

Computer Program Documentation

You MUST provide evidence showing how the program has been debugged, tested, trialled and feedback used to improve a final, working outcome.

Program Outline

The purpose of this program is to create an interactive math quiz designed for Miss Calculate's Year 8 class. The quiz lets students practice calculating the area and perimeter of simple shapes, including squares and rectangles.

Debugging

I made it so you can add (cm) at the end of your answer without having an error.

```
Question 1:
A square has a side length of 4 cm.
What is its AREA in square cm?
Your answer: 16cm
Traceback (most recent call last):
  File "C:\Users\henrifinn\PycharmProjects\pythonProject1\math_quiz_v1.py", line 39, in <module>
    if int(user_input) == correct_answer:
ValueError: invalid literal for int() with base 10: '16cm'
```

```
Question 1 of 5:
A square has a side length of 10 cm.
What is its AREA in square cm?
Your answer: 100cm
Correct!
```

Test plan for Yes_No function

Data Input	Expected Output (<i>What should happen</i>)	Actual Output (<i>What did happen</i>)
bob	Please enter yes / no	Please enter yes / no

Data Input	Expected Output (<i>What should happen</i>)	Actual Output (<i>What did happen</i>)
yes	yes	yes
no	no	no
y	yes	yes

```
Do you want to see the instructions? bob
please enter yes / no
Do you want to see the instructions? |
```

```
Do you want to see the instructions? y
you said yes
we done
```

```
Do you want to see the instructions? n
you said no
we done
```

```
Do you want to see the instructions? YES
you said yes
we done
```

```
Do you want to see the instructions? no
you said no
we done
```

Testing Schedule

Test plan for boundary testing - tests for input outside the boundary and on the boundary e.g. accepts numbers between 5 - 15

Data Input	Expected Output(<i>What should happen</i>)	Actual Output (<i>What did happen</i>)
4	Please enter a number that is at least 5.	<pre>--- Welcome to the Geometry Quiz Quest! --- How many questions would you like to answer? (Minimum 5): 4 Please enter a number that is at least 5. How many questions would you like to answer? (Minimum 5):</pre>
16	Please enter a number that is 15 or less.	<pre>--- Welcome to the Geometry Quiz Quest! --- How many questions would you like to answer? (5 - 15): 16 Please enter a number that is 15 or less. How many questions would you like to answer? (5 - 15):</pre>
xyz	Invalid input! Please enter a whole number.	<pre>--- Welcome to the Geometry Quiz Quest! --- How many questions would you like to answer? (Minimum 5): xyz Invalid input! Please enter a whole number. How many questions would you like to answer? (Minimum 5):</pre>

5	<pre>Awesome! Starting a quiz with {total_questions} questions. A square has a side length of 15 cm.What is its AREA in square cm? (should be something like this)</pre>	<pre>How many questions would you like to answer? (Minimum 5): 5 Awesome! Starting a quiz with 5 questions. Question 1 of 5: A square has a side length of 2 cm. What is its AREA in square cm? Your answer: </pre>
15	<pre>Awesome! Starting a quiz with {total_questions} questions. A square has a side length of 15 cm.What is its AREA in square cm? (should be something like this)</pre>	<pre>How many questions would you like to answer? (Minimum 5): 15 Awesome! Starting a quiz with 15 questions. Question 1 of 15: A square has a side length of 11 cm. What is its AREA in square cm? Your answer: </pre>

Program Testing

Test plan for all error messages and outputs

Data Input	Expected Output (<i>What should happen</i>)	Actual Output (<i>What did happen</i>)
16	Please enter a number that is 15 or less.	<pre>--- Welcome to the Geometry Quiz Quest! --- How many questions would you like to answer? (5 - 15): 16 Please enter a number that is 15 or less. How many questions would you like to answer? (5 - 15):</pre>
4	Please enter a number that is at least 5.	<pre>How many questions would you like to answer? (5 - 15): 4 Please enter a number that is at least 5. How many questions would you like to answer? (5 - 15): </pre>
answer : abc	Invalid! Please enter a whole number.	<pre>Your answer: abc Invalid! Please enter a whole number. Your answer:</pre>
Incorrect answer	Incorrect ❌ The correct answer was {answer}	<pre>Your answer: 8 Incorrect ❌ The correct answer was 49.</pre>
Correct answer	Correct ✅	<pre>What is its AREA in square cm? Your answer: 77 Correct ✅</pre>
xyz	Please enter yes / no	<pre>Do you want to play again? (yes/no): xyz Please enter yes / no</pre>

yes	--- Welcome to the Geometry Quiz Quest! --- How many questions would you like to answer? (5 - 15):	<pre> Do you want to play again? (yes/no): yes --- Welcome to the Geometry Quiz Quest! --- How many questions would you like to answer? (5 - 15): </pre>
-----	---	--

Usability/End User Testing

Better responses (Correct - Incorrect) Completed

Post Usability Testing

Before changes were made:

```

Your answer: 24
Correct

```

```

Your answer: 2
Incorrect The correct answer was 34.

```

After:

```

Your answer: 4
Correct ✓

```

```

Your answer: 5
Incorrect ✗ The correct answer was 8.

```