

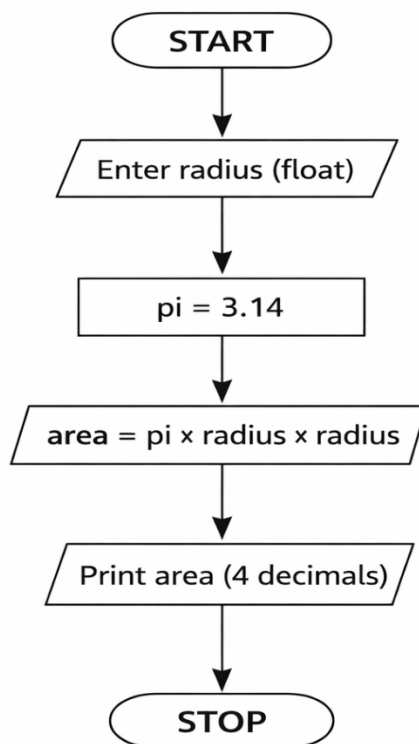
Experiment - 1

1.1.1 Area of a circle

Algorithm

- Step 1 :- Start
- Step 2 :- Read the radius value from the user.
- Step 3:- Set the value of π (pi) as 3.14.
- Step 4 :- Calculate area using formula . Area = pi x radius x radius
- Step 5 :- Display the area formatted to 4 decimal places.
- Step 6 :- Stop

Flowchart



Phyton code

Experiment - 1

radius = float(input())

pi = 3.14

area = pi * radius * radius

print(f"{area:.4f}")

Execution

The screenshot displays the CODETANTRA IDE interface. On the left, the problem statement for "1.1.1. Area of Circle" is shown, including input and output formats and sample test cases. The main editor shows the Python code for calculating the area of a circle. The right sidebar displays the execution results, including a table of test cases and their outcomes.

Problem Statement: Write a Python program that calculates the area of a circle when the radius is provided by the user. Use $\pi = 3.14$ 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.

Sample Test Cases:

Test case	Input	Expected output
Test case 1	3.36	35.4493
Test case 2	2	12.5600

Code:

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

Execution Results:

Test case	Expected output	Actual output	Status
Test case 1	3.36	35.4493	Passed
Test case 2	2	12.5600	Passed

Performance Metrics:

Metric	Value
Average time	0.006 s
Maximum time	0.008 s

Summary: 2 out of 2 shown test case(s) passed. 2 out of 2 hidden test case(s) passed.