

Philip Pesic

Week 12

April 9 2023

Week 12 Prog 4

Run the Code for the Array out of bound error example below.

Explain what you are looking at when you go out of bounds

```
package Prog4;

class prog4 {
    public static void main(String[] args) {

        int ages[] = {0, 1, 2, 3, 4, 5, 6, 7, 8};
        for(int i = 0; i <= 10; i++) {
            System.out.println(ages[i]);
        }

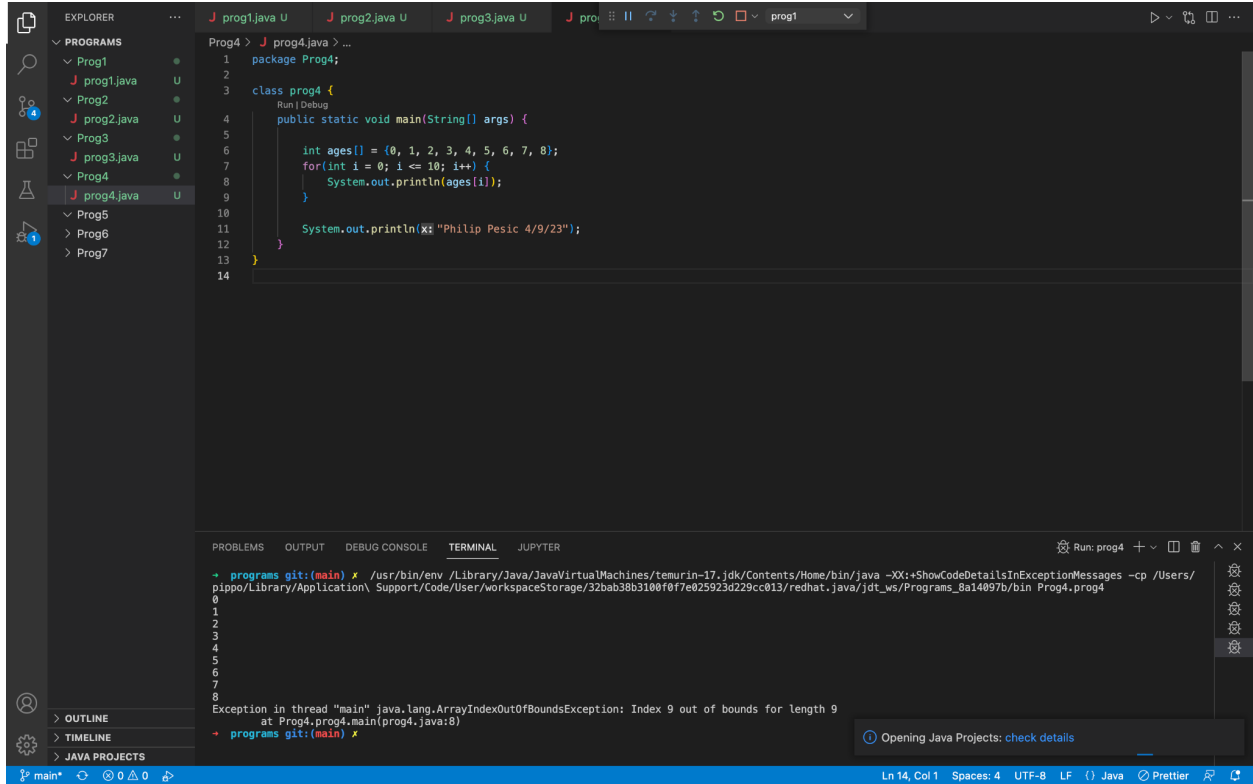
        System.out.println("Philip Pesic 4/9/23");
    }
}
```

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The screenshot shows an IDE with a Java project named 'Prog4'. The Explorer panel on the left lists several programs, with 'prog4.java' selected. The main editor displays the code for 'Prog4.java', which includes a package declaration, a class definition, and a main method. The main method contains an array 'ages' with 9 elements (indices 0-8) and a loop that prints the first 10 elements (indices 0-9). The terminal panel at the bottom shows the output of the program, which includes an exception message: 'Exception in thread "main" java.lang.ArrayIndexOutOfBoundsException: Index 9 out of bounds for length 9'. The status bar at the bottom indicates the current line and column (Ln 14, Col 1) and the file encoding (UTF-8).

```
1 package Prog4;
2
3 class prog4 {
4     public static void main(String[] args) {
5
6         int ages[] = {0, 1, 2, 3, 4, 5, 6, 7, 8};
7         for(int i = 0; i <= 10; i++) {
8             System.out.println(ages[i]);
9         }
10
11         System.out.println("Philip Pesic 4/9/23");
12     }
13 }
14
```

Exception in thread "main" java.lang.ArrayIndexOutOfBoundsException: Index 9 out of bounds for length 9  
at Prog4.prog4.main(prog4.java:8)

I learned what happens if you access a nonexistent array element