

Bug hunt: fix Python errors

Each program has exactly one bug. Predict, find it, then write the fix.



NAME _____ CLASS _____ DATE _____

LEARNING GOAL

Read Python error messages, then find and fix the bug in a short program.

SUCCESS CRITERIA

- ☐ I can predict what a program will do before it runs.
- ☐ I can name `SyntaxError`, `IndentationError` and `TypeError`.
- ☐ I can fix a bug and check it with a trace table.

SyntaxError

Python cannot read the code, so nothing runs.

IndentationError

A `SyntaxError` about the spaces at the start of a line.

TypeError

The program stops at a line that mixes text and a number.

Logic error

It runs, but the output is wrong.

1 Find and fix three bugs

REV A TO B

9 marks

Write what will really happen: an error name or the output. Then find the bug and fix that line.

BUG 1 club.py	A AS WRITTEN	WHAT WILL HAPPEN?	1 mark
<pre>1 age = 12 2 if age >= 11 3 print("You can join Code Club")</pre>			
IT SHOULD PRINT You can join Code Club		FIND THE BUG: LINE AND WHAT IS WRONG	1 mark
B FIXED LINE			1 mark

BUG 2 double.py	A AS WRITTEN	WHAT WILL HAPPEN?	1 mark
<pre>1 for n in range(3): 2 print(n * 2) 3 print("Done")</pre>			
IT SHOULD PRINT 0, 2, 4, Done (one per line)		FIND THE BUG: LINE AND WHAT IS WRONG	1 mark
B FIXED LINE			1 mark

BUG 3 quiz.py	A AS WRITTEN	WHAT WILL HAPPEN?	1 mark
<pre>1 answer = 7 * 8 2 if answer = 56: 3 print("Correct!")</pre>			
IT SHOULD PRINT Correct!		FIND THE BUG: LINE AND WHAT IS WRONG	1 mark
B FIXED LINE			1 mark

Two more bugs, then trace a loop

2 Find and fix two more bugs

6 marks

BUG 4 total.py	A AS WRITTEN	WHAT WILL HAPPEN?	1 mark
<pre> 1 total = 0 2 for n in range(1, 10): 3 total = total + n 4 print(total) </pre>			
IT SHOULD PRINT 55, the total of 1 to 10		FIND THE BUG: LINE AND WHAT IS WRONG	1 mark
B FIXED LINE			1 mark

BUG 5 score.py	A AS WRITTEN	WHAT WILL HAPPEN?	1 mark
<pre> 1 name = "Sam" 2 score = 15 3 print(name + " scored " + score) </pre>			
IT SHOULD PRINT Sam scored 15		FIND THE BUG: LINE AND WHAT IS WRONG	1 mark
B FIXED LINE			1 mark

3 Trace the loop

PART T

5 marks

A trace table records each variable every time it changes. Two rows are done for you. Fill in the rest.

TRACE evens.py	LINE	n	total	OUTPUT
1 total = 0	1	-	0	
2 for n in range(1, 5):	3	1	2	
3 total = total + n * 2	3			
4 print(total)	3			
	3			
	4			

Q Why does n never become 5?



BUG 6 biggest.py

```

1 biggest = 0
2 for n in [3, 9, 4]:
3     if n < biggest:
4         biggest = n
5 print(biggest)

```

GO FURTHER: A BUG WITH NO ERROR MESSAGE

It should print 9, the biggest number, but it prints 0. Write the bug's line number in the box and the fixed line beside it.