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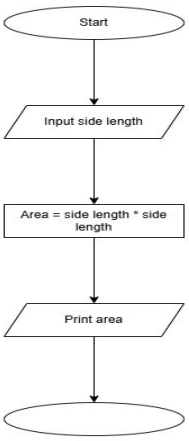
PPS 1.1.1

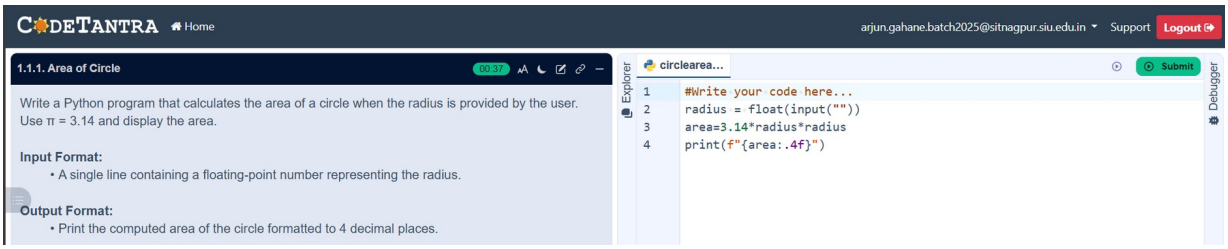
Algorithm: Calculate Area of Circle

1. **Start** the program.
2. **Input**: Read a floating-point value from the user and store it in a variable named radius.
3. **Define Constant**: Initialize a variable for pi, where

   pi = 3.14
4. **Calculate**: Compute the area using the formula:
   - Area = 3.14*r*r
5. **Format Output**: Convert the calculated area into a string formatted to **4 decimal places**.
6. **Display**: Print the formatted area to the console.
7. **End** the program.

Flowchart:


Start
Input side length
Area = side length * side length
Print area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1.1.1. Area of Circle
00:37
Write a Python program that calculates the area of a circle when the radius is provided by the user.
Use π = 3.14 and display the area.
Input Format:
• A single line containing a floating-point number representing the radius.
Output Format:
• Print the computed area of the circle formatted to 4 decimal places.
Explorer
circlearea...
Submit
Debugger
#Write your code here...
radius = float(input(""))
area=3.14*radius*radius
print(f"{area:.4f}")

PPS 1.1.2

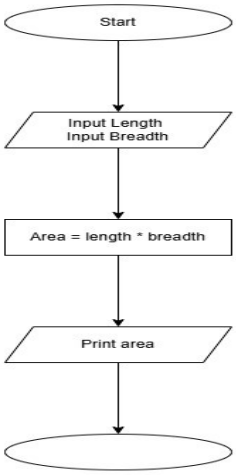
Algorithm to Calculate the Area of a Rectangle

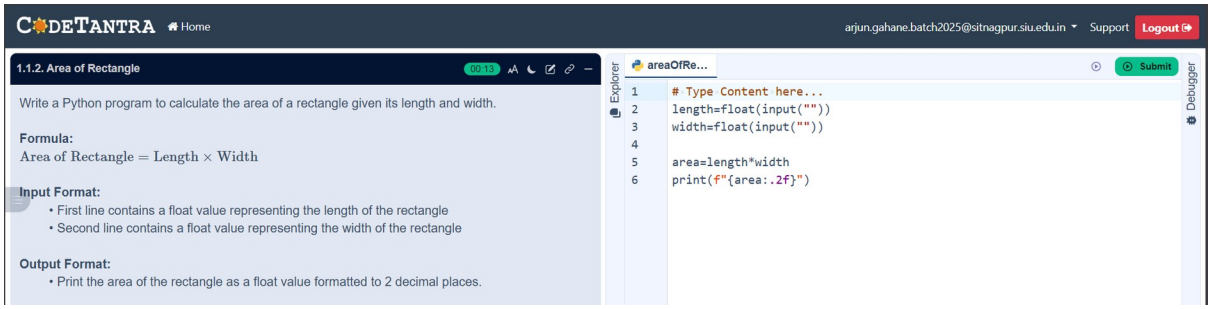
1. **Start** the program.
2. **Input Length**: Prompt the user to enter the length of the rectangle and store it in a variable (e.g., length). Convert this input to a floating-point number.
3. **Input Width**: Prompt the user to enter the width of the rectangle and store it in a variable (e.g., width). Convert this input to a floating-point number.
4. **Calculate Area**: Compute the area using the formula:

   Area = length*width

5. **Format Output**: Round or format the calculated area to two decimal places.
6. **Display Result**: Print the formatted area to the console.
7. **End** the program.

Flowchart:





PPS 1.1.3

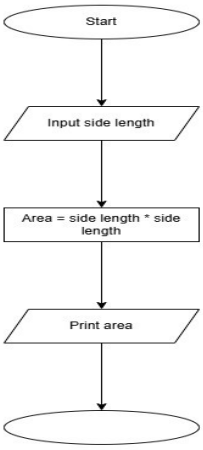
Algorithm to Calculate the Area of a Square

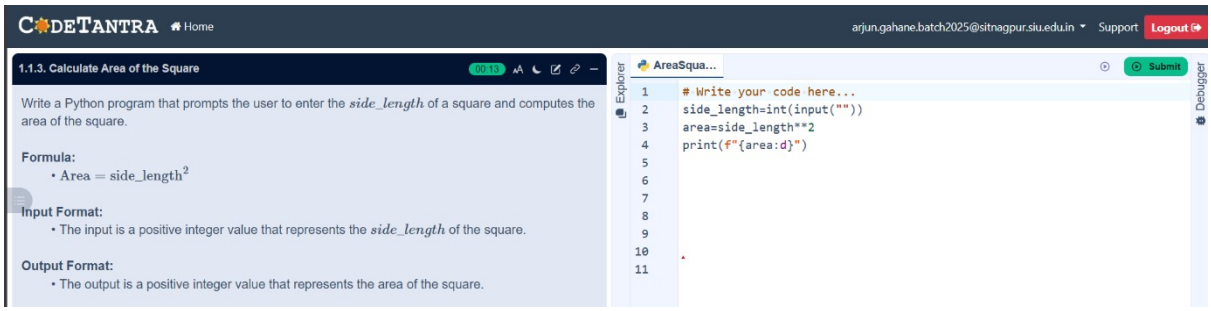
1. **Start** the program.
2. **Input Side Length**: Prompt the user to enter a positive integer representing the side length.
3. **Convert Input**: Store the input and convert it to an integer type.
4. **Calculate Area**: Square the side length using the formula:

Area = (side length)

5. **Display Result**: Print the resulting area as an integer value.
6. **End** the program.

Flowchart:





PPS 1.1.4

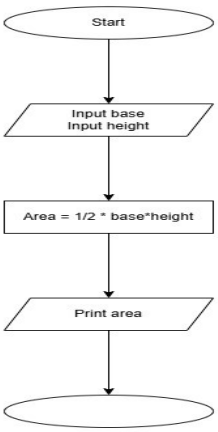
Algorithm to Calculate the Area of a Triangle

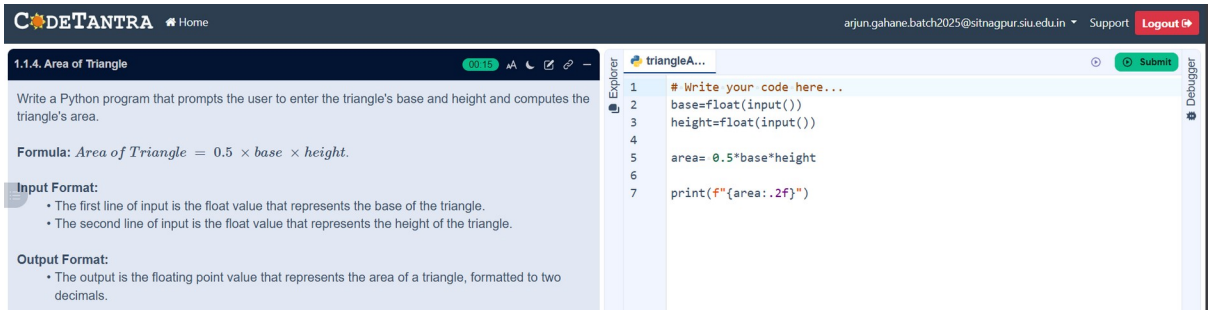
1. **Start** the program.
2. **Input Base**: Read a floating-point value from the user representing the base of the triangle.
3. **Input Height**: Read a second floating-point value representing the height of the triangle.
4. **Calculate Area**: Compute the area using the formula:

   $$\text{Area} = 0.5 * \text{base} * \text{height}$$

5. **Format Output**: Prepare the resulting area as a floating-point value formatted specifically to two decimal places.
6. **Display Result**: Print the formatted result to the console.
7. **End** the program.

Flowchart:


Start
Input base
Input height
Area = 1/2 * base*height
Print area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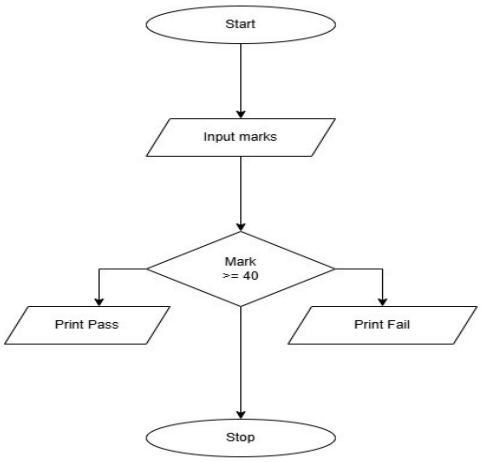
1.1.4. Area of Triangle
00:15
Write a Python program that prompts the user to enter the triangle's base and height and computes the triangle's area.
Formula: $Area\ of\ Triangle\ =\ 0.5\ \times base\ \times height.$
Input Format:
• The first line of input is the float value that represents the base of the triangle.
• The second line of input is the float value that represents the height of the triangle.
Output Format:
• The output is the floating point value that represents the area of a triangle, formatted to two decimals.
Explorer
triangleA...
Submit
Debugger
1 # Write your code here...
2 base=float(input())
3 height=float(input())
4
5 area= 0.5*base*height
6
7 print(f"{area:.2f}")

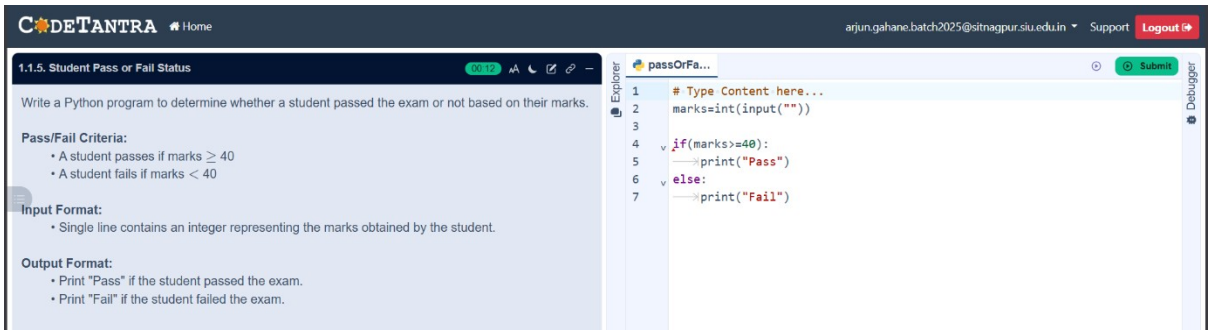
PPS 1.1.5

Algorithm: Student Pass or Fail Status

1. **Start**
2. **Input:** Read an integer value from the user and store it in a variable (e.g., marks).
3. **Condition Check:** * Compare the value of marks with the threshold of **40**.
    - 4. **Decision Path:**
    - **If** marks is greater than or equal to **40** (marks>= 40):
        - Print **"Pass"**.
    - **Else** (if marks is less than 40):
        - Print **"Fail"**.
4. **Stop**

Flowchart:


Start
Input marks
Mark
>= 40
Print Pass
Print Fail
Stop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1.1.5. Student Pass or Fail Status
00:12
Write a Python program to determine whether a student passed the exam or not based on their marks.
Pass/Fail Criteria:
• A student passes if marks ≥ 40
• A student fails if marks < 40
Input Format:
• Single line contains an integer representing the marks obtained by the student.
Output Format:
• Print "Pass" if the student passed the exam.
• Print "Fail" if the student failed the exam.
Explorer
passOrFa...
Submit
Debugger
1 # Type Content here...
2 marks=int(input(""))
3
4 if(marks>=40):
5 print("Pass")
6 else:
7 print("Fail")