

Philip Pesic

Week 4

February 12 2023

Week 4 Prog 3

Write a program from scratch given these declarations and assignments: double a = 18, b = 6, c = 3, and

that calculates and prints out the answers for:

$a + b / c$;

$(a + b) / c$;

$a + (b / c)$;

```
package prog3;

class prog3 {
    public static void main(String[] args) {
        double a = 18, b = 6, c = 3;
        double sum1, sum2, sum3;

        sum1 = a + b / c; //Computes b/c then adds a
        sum2 = ( a + b ) / c; // divides sum of a + b by c
        sum3 = a + ( b / c ); //Same as sum1

        System.out.println("a + b / c = " + sum1);
        System.out.println("( a + b ) / c = " + sum2);
        System.out.println("a + ( b / c ) = " + sum3);

        System.out.println("Philip Pesic 2/12/23");

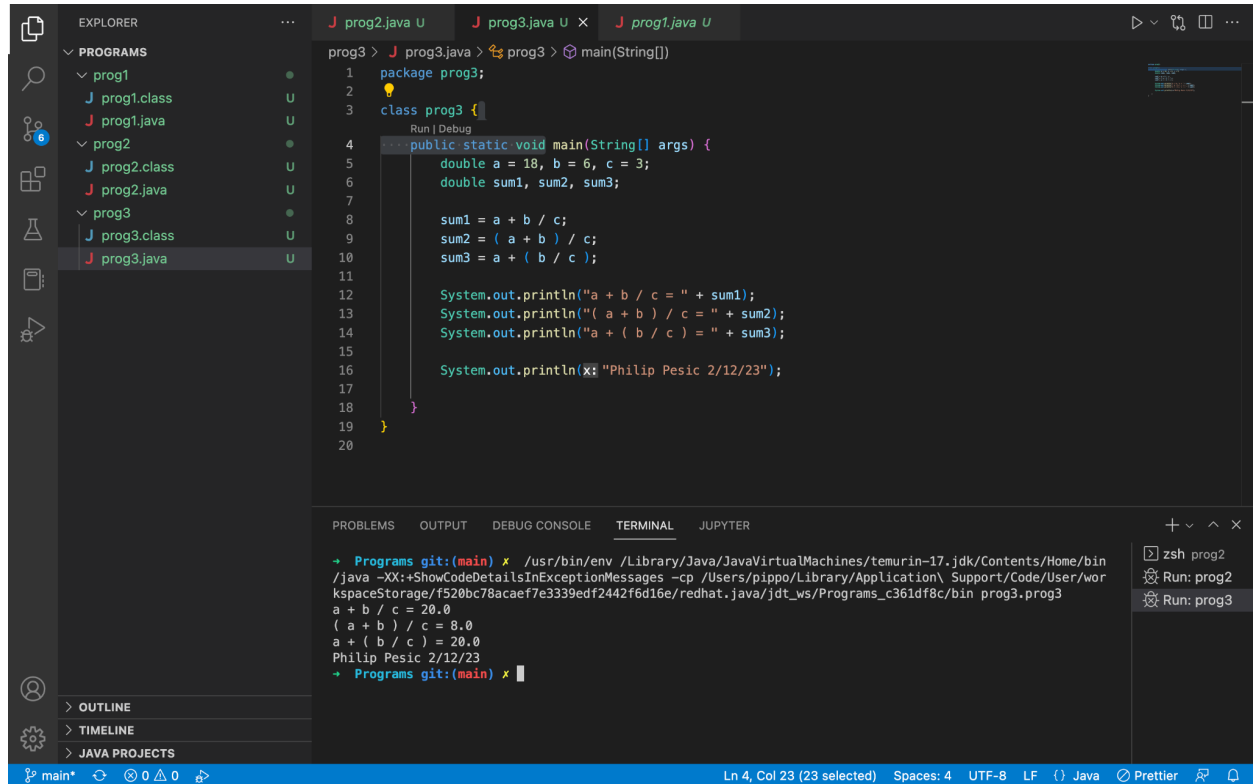
    }
}
```

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The screenshot shows an IDE with a project named 'PROGRAMS' containing three sub-projects: 'prog1', 'prog2', and 'prog3'. The 'prog3' sub-project is selected, showing 'prog3.java' in the Explorer. The code in 'prog3.java' is as follows:

```
1 package prog3;
2
3 class prog3 {
4     public static void main(String[] args) {
5         double a = 18, b = 6, c = 3;
6         double sum1, sum2, sum3;
7
8         sum1 = a + b / c;
9         sum2 = ( a + b ) / c;
10        sum3 = a + ( b / c );
11
12        System.out.println("a + b / c = " + sum1);
13        System.out.println("( a + b ) / c = " + sum2);
14        System.out.println("a + ( b / c ) = " + sum3);
15
16        System.out.println(x! "Philip Pesic 2/12/23");
17    }
18 }
19
20
```

The output of the program is shown in the Terminal:

```
Programs git:(main) x /usr/bin/env /Library/Java/JavaVirtualMachines/temurin-17.jdk/Contents/Home/bin
/java -XX:+ShowCodeDetailsInExceptionMessages -cp /Users/pippo/Library/Application\ Support/Code/User/wor
kspaceStorage/f520bc78acae7e3339edf2442f6d16e/redhat.java/jdt_ws/Programs_c361df8c/bin prog3.prog3
a + b / c = 20.0
( a + b ) / c = 8.0
a + ( b / c ) = 20.0
Philip Pesic 2/12/23
Programs git:(main) x
```

I learned: how compilers handle the order of operations