

Philip Pesic

Week 12

April 9 2023

Week 12 Prog 5

Create a two dimensional integer array called Multiplication table, of 11 by 11 integers.

Write a for loop nested in a for loop. Calculate and assign the results of multiplying the inside and outside index

values to each element of the array.

Write a for loop nested in a for loop to print out the values that are stored in the array.

Make the outputted table lined up and looking like a multiplication table.

```
package Prog5;

class prog5 {
    public static void main(String[] args) {

        int[][] MultiplicationTable = new int[11][11];

        for (int i = 0; i < 11; i++) {
            for (int j = 0; j < 11; j++) {
                MultiplicationTable[i][j] = (i + 1) * (j + 1);
            }
        }

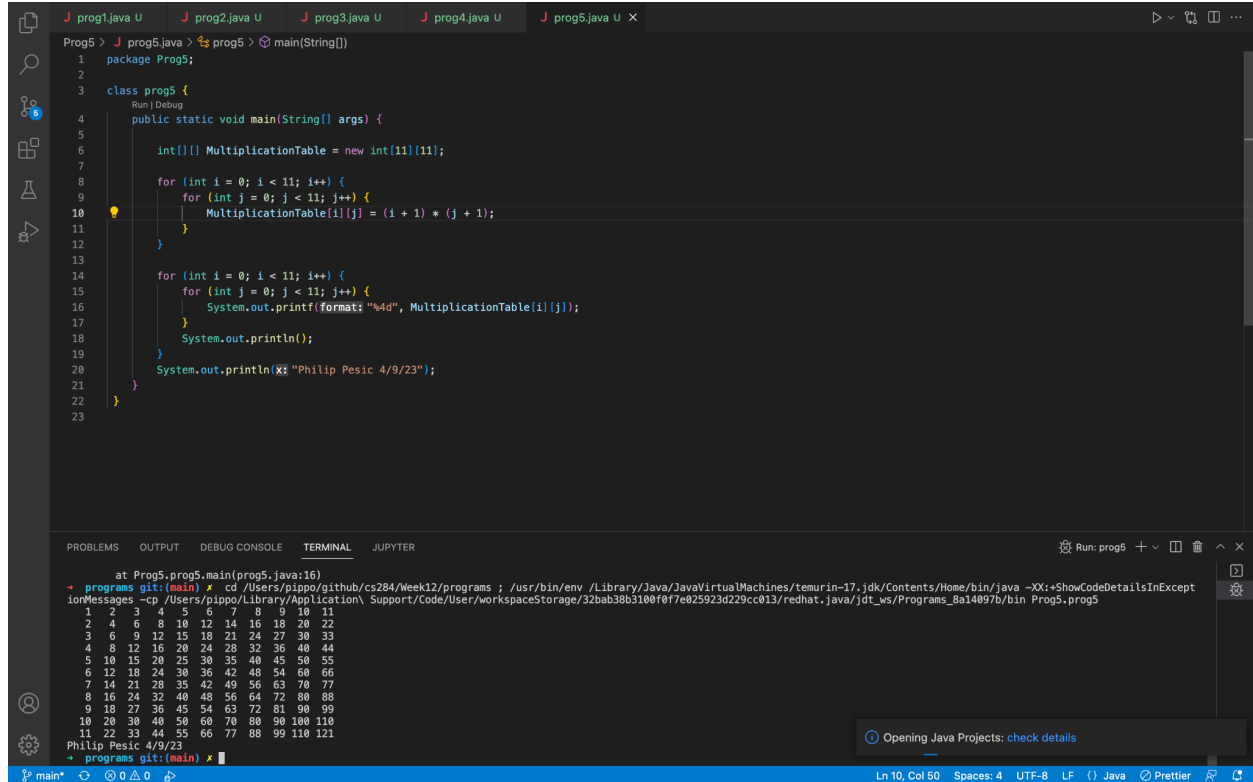
        for (int i = 0; i < 11; i++) {
            for (int j = 0; j < 11; j++) {
                System.out.printf("%4d", MultiplicationTable[i][j]);
            }
            System.out.println();
        }
        System.out.println("Philip Pesic 4/9/23");
    }
}
```

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The screenshot shows an IDE with a Java file named `prog5.java`. The code defines a class `prog5` with a `main` method. It creates a 12x12 integer array `MultiplicationTable` and fills it with values from 1 to 121 (12*12). The values are printed in a formatted grid. The IDE's terminal shows the output of the program, which is a 12x12 grid of numbers. The status bar at the bottom indicates the current line is 10, column 50, with 4 spaces, UTF-8 encoding, LF line endings, and the Java language.

```
1 package Prog5;
2
3 class prog5 {
4     public static void main(String[] args) {
5
6         int[][] MultiplicationTable = new int[12][12];
7
8         for (int i = 0; i < 12; i++) {
9             for (int j = 0; j < 12; j++) {
10                MultiplicationTable[i][j] = (i + 1) * (j + 1);
11            }
12        }
13
14        for (int i = 0; i < 12; i++) {
15            for (int j = 0; j < 12; j++) {
16                System.out.printf("%4d", MultiplicationTable[i][j]);
17            }
18            System.out.println();
19        }
20        System.out.println("Philip Pesic 4/9/23");
21    }
22 }
23
```

```
at Prog5.prog5.main(prog5.java:16)
+ programs git:(main) x cd /Users/pippo/github/cs284/Week12/programs ; /usr/bin/env /Library/Java/JavaVirtualMachines/temurin-17.jdk/Contents/Home/bin/java -XX:+ShowCodeDetailsInExcept
ionMessages -cp /Users/pippo/Library/Application\ Support/Code/User/workspaceStorage/32bab30b3100f07e825923d229cc013/redhat.java/jdt_ws/Programs_8a14097b/bin Prog5.prog5
1 2 3 4 5 6 7 8 9 10 11
2 4 6 8 10 12 14 16 18 20 22
3 6 9 12 15 18 21 24 27 30 33
4 8 12 16 20 24 28 32 36 40 44
5 10 15 20 25 30 35 40 45 50 55
6 12 18 24 30 36 42 48 54 60 66
7 14 21 28 35 42 49 56 63 70 77
8 16 24 32 40 48 56 64 72 80 88
9 18 27 36 45 54 63 72 81 90 99
10 20 30 40 50 60 70 80 90 100 110
11 22 33 44 55 66 77 88 99 110 121
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+ programs git:(main) x
```

I learned how to use 2d arrays