

5 SIMPLE STEPS TO DEBUG YOUR CODE



IDENTIFY THE BUG

Is there an issue with your program?

- Run your code and look for an error message.
- Print the outputs for a variety of inputs and look for anything unexpected.
- Use unit tests to determine what aspects of your code aren't functioning properly.

ISOLATE THE BUG

Where is the error coming from?

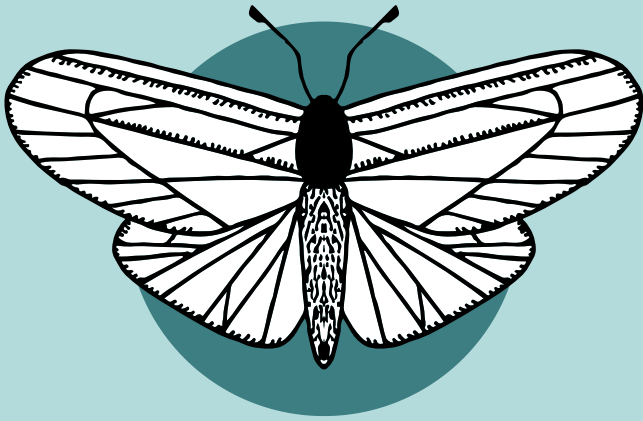
- Walk through your code. You should know the value of each variable. If you find you don't know it, add print statements.
- Comment out areas of your code until you find where the error is occurring.
- Look at any error messages to find the lines where they occurred.



DISCERN THE CAUSE

Why is this area causing an error?

- Read any error messages. If you don't know what they mean Google it!
- Think critically about the area you have isolated. Ask yourself what inputs cause errors and why those inputs do so.



DETERMINE A FIX

How can you resolve the issue?

- If you have completed the steps above this will often be the easiest step.
- If you get stuck here, take a break from debugging or ask for help.



TEST YOUR FIX

How did your fix solve the issue?

- Run unit tests or check any inputs that caused an issue.
- If the issue has not been resolved, back out any changes you made.
- Be sure you understand the issue and how to fix it before moving forward. You won't gain experience debugging from guess work.



As you grow as a programmer this strategy can be adapted to any new bugs you encounter. Working methodically may seem more difficult at first, but in the end it will make you a more effective debugger.

