PRO TIP

Continue to improve your code even after you get the correct results!
Lesson 00, 01 and 02 (due on Wednesday 2/1/2023 at 10:00 pm)

HW00 (due on Monday 2/6/2023 at 10:00 pm)

Office Hours Schedule is posted

Office Hours start TODAY
Topics Covered in Week 2 (Lesson 01)

- Reading input from the user
- Python Elements and Basic Syntax (Lesson 01-3)
  - Literals, names, operators, comments, keywords
- Expressions and Assignment Statement (Lesson 01-6)
- Errors: Syntax and Logical (Lesson 01-14)
- Comments (Lesson 01-20)
Today’s Plan

- Data Types
- Strings
  - Indexing
  - Slicing
  - Constructing Strings using + Operator
- Modules
- Casting Values
There are three ways to import a module/library:

1. `import math`
2. `from math import factorial`
3. `from math import *`
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<table>
<thead>
<tr>
<th>Function</th>
<th>Available</th>
</tr>
</thead>
<tbody>
<tr>
<td>math.factorial(5)</td>
<td>NO</td>
</tr>
<tr>
<td>math.pi</td>
<td>NO</td>
</tr>
<tr>
<td>factorial(5)</td>
<td>YES</td>
</tr>
<tr>
<td>pi</td>
<td>YES</td>
</tr>
</tbody>
</table>
Create a group of two or three colleagues and work on the following exercise

In geometry, Heron's formula gives the area of a triangle when the length of all three sides is known. Heron's formula states that the area of a triangle whose sides have lengths $a$, $b$, and $c$ is

$$A = \sqrt{s(s - a)(s - b)(s - c)}$$

where $s = (a + b + c) / 2$

Write a Python program that prompts the user to enter three numbers that represent the three triangle sides and prints the area.

You may assume that the user will always enter proper triangle values, i.e., the sum of any two sides is larger than the third side.
Example Input/ Output

Sample 1

Enter a value: 3
Enter b value: 4
Enter c value: 5
area = 6.0

Example Input/ Output

Sample 2

Enter a value: 7
Enter b value: 10
Enter c value: 6
area = 20.662465970933866
Wrap-up

- Today’s Lecture
  - Data Types, Strings, and Modules (Lesson 02)

- Next Lecture
  - Data Types (Lesson 02)
  - Logic and Conditional Structures