

Enter x coordinate of 1st point: 1
Enter y coordinate of 1st point: 2
Enter x coordinate of 2nd point: 3
Enter y coordinate of 2nd point: 4
Enter x coordinate of 3rd point: 5
Enter y coordinate of 3rd point: 6
Distance between points (1.0, 2.0) and (3.0, 4.0) = 2.8284271247461903
Distance between points (3.0, 4.0) and (5.0, 6.0) = 2.8284271247461903
Distance between points (5.0, 6.0) and (1.0, 2.0) = 5.656854249492381
Not a triangle

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In [163]: '''Approach 2: Using slope of lines connecting two points'''
import math

def slope(x1, y1, xj, yj):
    if(x1 == xj):
        return(math.inf)
    else:
        return((yj - y1) / (xj - x1))

x1 = float(input('Enter x coordinate of 1st point: '))
y1 = float(input('Enter y coordinate of 1st point: '))
x2 = float(input('\nEnter x coordinate of 2nd point: '))
y2 = float(input('Enter y coordinate of 2nd point: '))
x3 = float(input('\nEnter x coordinate of 3rd point: '))
y3 = float(input('Enter y coordinate of 3rd point: '))
s1 = slope(x1, y1, x2, y2)
print(f'\nSlope of the line connecting points ({x1}, {y1}) and ({x2}, {y2}) = {s1}')
s2 = slope(x2, y2, x3, y3)
print(f'\nSlope of the line connecting points ({x2}, {y2}) and ({x3}, {y3}) = {s2}')
if(s1 != s2):
    print('\nNot a triangle')

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Enter x coordinate of 3rd point: 5
Enter y coordinate of 3rd point: 6

Slope of the line connecting points (1.0, 2.0) and (3.0, 4.0) = 1.0
Slope of the line connecting points (3.0, 4.0) and (5.0, 6.0) = 1.0

Not a triangle
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In [ ]: 
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In [ ]: 
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