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**DebuggindExercise.java**

In debugging DebuggingExercise.java, The issue was that the for loop went too far with the “I” value and tried to assign a value in the array at index 4 while the indexes only went up to 3.

I found this problem by running the code and then clicking on the error message and creating a code break before such error so I can examine the values at that moment in the program.

The fix I have applied to the code was to begin the for loops at index 0 and decrease the max “I” value to 3.

**DebugHash.java**

To find the 49,791st hash value in the loop and created a breakpoint with a hit count. I set the breakpoint at the line of the print statement (Line 37) and set the hit count to 49791.

**FileDebug.java**

The issue in this debugging situation is that there is an error when running the program and yielding no results.

I ran the eclipse debugger on the program and when it stopped and highlighted the third line of code, I was able to notice that there was no closing parenthesis in the public static statement.

To fix the program I provided a closing parenthesis after “args” on line 3.

**Marker.java**

The issues with this java file is with the “if” statements. Since the file is coded with multiple independent if statements. All “if” statements were run, one after another.

I found this issue using the debugger, setting a breakpoint at the beginning of the method and stepping through the method and realizing each “if” statement was independently ran.

I fixed the program by making all the “if” statements after the initial “if” statement, into “Else if” statements and the final “if” statement into a “Else” statement. This way there will be only one printed value for the given argument.

**AccountDebug.java**

The issues with this java file is with how the object in the file was referenced. There was no initialization of a new instance of “Account”. There was a nullpointerException because “Null” cannot be used to reference an object.

I found the issue by running the program and clicking on the link in the error message in the terminal and creating a break point the line before the error is thrown. This allowed me to deduce that the creating of account variable “a” as “null” was the line that throws the error.

To fix the error I got rid of the “null” and replaced it with “new Account” which allows for the rest of the code to run given a string variable as a parameter for the account.

**PersonDebug.java**

The issues with this java file began with the lack of a constructor when trying to create a new “Person”. There was an error due to trying to call a method without using a constructor to create an instance of the object “person. Another error was on line 6 when the string came out and where the age was supposed to be called, there was 2 method calls, both to the getName() where there needed to be a getName() and getAge().

I found the first issue by running the debugger and eclipse highlighted the incorrect constructor/method call on line 4. I then found the 2 getName() calls in the system.out by continuing to run the debugger step by step and noticed that where the outputted string was supposed to provide the age, it ran through the getName() method again.

I fixed these issues by setting Person p on line 4 equal to a constructor (new Person()) to create an instance of the person object and then added a line in between lines 4 and 5 to call the Student method on the object “p”. I then replaced the second getName() on the print statement with getAge() to produce the age value.