

Experiment - 1.1.1. Area of Circle

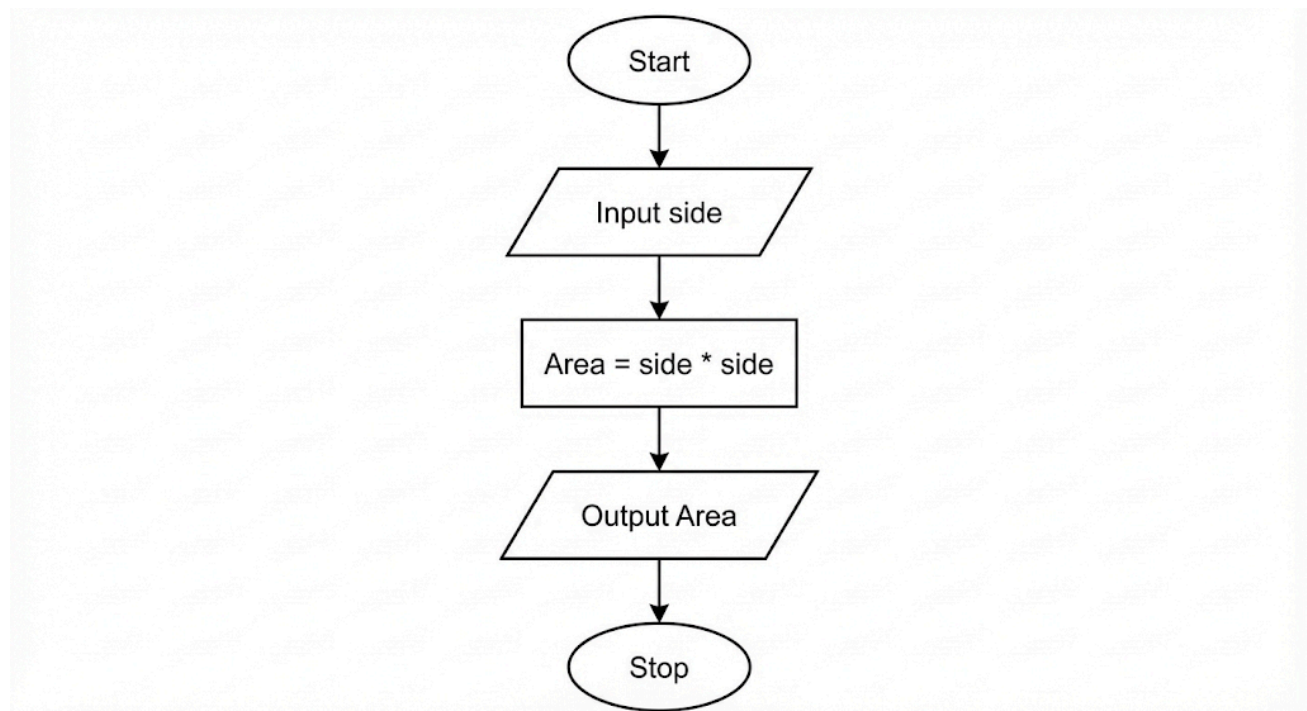
1. Aim

To write a Python program that calculates the area of a circle given its radius as input from the user, using the constant value of $\pi = 3.14$ and displaying the result formatted to four decimal places.

2. Pseudocode

1. **START**
2. **READ** the input value from the user and convert it to a floating-point number.
3. **STORE** the value in a variable named radius.
4. **DEFINE** a constant variable pi and assign it the value 3.14.
5. **CALCULATE** the area using the formula: $Area = \pi \times radius \times radius$.
6. **FORMAT** the resulting area to 4 decimal places.
7. **PRINT** the formatted area.
8. **END**

3. Flowchart



4. Python Program

```
# Program to calculate the area of a circle
# Input: Radius as a float
# Output: Area formatted to 4 decimal places
```

```
# Taking input from the user
radius = float(input())
```

```
# Constant value of Pi
pi = 3.14
```

```
# Calculating area
area = pi * radius * radius
```

```
# Displaying the result formatted to 4 decimal places
print(f"{area:.4f}")
```

5. Experiment Screenshot

The screenshot displays the CODETANTRA online IDE interface. On the left, the problem statement for "1.1.1. Area of Circle" is shown, along with input and output formats and sample test cases. The main area contains a Python code editor with the following code:

```
1 radius = float(input())
2
3 pi = 3.14
4 area = pi * radius * radius
5
6 print(f"{area:.4f}")
7
8
```

Below the code editor, the execution results are displayed, showing that 2 out of 2 shown test case(s) passed and 2 out of 2 hidden test case(s) passed. The test case details for Test case 1 are shown, with an expected output of 35.4493 and an actual output of 35.4493. The bottom of the interface includes a terminal and navigation buttons.