Python → Object-oriented programming → Class vs instance

Class vs instance → Sphere

📊 Hard   🕐 5 minutes   ⑦

In her projects, Jess works with various geometrical objects. To simplify the process, she needs to create different classes for the shapes.

One of these shapes is a **sphere**. There are 3 characteristics she needs for the sphere: the *PI* number, the *radius r* and the *volume v* of the particular sphere.

The volume is calculated according to this formula: $v = \frac{4}{3}\pi r^3$.

Finish writing the code below: determine which attributes are class or instance attributes, and do necessary calculations. Make sure to name the attributes like they are presented above (that is, `PI`, `radius`, and `volume`.) Use $\pi \approx 3.1415$ (for checkup purposes).

You do NOT need to create any instances of the class or work with input.

[Hint]

📄 Report a typo

↓ Write a program

Code Editor   IDE

```Python
1  class Sphere:
2      # finish class Sphere here
3      PI = 3.1415
4
5      def __init__(self, radius):
6          self.radius = radius
7          self.volume = 4 / 3 * Sphere.PI * radius ** 3
8
```

✓ Correct.

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😍 🙂 😐 🙁 😡

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