Debugger Mini Lab

List of bugs:

1. This is a logical bug where we use incompatible types. This is fixed by changing the type of the variable. This is shown in the IDE, so no debugger is necessary.
2. This is a syntax bug as we didn’t append the statement with a semicolon. This is shown in the IDE, so no debugger is necessary. Fixed by adding a semicolon.
3. This is a logical bug where we use a variable that has not been declared. Fixed by declaring it. This is shown in the IDE, so no debugger is necessary.
4. This is a syntax bug. It’s supposed to be new int[5]. This is shown in the IDE, so no debugger is necessary.
5. This is a logical bug that can be seen clearly if using a debugger The array will provide unexpected results with ‘3’ being output as an int 51. This will not be caught by IDE but can be seen by the debugger if you put a breakpoint at initialization and step over it. The 3 is actually 51 when we look at the array in the debugger. Change the ‘3’ to 3. Screenshot attached.
6. This is a logical bug. It will not print to the console, as it must be wrapped in Arrays.toString() first. The actual error is shown in the IDE; no debugger needed.
7. This is a syntax bug where we did not prepend the type of the variable i. This is shown in the IDE, so no debugger is necessary. This is fixed by adding the type of i, which is int.
8. This is a runtime bug that will cause an ErrorOutOfBounds exception. Can be fixed by changing the conditional from <= to <. This is shown clearly by setting a breakpoint on the loop and stepping over until the last loop where the exception occurs. Screenshot attached.
9. This is a logical error where the print statement will never output, as a number cannot be less than and greater than a single number. This should be an OR statement or NOT 2 statement. This is shown in the IDE as always being false, so no debugger is necessary.
10. This is a logical error where the condition is an int, but our cases are Strings. This is shown in the IDE, so no debugger is necessary. Can be fixed by changing the stringed numbers to ints.