

Philip Pesic

Week 9

March 19 2023

Week 9 Prog 4

Prog 4 - Modify the following code to:

- \* Create a Driver Class

- \* Create a DIGITS class

```
package Prog4;

class prog4 {
    public static void main(String[] args) {
        Digits digitGetter = new Digits(23988);
        digitGetter.getDigits();
        System.out.println("Philip pesic 3/19/23");
    }
}

package Prog4;

public class Digits {
    private int count, num;

    public Digits(int num) {
        this.num = num;
        count = 0;
    }

    public void getDigits() {

        while(num != 0) {
            num /= 10;
            ++count;
        }

        System.out.println("Number of digits: " + count);
    }
}
```

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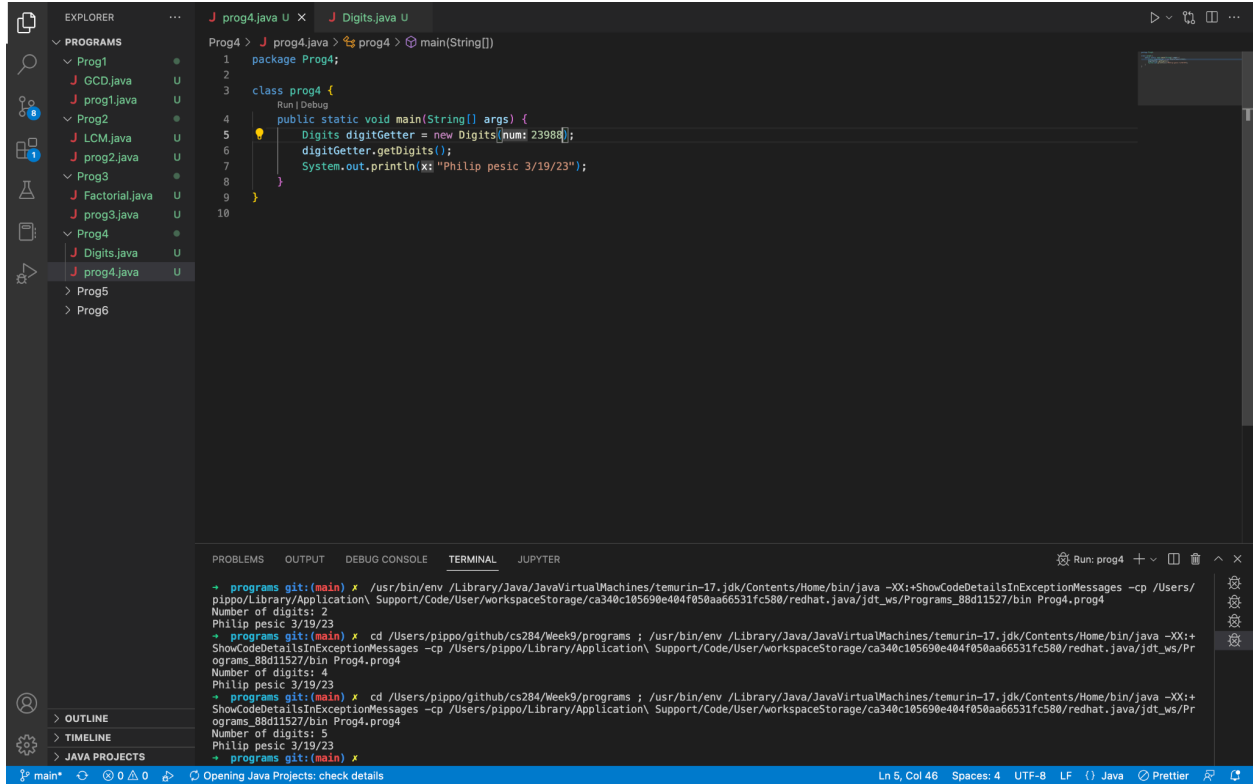


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The screenshot shows an IDE with a project explorer on the left containing a list of programs. The main editor displays the source code for Prog4.java, which includes a package declaration, a class definition, and a main method that uses a Digits class to calculate the number of digits in the number 23984. The terminal at the bottom shows the execution of the program, displaying the output 'Philip pesic 3/19/23' and the number of digits '4'.

```
package Prog4;

class prog4 {
    public static void main(String[] args) {
        Digits digitGetter = new Digits(num: 23984);
        digitGetter.getDigits();
        System.out.println("Philip pesic 3/19/23");
    }
}
```

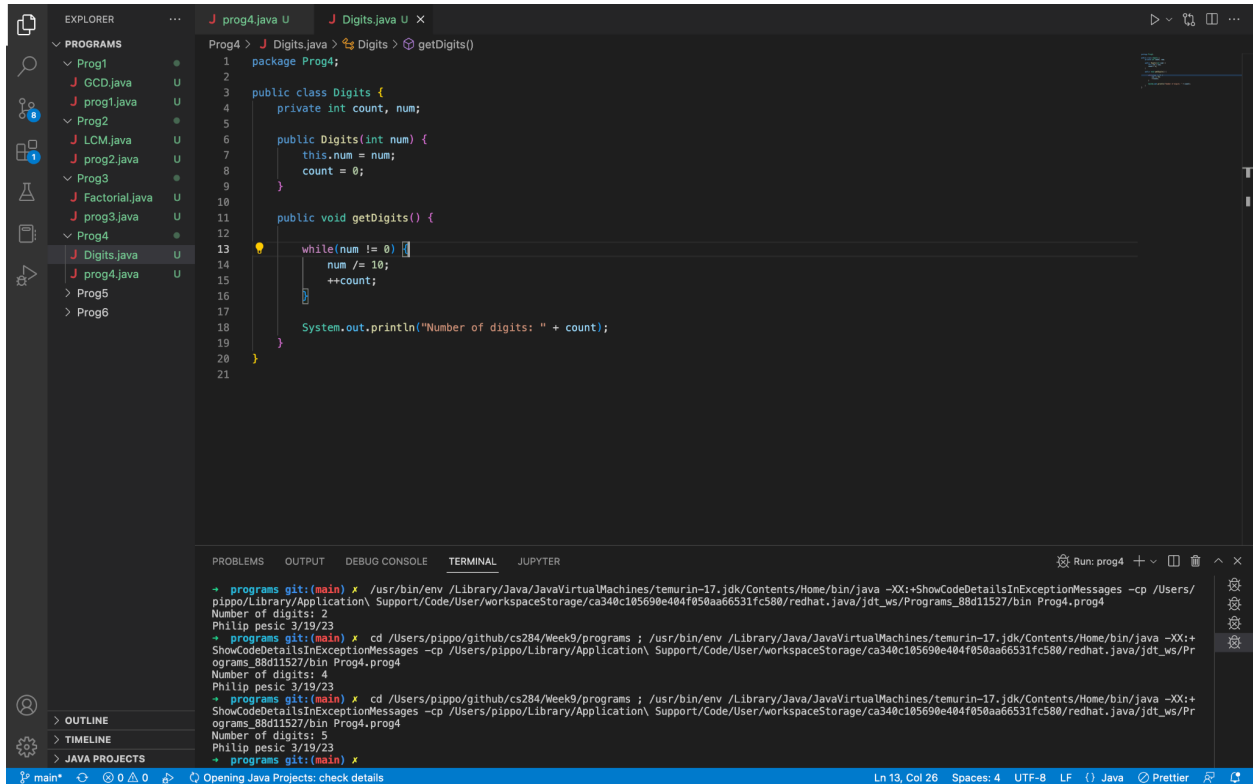
```
+ programs git:(main) x /usr/bin/env /Library/Java/JavaVirtualMachines/temurin-17.jdk/Contents/Home/bin/java -XX:+ShowCodeDetailsInExceptionMessages -cp /Users/pipipo/Library/Application\ Support/Code/User/workspaceStorage/ca340c185690e404f050aa66531fc580/redhat.java/jdt_ws/Programs_88d11527/bin Prog4.prog4
Number of digits: 2
Philip pesic 3/19/23
+ programs git:(main) x cd /Users/pipipo/github/cs284/Week9/programs ; /usr/bin/env /Library/Java/JavaVirtualMachines/temurin-17.jdk/Contents/Home/bin/java -XX:+ShowCodeDetailsInExceptionMessages -cp /Users/pipipo/Library/Application\ Support/Code/User/workspaceStorage/ca340c185690e404f050aa66531fc580/redhat.java/jdt_ws/Programs_88d11527/bin Prog4.prog4
Number of digits: 4
Philip pesic 3/19/23
+ programs git:(main) x cd /Users/pipipo/github/cs284/Week9/programs ; /usr/bin/env /Library/Java/JavaVirtualMachines/temurin-17.jdk/Contents/Home/bin/java -XX:+ShowCodeDetailsInExceptionMessages -cp /Users/pipipo/Library/Application\ Support/Code/User/workspaceStorage/ca340c185690e404f050aa66531fc580/redhat.java/jdt_ws/Programs_88d11527/bin Prog4.prog4
Number of digits: 5
Philip pesic 3/19/23
+ programs git:(main) x
```

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The screenshot shows an IDE with a project explorer on the left containing several programs. The main editor displays a Java file named `Digits.java` with the following code:

```
1 package Prog4;
2
3 public class Digits {
4     private int count, num;
5
6     public Digits(int num) {
7         this.num = num;
8         count = 0;
9     }
10
11     public void getDigits() {
12
13         while(num != 0) {
14             num /= 10;
15             ++count;
16         }
17
18         System.out.println("Number of digits: " + count);
19     }
20 }
21
```

The terminal at the bottom shows the execution of the program, displaying the output "Number of digits: 2" and "Number of digits: 4".

I learned: how to use composition to find the place values of a number