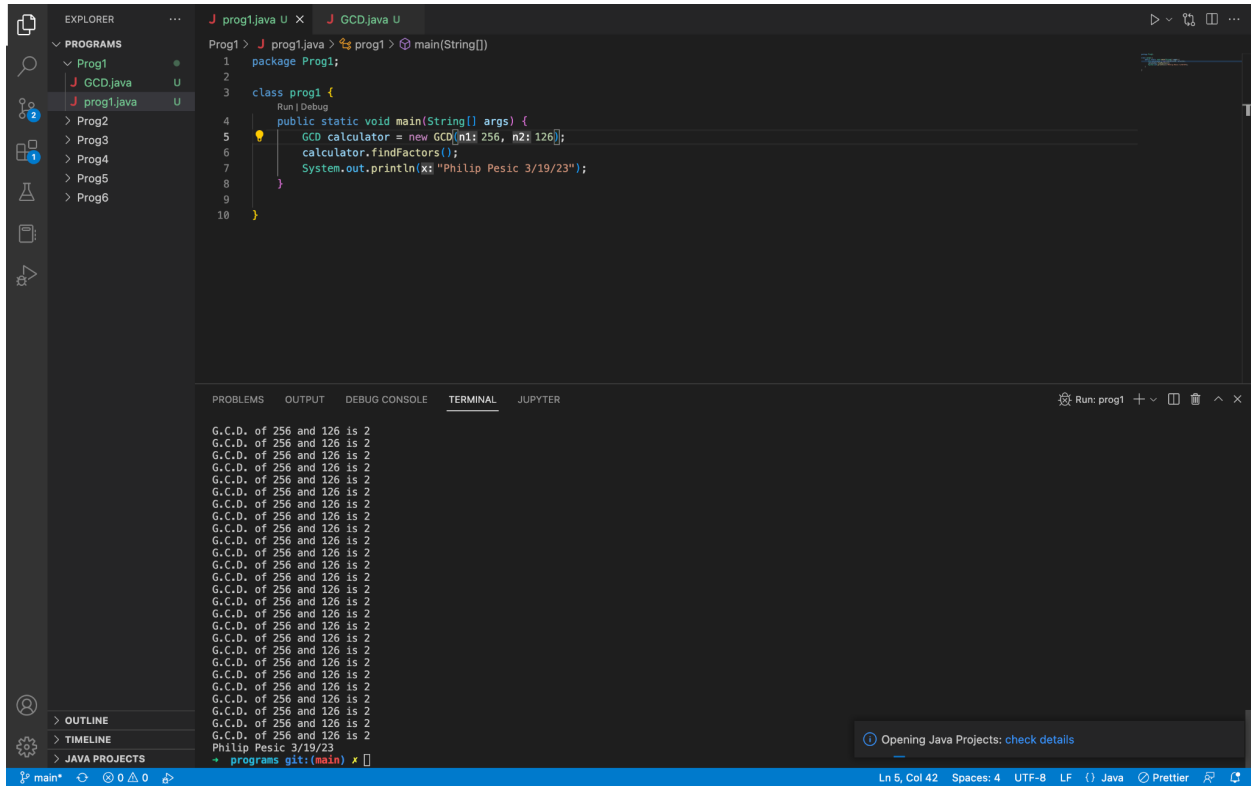
The terminal output shows the program running and printing the G.C.D. of 256 and 126 is 2, repeated 20 times.

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The screenshot shows an IDE with a dark theme. The Explorer panel on the left shows a project named 'PROGRAMS' with sub-items 'Prog1', 'GCD.java', and 'prog1.java'. The main editor displays the code for 'prog1.java', which includes a package declaration, a class definition, and a main method. The main method calls a 'GCD' class to find factors and prints a message. The Terminal panel at the bottom shows the output of the program, which is a repeated message: 'G.C.D. of 256 and 126 is 2'. The status bar at the bottom indicates the current file is 'main*' and the cursor is at line 5, column 42.

```
1 package Prog1;
2
3 class prog1 {
4     public static void main(String[] args) {
5         GCD calculator = new GCD(n1: 256, n2: 126);
6         calculator.findFactors();
7         System.out.println("Philip Pesic 3/19/23");
8     }
9 }
10
```

G.C.D. of 256 and 126 is 2
G.C.D. of 256 and 126 is 2
G.C.D. of 256 and 126 is 2
G.C.D. of 256 and 126 is 2
G.C.D. of 256 and 126 is 2
G.C.D. of 256 and 126 is 2
G.C.D. of 256 and 126 is 2
G.C.D. of 256 and 126 is 2
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G.C.D. of 256 and 126 is 2
G.C.D. of 256 and 126 is 2
G.C.D. of 256 and 126 is 2
G.C.D. of 256 and 126 is 2
G.C.D. of 256 and 126 is 2
G.C.D. of 256 and 126 is 2
G.C.D. of 256 and 126 is 2
G.C.D. of 256 and 126 is 2
G.C.D. of 256 and 126 is 2
G.C.D. of 256 and 126 is 2
G.C.D. of 256 and 126 is 2
G.C.D. of 256 and 126 is 2
G.C.D. of 256 and 126 is 2
G.C.D. of 256 and 126 is 2
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+ programs git:(main) x

I learned: how to use parameters for constructors