

<Python Fundamentals (3/3)> (Python Week 3 Assignment)

Q1. (Easy Version) Please help Sam! Sam brought a ruler to measure the perimeter(둘레) of a rectangle(직사각형) with four sides. However, the ruler can only extend up to 100cm. Please create a program that takes four sides as input using the input() function, and print the perimeter of a rectangle with the four sides entered.
(only 4 integers representing the sides of a rectangle are entered)

```
Enter your number1: 50
Enter your number2: 100
Enter your number3: 50
Enter your number4: 100
300
```

(ADVANCED) Q2. (Hard Version) Please help Sam! Sam brought a ruler to measure the perimeter(둘레) of a rectangle(직사각형) with four sides. However, the ruler can only extend up to 100cm. Please create a program that takes four sides(including float data type) as input using the input() function, and print the perimeter of a rectangle based on the format of example below
(hint: use f-string and :.xf)

- hint code -

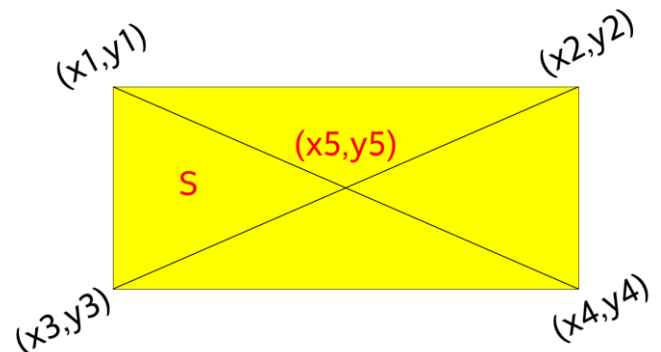
```
x = 3
print(f'{x:.5f}') #prints 3.00000
```

```
Enter your number1: 3.3
Enter your number2: 3.3
Enter your number3: 7.7
Enter your number4: 7.7
the perimeter of a rectangle is 22.000
```

```
Enter your number1: 33.1357553
Enter your number2: 33.1357553
Enter your number3: 88.1211321
Enter your number4: 88.1211321
the perimeter of a rectangle is 242.514
```

(ADVANCED) Q3. Input x1 and y1 in ONE LINE according to the picture below, then input x2 and y2 in one line, then x3 and y3, and finally x4 and y4. Then output the intersection(교점) point of the two diagonals(두 대각선) of the rectangle, which is x5 and y5. Next, output the areas of the triangle S with vertices(꼭짓점) (x1, y1), (x3, y3), and (x5, y5).

(output format follows the diagram below)



```
enter x1 and y1: 2 5
enter x2 and y2: 8 5
enter x3 and y3: 2 3
enter x4 and y4: 8 3
x5 and y5 is 5.0, 4.0
S is 3.0
```

```
enter x1 and y1: 3355 2311
enter x2 and y2: 3500 2311
enter x3 and y3: 3355 137
enter x4 and y4: 3500 137
x5 and y5 is 3427.5, 1224.0
S is 78807.5
```

Q4. Make your own program using input() function.

code it freely!