

# Python 4 Worksheet: Complex Selection

Student Resource



871KB

Python Worksheet 4 - Complex Selection.docx



350KB

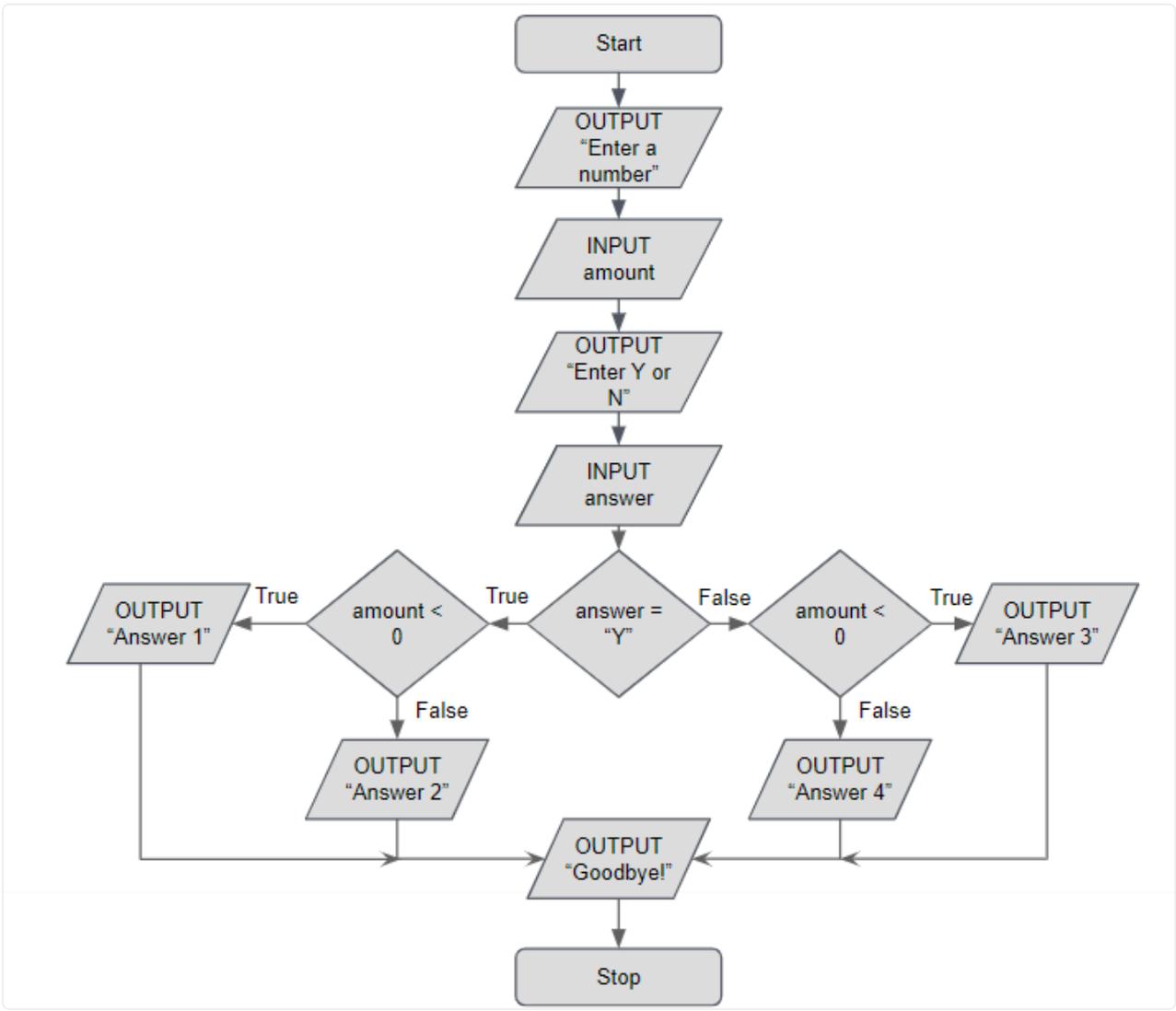
Python Worksheet 4 - Complex Selection.pdf  
pdf

## Activity 1: Identify the route

Draw arrows to identify the route through the flowchart for the given inputs.

**Exercise 1:**

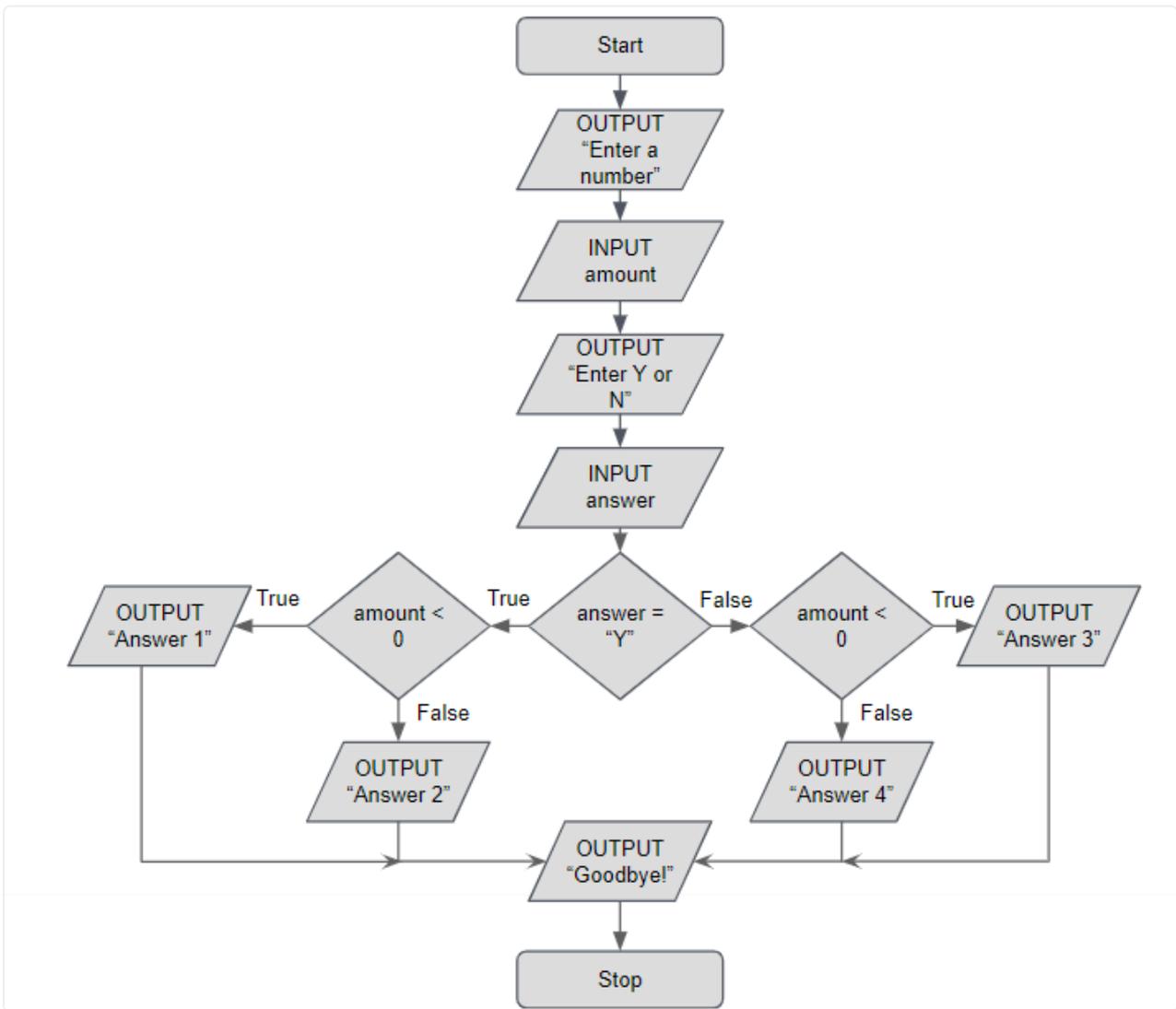
**Inputs:** -1 and Y



Exercise 1

**Exercise 2:**

**Inputs:** 10 and yes



Exercise 2

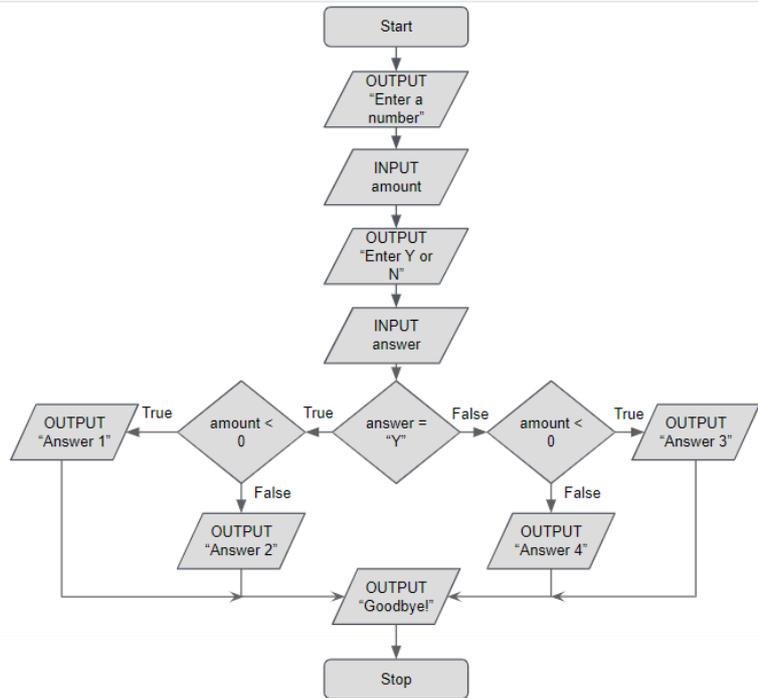
## Activity 2: Nested Selection in Python

Look at the Python code and flowchart from Activity 1:

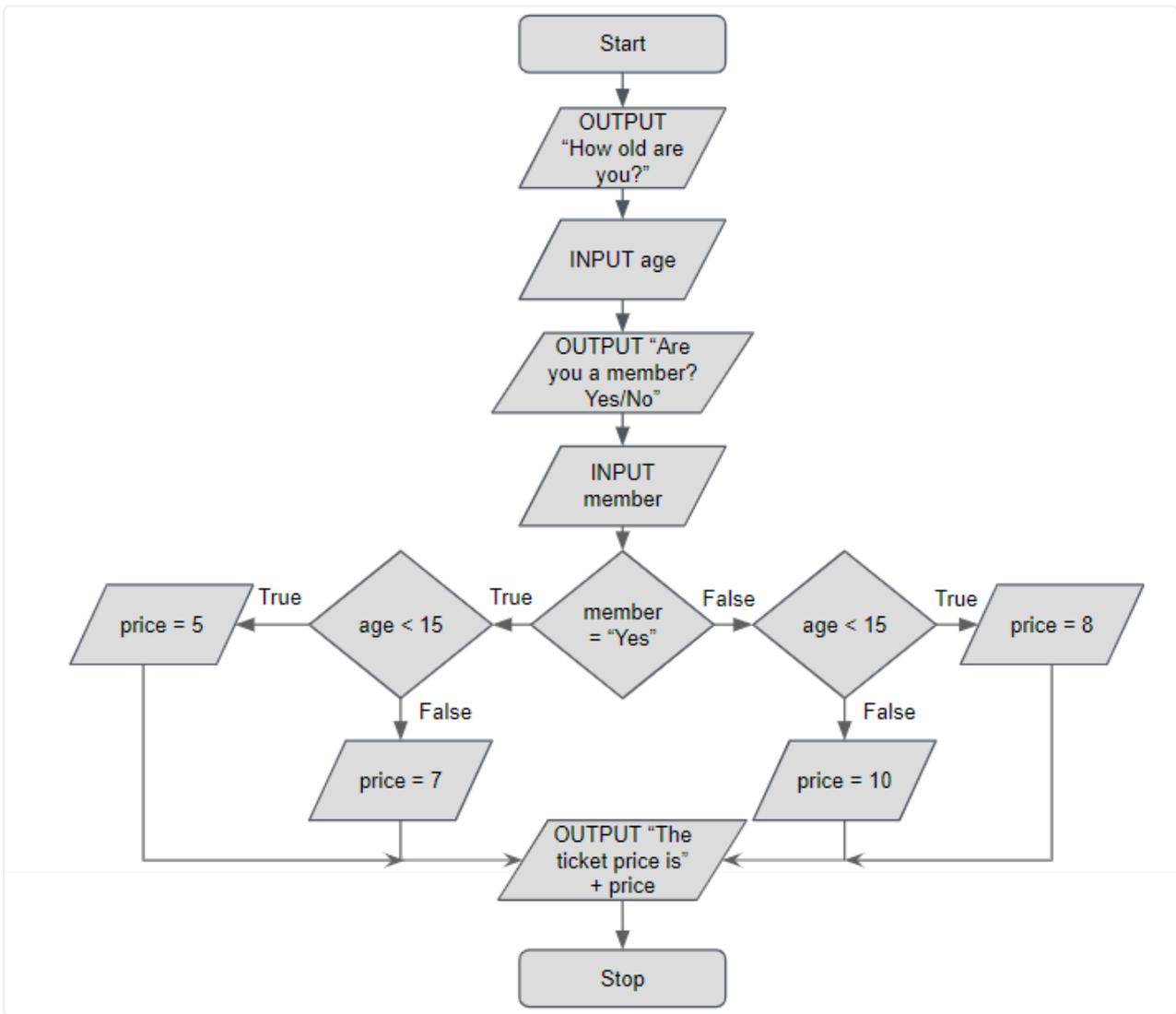
```

amount = int(input("Enter a number "))
answer = input("Enter Y or N ")
if answer == "Y":
    if amount < 0:
        print("Answer 1")
    else:
        print("Answer 2")
else:
    if amount < 0:
        print("Answer 3")
    else:
        print("Answer 4")
print("Goodbye!")

```



Use this as a model to help you write a Python program for this flowchart:



Paste a screenshot of your code below:

Fill in the blanks and then use this test table to check that your program produces the correct output. Try the input values and write in the exact output from your program.

Test case #	Input values	Expected output	Actual output
1	14 Yes	The ticket price is £ 5	
2	15 Yes	The ticket price is £ 7	
3	14 No	The ticket price is £ 10	

Test case #	Input values	Expected output	Actual output
4	15 No		
5	Y 20		

## Activity 3: Debugging - Test your assumptions

### Exercise 1:

Explain how you would use this method to debug this code - even if you have already spotted the error.

Your answer:

<pre> 1 # This program asks for an integer input 2 # Then it doubles it and outputs if the result 3 # is small or large. In this case &lt;10 is counted 4 # as small and everything else is large 5 number = int(input("Enter a number ")) 6 number * 2 7_v if number &lt; 10: 8     print("Small!") 9_v else: 10    print("Large!") </pre>	<pre> Enter a number 15 Large!  Enter a number 4 Small!  Enter a number 8 Small! </pre>
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### Exercise 1

What is the correction to this code?

### Exercise 2:

Where can you add a `print` statement to help you to find the error in this code?

Your answer:

```
1 # This program checks to see if your game score
2 # has beaten the current high score and outputs
3 # a message to let you know this
4 high_score = 100
5 score = int(input("What was your score? "))
6_v if score > high_score:
7     result = "You beat the high score"
8_v else:
9     result = "Sorry, try again!"
10    print("And the result is...", result)
```

```
What was your score?
90
And the result is... Sorry, try again!

What was your score?
120

What was your score?
101

What was your score?
100
And the result is... Sorry, try again!
```

## Exercise 2

What is the correction to this code?