

Determine the Type of Triangle

Consider the following:

You are given three angles of a triangle as input. Your task is to determine whether these angles form a valid triangle. If they do, you should identify the type of triangle based on its angles.

A triangle is valid if the sum of its three angles is exactly 180 degrees, and all angles are positive.

If the triangle is valid:

- It is a Right-angled triangle if one of the angles is exactly 90 degrees.
- It is an Obtuse angled triangle if one of the angles is greater than 90 degrees.
- It is an Acute angled triangle if all three angles are less than 90 degrees.

If the angles do not form a valid triangle, output “Angles do not form a triangle”.

Function Description

Complete the function ‘`determine_triangle_type`’ that has the following parameters:

- Three integers representing the angles of the triangle.

The function should print:

- "Right angled" if the triangle is a right-angled triangle.
- "Obtuse angled" if the triangle is an obtuse-angled triangle.
- "Acute angled" if the triangle is an acute-angled triangle.
- "Angles do not form a triangle" if the given angles do not form a valid triangle.

Input Format

- The first line contains an integer representing the first angle of the triangle.
- The second line contains an integer representing the second angle of the triangle.
- The third line contains an integer representing the third angle of the triangle.

Constraints

- All angles are positive integers.

Sample Input

Sample Input 1:

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Enter angle 1: 10
Enter angle 2: 15
Enter angle 3: 20
```

Sample Output 1:

```
Angles do not form a triangle
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Sample Input 2:

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Enter angle 1: 90
Enter angle 2: 45
Enter angle 3: 45
```

Sample Output 2:

Right angled

Explanation

- In the first example, the sum of the angles is not 180, so they do not form a triangle.
- In the second example, the angles form a valid triangle, and one of the angles is 90 degrees, making it a right-angled triangle.