**AI CODING LAB TEST -02**

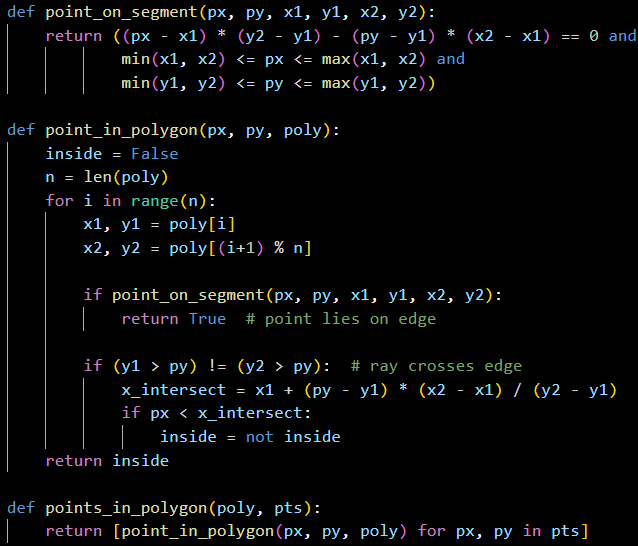
**Sub group : O**

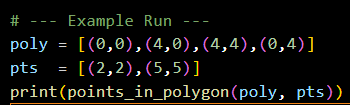
**H.NO:2403A51342**

**Prompt:**

Check if given points lie inside a polygon using **ray-casting** (count edge crossings; treat points on edges as inside).

**CODE:**





**OUTPUT:**

**C:\Users\lenovo\Pictures\Screenshots\Screenshot 2025-09-17 092923.png**

**OBSERVATION:**

 (2,2) lies inside the square → True.

 (5,5) lies outside → False.

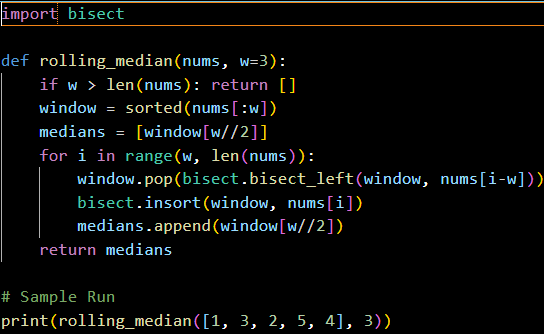
 Points **on polygon edges** are correctly counted as **inside**.

O2)

**Prompt:**

Compute the **rolling median** of a list with sliding window size w=3.  
Return the median of each window. Ensure efficiency (use bisect for maintaining a sorted window).

**CODE:**

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**OUTPUT:**

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**OBSERVATION:**

 Maintains a **sorted window** using bisect.

 (1,3,2) → 2, (3,2,5) → 3, (2,5,4) → 4.

 Efficient for moderate inputs, edge-friendly (returns [] if not enough elements).