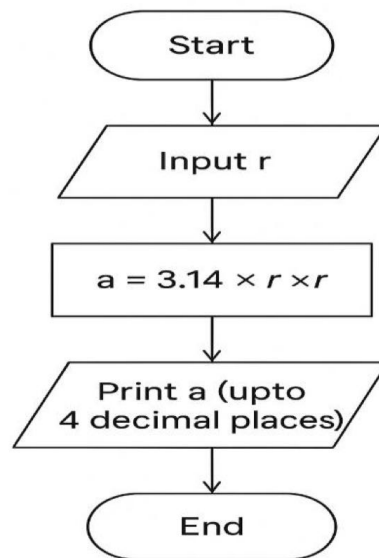


### PROBLEM 1.1.1

#### Flowchart



#### Algorithm

##### Start

**Input:** Read the radius (r).

**Process:** Calculate the area by multiplying  $3.14 * r * r$ .

**Output:** Print the result (formatted to 4 decimal places).

##### Stop

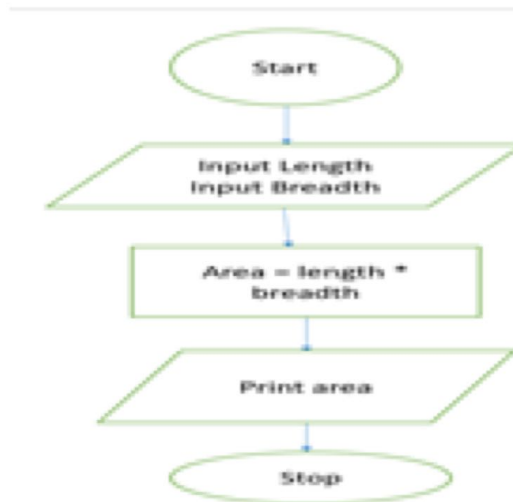
The screenshot shows a web-based code editor interface. On the left, the problem description for '1.1.1. Area of Circle' is visible, including the input and output formats. The main editor area contains the following Python code:

```
1 #Write your code here...
2 radius = float(input(""))
3 area=3.14*radius*radius
4 print(f"{area:.4f}")
```

Below the code editor, the output is displayed as '3629.8400', followed by the message 'YOUR PROGRAM HAS ENDED'.

### PROBLEM 1.1.2

#### Flowchart



#### Algorithm

##### Start

**Input:** Read length and width.

**Process:** Calculate the area by multiplying length \*width.

**Output:** Print the result (formatted to 2 decimal places).

##### Stop

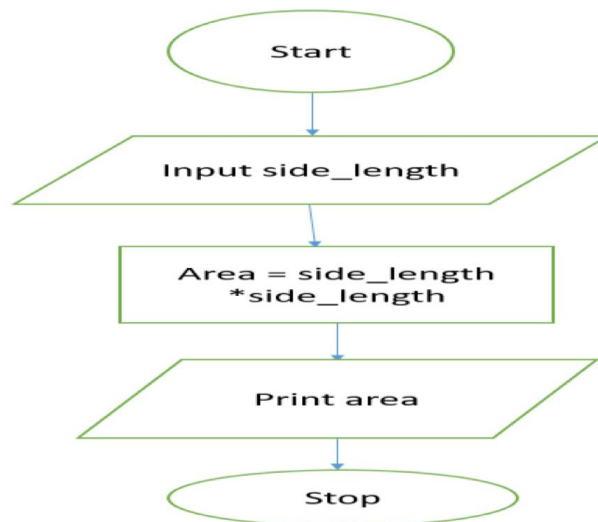
The screenshot shows a web-based code editor interface. On the left, a panel titled '1.1.2. Area of Rectangle' provides instructions: 'Write a Python program to calculate the area of a rectangle given its length and width.' It includes the formula 'Area of Rectangle = Length × Width', input format instructions (two lines for length and width), and output format instructions (print the area formatted to 2 decimal places). The main editor area on the right contains the following Python code:

```
1 # Type Content here...
2 length=float(input(""))
3 width=float(input(""))
4
5 area=length*width
6 print(f"area:.2f")
```

Below the code editor, a terminal window shows the output of the program: '1936.00'. At the bottom of the terminal, a message reads '==== YOUR PROGRAM HAS ENDED ===='.

### PROBLEM 1.1.3

### Flowchart



### Algorithm

#### Start

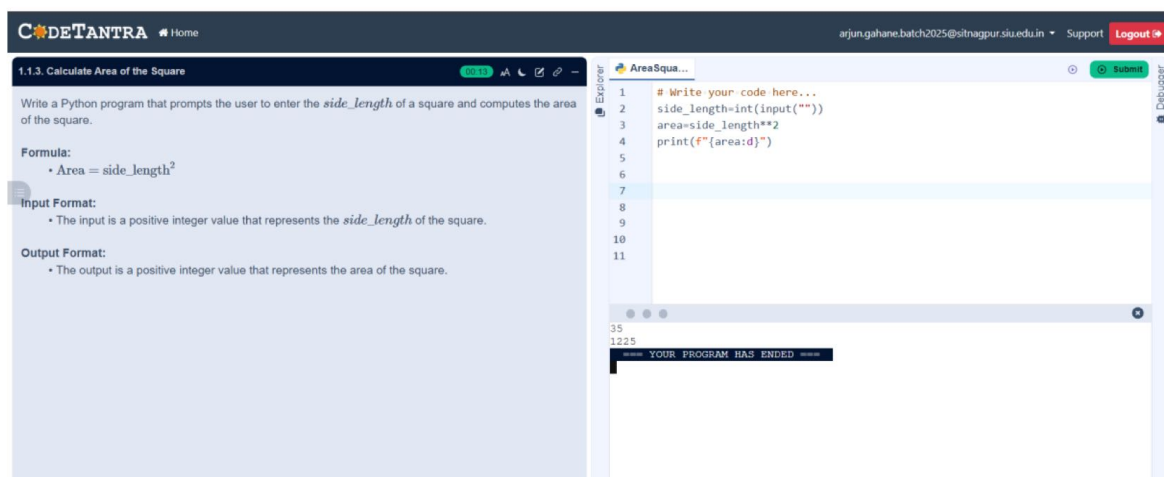
**Input:** Read the value for `side_length` from the user.

**Process:** Convert the input value to an integer.

**Calculation:** Calculate the area using the formula:  $\text{Area} = \text{side\_length}^2$

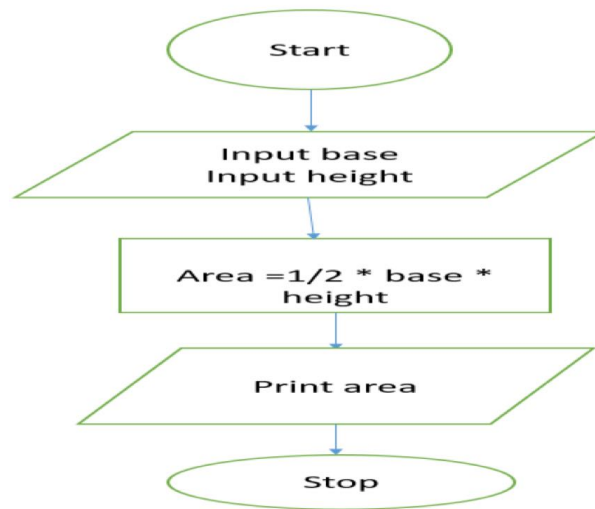
**Output:** Print the calculated area.

#### Stop



#### PROBLEM 1.1.4

#### Flowchart



#### Algorithm

##### Start

**Input 1:** Read the first value from the user and store it as base.

**Input 2:** Read the second value from the user and store it as height.

**Calculation:** Calculate the area using the formula =  $\text{Area} = 0.5 \times \text{base} \times \text{height}$

**Output:** Print the calculated area, formatted to exactly two decimal places.

##### Stop

The screenshot shows a web-based code editor interface. On the left, there's a panel titled '1.1.4. Area of Triangle' with instructions: 'Write a Python program that prompts the user to enter the triangle's base and height and computes the triangle's area.' It also provides the formula:  $\text{Area of Triangle} = 0.5 \times \text{base} \times \text{height}$ . Below this, it specifies the 'Input Format' (two lines of float input) and 'Output Format' (a float output formatted to two decimals). The main editor area shows a Python script: 

```
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}')
```

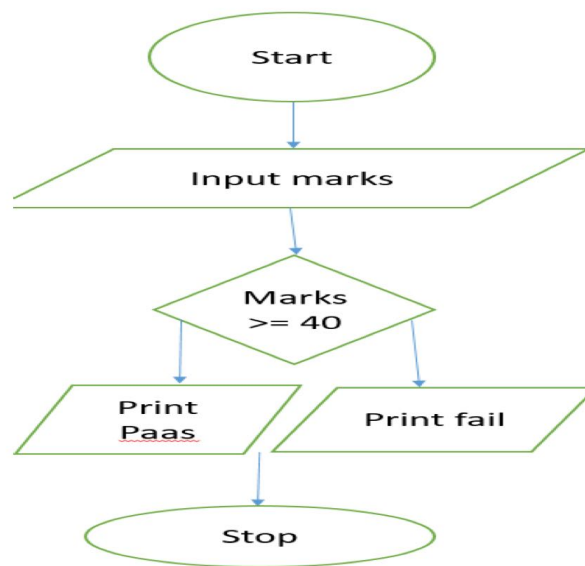
 The output window at the bottom shows the result: 

```
35
35
612.50
```

 and a status bar indicating 'YOUR PROGRAM HAS ENDED'.

### PROBLEM 1.1.5

#### Flowchart



#### Algorithm

##### Start

**Input:** Read the marks from the user.

**Process:** Convert the input to an integer.

**Decision:** Check if marks is greater than or equal to 40.

**If Yes:** Print "Pass".

**If No:** Print "Fail".

##### Stop

CODETANTRA Home

1.1.5. Student Pass or Fail Status

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  $\geq 40$
- 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.

```
1 # Type Content here...
2 marks=int(input(""))
3
4 if(marks>=40):
5     print("Pass")
6 else:
7     print("Fail")
```

35  
Fail

== YOUR PROGRAM HAS ENDED ==